2017 NC1 CCR Landfill Annual Groundwater Monitoring and Corrective Action Report

Nebraska City Ash Landfill Unit 1

Omaha Public Power District
Nebraska City Station

Nebraska City, Nebraska
January 31, 2018

OPPD Nebraska City Station Unit 1 Ash Landfill
2017 NC1 CCR Landfill Annual Groundwater Monitoring and Corrective Action Report

Table of Contents

Appendices

OPPD Nebraska City Station Unit 1 Ash Landfill
2017 NC1 CCR Landfill Annual Groundwater Monitoring and Corrective Action Report

Summary

Detection monitoring began for the Nebraska City Unit 1 Landfill during the 4th quarter of 2017. Statistical Analysis was conducted using analysis of variance (ANOVA) to determine whether there are Statistically Significant Increases (SSI) over the background data. Trend analysis was also conducted using Sen's Slope/Mann-Kendall statistical analysis to determine if Statistically Significant Differences (SSD) were increasing or decreasing over time.

The results of the analysis show the following SSD's/SSI's:
Boron: MW-3, MW-4, MW-9
Calcium: MW-3, MW-9
Chloride: MW-3
Sulfate: MW-3, MW-4, MW-9
Total Dissolved Solids: MW-3, MW-9

Due to the detection monitoring statistical analysis results and consistent to the CCR rule, "once the detection monitoring parameters are detected at a statistically significant level over the established background concentrations, the owner/operator must proceed to assessment monitoring", OPPD is entering into the assessment monitoring program.

1 Introduction

On April 17, 2015 the U.S. Environmental Protection Agency (EPA) published the final rule for the regulation and management of coal combustion residuals (CCR) under Subtitle D of the Resource Conservation and Recovery Act (RCRA). The CCR rule defines a set of requirements for the disposal and handling of CCR within CCR units (defined as either landfills or surface impoundments). The Omaha Public Power District (OPPD), Nebraska City Generating Station currently has two (2) active CCR landfill. Section 40 CFR 257.90(e) specifies that an owner or operator of an existing CCR landfill must prepare an annual groundwater monitoring and corrective action report to summarize any key actions completed, problems encountered, and activities coming up relating to the ground water monitoring system.

1.1 Purpose

The CCR rule requires an annual groundwater monitoring and corrective action report to be completed no later than January 31, 2018 and annually thereafter. This report should include:

- A map, aerial image, or diagram of the CCR unit showing all background (upgradient) and downgradient monitoring wells including identification numbers.
- Identification of any monitoring wells that were installed or decommissioned during the previous year, along with a narrative description of why those actions were taken.
- All monitoring well data obtained under 257.90-257.98 , a summary including the number of groundwater samples that were collected for analysis for each background and downgradient well, the date the sample were collected, and whether the sample was required by detection monitoring or assessment monitoring program.
- A narrative discussion of any transition between monitoring programs.
- Other information required to be included in the annual report as specified in 257.90-257.98.

1.2 Facility Background

OPPD has a two-unit fossil fuel-fired generating station (NC1 and NC2), located 5.5 miles southeast of Nebraska City, Nebraska, along the west shore of the Missouri River. This Station has two (2) existing CCR landfills that are permitted under the current NDEQ Title 132 regulations for fossil fuel combustion ash disposal area; the NC1 Ash Disposal Area and NC2 Ash Disposal Area that are active after the CCR rule effective date of October 19, 2015. This annual report covers the NC1 (NDEQ Permit No. NE0054712, Facility ID 58343) Ash Disposal Area. The NC1 Ash Disposal Area is an unlined CCR landfill of approximately 52 acres that has historically received CCR for disposal. Refer to figures in the Ground Water Monitoring Report.

2 Changes in Ground Water Monitoring System (40 CFR 257.90(e)(2))

There were no monitoring wells installed or decommissioned during 2017.

3 Summary of Sampling Events (40 CFR 257.90(e)(3))

Eight background samples and an initial detection monitoring sample were collected during 2016 and 2017 for all wells in the CCR ground water monitoring system. During these events appendix III and appendix IV background samples were collected, and an appendix III detection monitoring sample was collected.

The wells that were sampled at NC1 as part of this event were MW-2, MW-3, MW-4, NC2MW-4, MW-9, MW-11, and MW-13.

All of the analytical data including results, statistical analysis, groundwater contour maps, and field sheets are located in Appendix A.

4 Transition of Monitoring Programs (40 CFR 257.90(e)(4))

The site is currently transitioning from Detection Monitoring to Assessment Monitoring. Since OPPD has determined that there is a SSI over background for one or more of the parameters listed in the appendix III at any monitoring well at the waste boundary, OPPD must place a notice in the operating record and on the facility's internet site indicating which parameters have shown a statistically significant changes for background levels and notify the State Director.

The results of the analysis show the following SSD's/SSI's:

Boron: MW-3, MW-4, MW-9

Calcium: MW-3, MW-9

Chloride: MW-3

Sulfate: MW-3, MW-4, MW-9

Total Dissolved Solids: MW-3, MW-9

5 Upcoming Activities

OPPD will first evaluate the alternative source determination and if the result demonstrated that a source other than the CCR unit caused SSI or that the SSI resulted from error in sampling, analysis, statistical evaluation or a natural variation in the ground water OPPD will continue detection monitoring. If the results do not show a successful demonstration OPPD will establish an assessment monitoring program within 90 days. Documentation for changes to the monitoring system will be captured through recertification of the system.

Appendix A

Groundwater Monitoring Report

OMAHA PUBLIC POWER DISTRICT'S

NEBRASKA CITY STATION UNIT I ASH LANDFILL

2017 NC1 CCR GROUNDWATER REPORT

Omaha Public Power District
444 South 16th Street Mall
Omaha, Nebraska 68102-2247

JANUARY 2018

TABLE OF CONTENTS

APPENDIX A

SUMMARY OF GROUNDWATER ELEVATIONS
NEBRASKA CITY UNIT 1

Location	Date	Top of Casing Elevation	Depth to Water	Groundwater Elevation	Comments
MW-2	3/9/2016	919.39	8.90	910.49	
MW-2	6/7/2016	919.39	7.04	912.35	
MW-2	10/3/2016	919.39	8.45	910.94	
MW-2	11/18/2016	919.39	9.30	910.09	
MW-2	2/14/2017	919.39	10.10	909.29	
MW-2	4/25/2017	919.39	8.10	911.29	
MW-2	6/20/2017	919.39	7.60	911.79	
MW-2	7/13/2017	919.39	8.40	910.99	
MW-2	11/8/2017	919.39	11.55	907.84	
MW-3	3/9/2016	919.80	8.95	910.85	
MW-3	6/7/2016	919.80	7.75	912.05	
MW-3	10/3/2016	919.80	8.35	911.45	
MW-3	11/18/2016	919.80	9.36	910.44	
MW-3	2/14/2017	919.80	9.91	909.89	
MW-3	4/25/2017	919.80	8.25	911.55	
MW-3	6/20/2017	919.80	7.95	911.85	
MW-3	7/13/2017	919.80	8.75	911.05	
MW-3	11/8/2017	919.80	11.90	907.90	
MW-4	3/9/2016	919.81	9.50	910.31	
MW-4	6/7/2016	919.81	7.41	912.40	
MW-4	10/3/2016	919.81	9.10	910.71	
MW-4	11/18/2016	919.81	10.10	909.71	
MW-4	2/14/2017	919.81	10.85	908.96	
MW-4	4/25/2017	919.81	8.84	910.97	
MW-4	6/20/2017	919.81	8.20	911.61	
MW-4	7/13/2017	919.81	9.10	910.71	
MW-4	11/8/2017	919.81	11.60	908.21	
MW-5	3/9/2016	920.81	10.82	909.99	
MW-5	6/7/2016	920.81	9.67	911.14	
MW-5	10/3/2016	920.81	12.99	907.82	
MW-5	11/18/2016	920.81	11.25	909.56	
MW-5	2/14/2017	920.81	11.70	909.11	
MW-5	4/25/2017	920.81	10.30	910.51	
MW-5	6/20/2017	920.81	10.72	910.09	
MW-5	7/13/2017	920.81	10.50	910.31	
MW-5	11/8/2017	920.81	10.90	909.91	
MW-6	3/9/2016	916.87	7.55	909.32	
MW-6	6/7/2016	916.87	6.31	910.56	
MW-6	10/3/2016	916.87	6.86	910.01	
MW-6	11/18/2016	916.87	8.20	908.67	
MW-6	2/14/2017	916.87	8.80	908.07	

Measurements are in feet.

Well condition is compliant unless noted otherwise.

SUMMARY OF GROUNDWATER ELEVATIONS
NEBRASKA CITY UNIT 1

Location	Date	Top of Casing Elevation	Depth to Water	Groundwater Elevation	Comments
MW-6	4/25/2017	916.87	7.02	909.85	
MW-6	6/20/2017	916.87	7.42	909.45	
MW-6	7/13/2017	916.87	8.10	908.77	
MW-6	11/8/2017	916.87	8.70	908.17	
MW-7	3/9/2016	919.47	8.25	911.22	
MW-7	6/7/2016	919.47	6.43	913.04	
MW-7	10/3/2016	919.47	7.94	911.53	
MW-7	11/18/2016	919.47	8.72	910.75	
MW-7	2/14/2017	919.47	9.60	909.87	
MW-7	4/25/2017	919.47	7.41	912.06	
MW-7	6/20/2017	919.47	7.85	911.62	
MW-7	7/13/2017	919.47	8.32	911.15	
MW-7	11/8/2017	919.47	9.05	910.42	
MW-8	3/9/2016	919.73	8.60	911.13	
MW-8	6/7/2016	919.73	6.80	912.93	
MW-8	10/3/2016	919.73	8.53	911.20	
MW-8	11/18/2016	919.73	9.10	910.63	
MW-8	2/14/2017	919.73	10.00	909.73	
MW-8	4/25/2017	919.73	7.75	911.98	
MW-8	6/20/2017	919.73	8.04	911.69	
MW-8	7/13/2017	919.73	8.89	910.84	
MW-8	11/8/2017	919.73	9.18	910.55	
MW-9	3/9/2016	920.14	9.30	910.84	
MW-9	6/7/2016	920.14	7.88	912.26	
MW-9	10/3/2016	920.14	8.76	911.38	
MW-9	11/18/2016	920.14	7.75	912.39	
MW-9	2/14/2017	920.14	10.41	909.73	
MW-9	4/25/2017	920.14	8.65	911.49	
MW-9	6/20/2017	920.14	8.15	911.99	
MW-9	7/13/2017	920.14	9.10	911.04	
MW-9	11/8/2017	920.14	12.10	908.04	
MW-11	3/9/2016	918.35	6.90	911.45	
MW-11	6/7/2016	918.35	5.85	912.50	
MW-11	10/3/2016	918.35	6.34	912.01	
MW-11	11/18/2016	918.35	7.37	910.98	
MW-11	2/14/2017	918.35	7.95	910.40	
MW-11	4/25/2017	918.35	6.24	912.11	
MW-11	6/20/2017	918.35	7.85	910.50	
MW-11	7/13/2017	918.35	6.25	912.10	
MW-11	11/8/2017	918.35	10.95	907.40	
MW-12	3/9/2016	920.26	9.00	911.26	

Measurements are in feet.

Well condition is compliant unless noted otherwise.

SUMMARY OF GROUNDWATER ELEVATIONS
NEBRASKA CITY UNIT 1

Location	Date	Top of Casing Elevation	Depth to Water	Groundwater Elevation	Comments
MW-12	6/7/2016	920.26	7.80	912.46	
MW-12	10/3/2016	920.26	8.40	911.86	
MW-12	11/18/2016	920.26	9.35	910.91	
MW-12	2/14/2017	920.26	9.95	910.31	
MW-12	4/25/2017	920.26	8.20	912.06	
MW-12	6/20/2017	920.26	8.40	911.86	
MW-12	7/13/2017	920.26	8.52	911.74	
MW-12	11/8/2017	920.26	12.55	907.71	
MW-13	3/9/2016	917.69	4.61	913.08	
MW-13	6/7/2016	917.69	3.95	913.74	
MW-13	10/3/2016	917.69	4.03	913.66	
MW-13	11/18/2016	917.69	4.43	913.26	
MW-13	2/14/2017	917.69	5.20	912.49	
MW-13	4/25/2017	917.69	4.02	913.67	
MW-13	6/20/2017	917.69	4.72	912.97	
MW-13	7/13/2017	917.69	5.00	912.69	
MW-13	11/8/2017	917.69	8.25	909.44	
NC2MW-4	3/9/2016	919.40	6.95	912.45	
NC2MW-4	6/7/2016	919.40	6.06	913.34	
NC2MW-4	10/3/2016	919.40	6.25	913.15	
NC2MW-4	11/18/2016	919.40	6.79	912.61	
NC2MW-4	2/14/2017	919.40	7.52	911.88	
NC2MW-4	4/25/2017	919.40	6.20	913.20	
NC2MW-4	6/20/2017	919.40	6.75	912.65	
NC2MW-4	7/13/2017	919.40	7.10	912.30	
NC2MW-4	11/8/2017	919.40	12.20	907.20	

Measurements are in feet.

Well condition is compliant unless noted otherwise.

SUMMARY OF DETECTION MONITORING GROUNDWATER ANALYTICAL RESULTS FOR APPENDIX III CONSTITUENTS NEBRASKA CITY STATION UNIT 1

Location	Duplicate	Well Type	Date	Boron (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	pH (SU)	Fluoride (mg/L)
MW2		d								
			3/9/2016	0.301	122	<5	90.2	456	6.84	0.664
			6/7/2016	0.205	94.4	<5	60.1	404	6.99	<0.5
			10/3/2016	0.327	103	<5	39.8	370	7.29	<0.5
			11/18/2016	0.333	121	<5	59.5	516	7.01	1.82
			2/14/2017	0.427	122	<5	99.1	580	7.48	<0.5
			4/25/2017	0.226	87	<5	59.8	536	7.4	1.4
			6/20/2017	<0.2	112	<5	54.4	496	7.12	<0.5
			7/13/2017	0.225	110	<5	44.5	524	7.48	<0.5
			11/8/2017	<0.2	135	<5	121	592	7.02	0.55
MW3		d								
			3/9/2016	1.88	227	14.3	457	1150	6.73	0.508
			6/7/2016	2.56	213	18.4	446	1180	6.9	<0.5
			10/3/2016	1.63	147	10.5	326	794	7.33	<0.5
	x		10/3/2016	1.67	151	11.9	311	814	n/a	0.625
			11/18/2016	1.66	156	9	149	732	7.05	3.91
			2/14/2017	1.66	170	11	286	852	7.56	2.97
			4/25/2017	1.97	166	10.1	338	924	7.27	0.974
			6/20/2017	2.42	155	10.5	361	1070	6.99	0.591
			7/13/2017	2.55	169	7.81	334	1080	7.85	0.603
			11/8/2017	2.04	144	9.53	339	852	7.14	0.648
	x		11/8/2017	2.03	142	9.98	332	976	n/a	0.616
MW4		d								
			3/9/2016	1.83	227	10.5	373	896	7.25	<0.5
	x		3/9/2016	1.77	198	10.7	371	870	n/a	0.521
			6/7/2016	1.22	107	<5	344	667	7.29	<0.5
			10/3/2016	1.29	104	<5	262	546	7.52	<0.5
			11/18/2016	1.4	124	<5	310	712	7.25	0.876
			2/14/2017	1.59	139	<5	295	760	7.48	<0.5
	x		2/14/2017	1.39	123	<5	292	552	n/a	<0.5
			4/25/2017	1.39	102	5.19	244	582	7.39	<0.5
			6/20/2017	1.16	89.9	<5	210	448	7.22	<0.5
			7/13/2017	1.41	88.2	<5	196	696	7.62	<0.5
	x		7/13/2017	1.3	84.3	<5	195	512	n/a	<0.5
			11/8/2017	1.13	97.6	6.39	234	480	7.05	<0.5
MW4NC2		u								
			3/9/2016	<0.2	131	<5	46.2	546	6.94	<0.5
			6/7/2016	<0.2	129	<5	45.6	660	6.95	<0.5
			10/3/2016	<0.2	127	<5	32	542	7.33	<0.5
			11/18/2016	<0.2	132	<5	33.6	574	7.3	1.1
			2/14/2017	<0.2	148	<5	39.3	544	7.72	<0.5
			4/25/2017	<0.2	122	<5	38.3	594	7.28	<0.5
			6/20/2017	<0.2	119	<5	33.1	558	7.13	<0.5
			7/12/2017	<0.2	112	<5	32.7	664	7.98	<0.5
			11/8/2017	<0.2	133	<5	43.5	556	7.15	<0.5

SUMMARY OF DETECTION MONITORING GROUNDWATER ANALYTICAL RESULTS FOR APPENDIX III CONSTITUENTS NEBRASKA CITY STATION UNIT 1

Location	Duplicate	Well Type	Date	Boron (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	pH (SU)	Fluoride (mg/L)
MW9		d								
			3/9/2016	3.65(F1)	125	<5(F1)	284	808	7.08	0.547(F1)
			6/7/2016	2.44	126	<5	133	660	6.9	<0.5
	x		6/7/2016	2.42	130	<5	150	684	n/a	<0.5
			10/3/2016	3.57	149	<5	244	740	7.58	0.578
			11/18/2016	4.44	181	6.31	270	944	7.08	3.4
	x		11/18/2016	4.22	179	<5	281	886	n/a	1.02
			2/14/2017	2.5	139	5.95	247	770	7.52	1.78
			4/25/2017	2.5	164	5.8	291	1100	7.12	0.934
	x		4/25/2017	2.76	166	6.01	294	920	n/a	0.998
			6/20/2017	1.39	174	5.69	218	870	7.06	<0.5
	x		6/20/2017	1.46	175	6.03	227	864	n/a	0.683
			7/13/2017	1.68	144	<5	159	792	7.58	0.68
			11/8/2017	2.65	167	5.77	344	846	7.16	0.735
MW11		u								
			3/9/2016	0.811	99.6	<5	128	468	7.07	<0.5
			6/7/2016	0.704	93.4	5.16	27.1	536	7.16	<0.5
			10/3/2016	1.35	107	<5	122	528	7.36	<0.5
			11/18/2016	1.38	115	<5	119	512	7.32	0.952
			2/14/2017	1.25	118	8.57	113	532	7.18	2.09
			4/25/2017	1.02	102	6.17	94.7	508	7.26	1.44
			6/20/2017	0.843	76.1	<5	80.4	400	7.19	0.562
			7/13/2017	1.01	69.9	<5	74.2	520	7.62	0.538
			11/8/2017	1.05	87.2	<5	120	492	6.95	0.62
MW13		u								
			3/9/2016	<0.2	96.3	11.8	44.8	408	7.2	<0.5
			6/7/2016	<0.2	87.1	11.7	39.3	484	7.14	<0.5
			10/3/2016	<0.2	85.4	10.7	29.7	388	7.37	<0.5
			11/18/2016	<0.2	86.2	9.65	34.4	410	7.14	0.647
			2/14/2017	<0.2	106	20.7	39.9	472	7.29	3.64
			4/25/2017	<0.2	93.5	12.1	38.9	430	7.36	0.803
			6/20/2017	<0.2	88.6	12.7	35.6	456	7.17	0.505
			7/12/2017	<0.2	94.1	12.5	39.8	592	8.09	<0.5
			11/8/2017	<0.2	90.2	12.7	37.4	498	7	0.608

mg/L = milligrams per liter

< = not detected above the reporting limit given

Well Type

u Upgradient/Background

d Downgradient

Laboratory Reported Qualifiers

(F1) MS and/or MSD Recovery is outside acceptance limits.

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS FOR APPENDIX IV CONSTITUENTS

NEBRASKA CITY STATION UNIT 1

Location	Duplicate	Well Type	Date	Fluoride (mg/L)	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)	Ra226 (pCi/L)	Ra28 (pCi/L)	Ra226+228 (pCi/L)
MW2		d																		
			3/9/2016	0.664	<0.001	<0.002	0.123	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	0.0444	<0.005	<0.001	0.137	0.358	0.495
			6/7/2016	<0.5	<0.001	<0.002	0.0956	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	0.0718	<0.005	<0.001	0.173	0.132	0.305
			10/3/2016	<0.5	<0.001	<0.002	0.104	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05(^)	<0.0002	0.12	<0.005	<0.001	0.155	0.431	0.586
			11/18/2016	1.82	<0.001	<0.002	0.126	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	0.095	<0.005	<0.001	0.236	0.178	0.415
			2/14/2017	<0.5	<0.001	<0.002	0.123	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	0.0654	<0.005	<0.001	0.185	0.0693	0.254
			4/25/2017	1.4	<0.001	<0.002	0.0889	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	0.0489	<0.005	<0.001	0.177	0.219	0.396
			6/20/2017	<0.5	<0.001	<0.002	0.116	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	0.038	<0.005	<0.001	0.166	0.00785	0.174
			7/13/2017	<0.5	<0.001	<0.002	0.122	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	0.0374	<0.005	<0.001	0.1	0.275	0.375
MW3		d																		
			3/9/2016	0.508	<0.001	0.0135	0.112	<0.001	<0.0005	<0.005	0.00239	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001	0.175	-0.0993	0.0759
			6/7/2016	<0.5	<0.001	0.00901	0.111	<0.001	<0.0005	<0.005	0.00364	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001	0.191	0.619	0.81
			10/3/2016	<0.5	<0.001	0.00761	0.0887	<0.001	<0.0005	<0.005	0.00267	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001	0.114	0.0361	0.15
	x		10/3/2016	0.625	<0.001	0.00821	0.0911	<0.001	<0.0005	<0.005	0.00273	<0.0005	<0.05(^)	<0.0002	<0.002	<0.005	<0.001	0.102	-0.299	-0.197
			11/18/2016	3.91	<0.001	0.031	0.101	<0.001	<0.0005	<0.005	0.00334	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001	0.447	0.289	0.736
			2/14/2017	2.97	<0.001	0.0248	0.092	<0.001	<0.0005	<0.005	0.00268	0.000553	<0.05	<0.0002	<0.002	<0.005	<0.001	0.237	0.199	0.436
			4/25/2017	0.974	<0.001	0.0131	0.106	<0.001	<0.0005	<0.005	0.00144	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001	0.205	0.0367	0.242
			6/20/2017	0.591	<0.001	0.0195	0.115	<0.001	<0.0005	<0.005	0.00196	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001	0.121	0.59	0.711
			7/13/2017	0.603	<0.001	0.0302	0.116	<0.001	<0.0005	<0.005	0.00257	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001	0.0669	0.272	0.339
MW4		d																		
			3/9/2016	<0.5	<0.001	0.00336	0.195	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	0.0053	<0.005	<0.001	0.325	0.428	0.753
	x		3/9/2016	0.521	<0.001	0.00345	0.18	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	0.0125	<0.005	<0.001	0.102	0.704	0.806
			6/7/2016	<0.5	<0.001	0.0029	0.1	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	0.017	<0.005	<0.001	0.236	0.134	0.37
			10/3/2016	<0.5	<0.001	0.0032	0.09	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	0.0297	<0.005	<0.001	0.153	0.19	0.343
			11/18/2016	0.876	<0.001	0.00254	0.115	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	0.0199	<0.005	<0.001	0.371	-0.188	0.182
			2/14/2017	<0.5	<0.001	0.00433	0.119	<0.001	<0.0005	<0.005	<0.0005	0.00052	<0.05	<0.0002	0.0139	<0.005	<0.001	0.0531	-0.354	-0.301
	x		2/14/2017	<0.5	<0.001	0.00384	0.107	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	0.0124	<0.005	<0.001	0.176	0.617	0.793
			4/25/2017	<0.5	<0.001	0.00344	0.0968	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	0.0249	<0.005	<0.001	0.261	0.0526	0.313
			6/20/2017	<0.5	<0.001	0.00334	0.0679	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	0.0356	<0.005	<0.001	0.0939	-0.135	-0.0408
			7/13/2017	<0.5	<0.001	0.00381	0.0687	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	0.0317	<0.005	<0.001	0.0634	0.0267	0.0901
	x		7/13/2017	<0.5	<0.001	0.00347	0.0681	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	0.0287	<0.005	<0.001	0.113	-0.0767	0.0368
MW4NC2		u																		
			3/9/2016	<0.5	<0.001	<0.002	0.281	<0.001	<0.0005	<0.005	<0.0005	0.00199	<0.05	<0.0002	0.00272	<0.005	<0.001	0.305	1.24	1.54
			6/7/2016	<0.5	<0.001	<0.002	0.293	<0.001	<0.0005	<0.005	<0.0005	0.000951(B)	<0.05	<0.0002	0.00283	<0.005	<0.001	0.323	0.884	1.21
			10/3/2016	<0.5	<0.001	<0.002	0.283	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	0.00421	<0.005	<0.001	0.258	0.936	1.19
			11/18/2016	1.1	<0.001	<0.002	0.283	<0.001	<0.0005	<0.005	<0.0005	0.00127	<0.05	<0.0002	0.00288	<0.005	<0.001	0.303	0.681	0.984
			2/14/2017	<0.5	<0.001	<0.002	0.3	<0.001	<0.0005	<0.005	0.00129	0.0032	<0.05	<0.0002	0.0028	<0.005	<0.001	0.219	0.675	0.894
			4/25/2017	<0.5	<0.001	<0.002	0.3	<0.001	<0.0005	<0.005	<0.0005	0.000714	<0.05	<0.0002	0.00323	<0.005	<0.001	0.611	0.62	1.23
			6/20/2017	<0.5	<0.001	<0.002	0.258	<0.001	<0.0005	<0.005	<0.0005	0.000754	<0.05	<0.0002	0.00551	0.00593	<0.001	0.282	0.878	1.16
			7/12/2017	<0.5	<0.001	<0.002	0.236	<0.001	<0.0005	<0.005	<0.0005	0.000787	<0.05	<0.0002	0.00326	<0.005	<0.001	0.293	0.468	0.76

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS FOR APPENDIX IV CONSTITUENTS

NEBRASKA CITY STATION UNIT 1

Location	Duplicate	Well Type	Date	Fluoride (mg/L)	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)	Ra226 (pCi/L)	Ra28 (pCi/L)	Ra226+228 (pCi/L)
MW9		d																		
			3/9/2016	0.547(F1)	<0.001(F2)	0.00995(F2)	0.0865(F2)	<0.001(F2)	<0.0005(F2)	<0.005(F2)	0.00121(F2)	<0.0005(F2)	<0.05	<0.0002	0.0111(F1)	0.0634(F1)	<0.001(F2)	0.103	0.527	0.629
			6/7/2016	<0.5	<0.001	0.00624	0.0816	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	0.0204	0.00958	<0.001	0.156	0.421	0.577
	x		6/7/2016	<0.5	<0.001	0.00553	0.0814	<0.001	<0.0005	0.0209	<0.0005	<0.0005	<0.05	<0.0002	0.0266	0.0117	<0.001	0.139	0.221	0.361
			10/3/2016	0.578	<0.001	0.00605	0.0847	<0.001	<0.0005	<0.005	0.000683	<0.0005	<0.05(^)	<0.0002	0.0435	0.0388	<0.001	0.143	0.0868	0.23
			11/18/2016	3.4	<0.001	0.00828	0.106	<0.001	<0.0005	<0.005	0.000648	<0.0005	<0.05	<0.0002	0.0222	0.0162	<0.001	0.614	0.512	1.13
	x		11/18/2016	1.02	<0.001	0.00651	0.106	<0.001	<0.0005	<0.005	0.000527	<0.0005	<0.05	<0.0002	0.0223	0.0166	<0.001	0.135	0.0982	0.233
			2/14/2017	1.78	<0.001	0.0122	0.0836	<0.001	<0.0005	<0.005	0.00147	<0.0005	<0.05	<0.0002	0.0169	0.0138	<0.001	0.154	0.271	0.425
			4/25/2017	0.934	<0.001	0.0164	0.115	<0.001	<0.0005	<0.005	0.00124	<0.0005	<0.05	<0.0002	0.0473	0.0101	<0.001	0.344	0.248	0.592
	x		4/25/2017	0.998	<0.001	0.0121	0.116	<0.001	<0.0005	<0.005	0.00187	<0.0005	<0.05	<0.0002	0.0444	0.012	<0.001	0.195	0.375	0.57
			6/20/2017	<0.5	<0.001	0.01	0.114	<0.001	<0.0005	<0.005	0.00295	<0.0005	<0.05	<0.0002	0.0486	<0.005	<0.001	0.164	0.309	0.473
	x		6/20/2017	0.683	<0.001	0.0101	0.111	<0.001	<0.0005	<0.005	0.0021	<0.0005	<0.05	<0.0002	0.0498	<0.005	<0.001	0.165	0.173	0.337
			7/13/2017	0.68	<0.001	0.00885	0.0952	<0.001	<0.0005	<0.005	0.000878	<0.0005	<0.05	<0.0002	0.0302	<0.005	<0.001	0.108	0.186	0.294
MW11		u																		
			3/9/2016	<0.5	<0.001	<0.002	0.215	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	0.00361	<0.005	<0.001	0.21	0.504	0.714
			6/7/2016	<0.5	<0.001	<0.002	0.212	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	0.00477	<0.005	<0.001	0.19	0.4	0.589
			10/3/2016	<0.5	<0.001	<0.002	0.233	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	0.0082	<0.005	<0.001	0.237	0.86	1.1
			11/18/2016	0.952	<0.001	<0.002	0.251	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	0.00659	<0.005	<0.001	0.513	0.612	1.13
			2/14/2017	2.09	<0.001	<0.002	0.246	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	0.00471	<0.005	<0.001	0.123	0.102	0.225
			4/25/2017	1.44	<0.001	<0.002	0.249	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	0.005	<0.005	<0.001	0.142	0.216	0.358
			6/20/2017	0.562	0.00235	<0.002	0.156	<0.001	<0.0005	<0.005	0.000549	<0.0005	<0.05	<0.0002	0.00788	<0.005	<0.001	0.163	0.235	0.398
			7/13/2017	0.538	<0.001	<0.002	0.146	<0.001	<0.0005	<0.005	0.00085	<0.0005	<0.05	0.000262	0.00905	<0.005	<0.001	0.166	0.23	0.397
MW13		u																		
			3/9/2016	<0.5	<0.001	0.00492	0.302	<0.001	<0.0005	<0.005	0.000817	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001	0.402	0.737	1.14
			6/7/2016	<0.5	<0.001	0.00591	0.317	<0.001	<0.0005	<0.005	0.00118	0.000623(B)	<0.05	<0.0002	<0.002	<0.005	<0.001	0.359	0.331	0.69
			10/3/2016	<0.5	<0.001	0.00709	0.319	<0.001	<0.0005	<0.005	0.00103	<0.0005	<0.05	<0.0002	0.00264	<0.005	<0.001	0.444	0.562	1.01
			11/18/2016	0.647	<0.001	0.0058	0.333	<0.001	<0.0005	<0.005	0.000916	<0.0005	<0.05	<0.0002	0.00235	<0.005	<0.001	0.208	0.537	0.745
			2/14/2017	3.64	<0.001	0.00304	0.349	<0.001	<0.0005	<0.005	0.000925	<0.0005	<0.05	<0.0002	0.00228	<0.005	<0.001	0.246	0.286	0.532
			4/25/2017	0.803	<0.001	0.00269	0.358	<0.001	<0.0005	<0.005	0.00141	0.000522	<0.05	<0.0002	<0.002	<0.005	<0.001	0.159	0.27	0.429
			6/20/2017	0.505	<0.001	0.00268	0.311	<0.001	<0.0005	<0.005	0.00119	0.00171	<0.05	<0.0002	<0.002	<0.005	<0.001	0.171	0.312	0.483
			7/12/2017	<0.5	<0.001	0.00325	0.33	<0.001	<0.0005	<0.005	0.00108	<0.0005	<0.05	<0.0002	0.00206	<0.005	<0.001	0.244	0.258	0.502

mg/L = milligrams per liter

< = not detected above the reporting limit given

Well Type

u Upgradient/Background

d Downgradient

Laboratory Reported Qualifiers

(^) ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

(F1) MS and/or MSD Recovery is outside acceptance limits.

(F2) MS/MSD RPD exceeds control limits

(B) Compound was found in the blank and sample

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-2	Date: 3/9/2016
Sample Number: MW-2	Weather Conditions: Cloudy, Cool, 49°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	8.90	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	2:02 PM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	16.4	10.) Purge Rate (mL/min)	300
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:14
5.) Casing Volume (L)	4.6310	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.50	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	2:05 PM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
2:15 PM	2.50	11.13	1.10	4	6.96	0.530	9.21
2:17 PM	3.50	11.23	0.94	4	6.90	0.529	9.21
2:19 PM	4.50	11.30	0.87	4	6.84	0.527	9.21

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-2	2:19 PM	11.30	0.87	4.00	6.84	0.527	9.21

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	300 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-3	Date: 3/9/2016
Sample Number: MW-3	Weather Conditions: Cloudy, Cool, 49°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	8.92	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	11:55 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	22.2	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:32
5.) Casing Volume (L)	8.1999	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	8.00	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	11:56 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
12:20 PM	6.00	12.06	0.35	50	6.75	1.154	9.40
12:22 PM	6.50	12.05	0.30	43	6.74	1.153	9.40
12:24 PM	7.00	12.01	0.30	39	6.74	1.152	9.40
12:26 PM	7.50	12.08	0.27	33	6.73	1.152	9.40
12:28 PM	8.00	12.07	0.25	20.0	6.73	1.151	9.40

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-3	12:28 PM	12.07	0.25	20.00	6.73	1.151	9.40

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	250 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-4	Date: 3/9/2016
Sample Number: MW-4	Weather Conditions: Cloudy, Cool, 49°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	9.50	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	12:45 PM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	17.7	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:17
5.) Casing Volume (L)	5.0632	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.00	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	12:47 PM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
1:00 PM	3.00	12.48	0.45	5	7.25	0.958	9.50
1:02 PM	3.50	12.57	0.38	4	7.26	0.951	9.50
1:04 PM	4.00	12.57	0.34	4	7.25	0.949	9.50

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-4	1:04 PM	12.57	0.34	4.00	7.25	0.949	9.50
DUP	1:06 PM	12.57	0.34	4.00	7.25	0.95	9.50

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	250 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: NC2MW-4	Date: 3/9/2016
Sample Number: NC2MW-4	Weather Conditions: Cloudy, Cool, 49°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	6.95	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:15 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	14.5	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:19
5.) Casing Volume (L)	4.6618	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	3.50	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	11:15 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
11:30 AM	2.50	10.23	1.41	24	6.94	0.648	7.20
11:32 AM	3.00	10.62	1.12	19	6.95	0.653	7.48
11:34 AM	3.20	10.40	1.03	16	6.95	0.648	7.48
10:39 AM	3.50	10.22	1.20	16	6.94	0.648	7.48

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
NC2MW-4	11:34 AM	10.22	1.20	16.00	6.94	0.648	7.48

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	200 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-9	Date: 3/9/2016
Sample Number: MW-9	Weather Conditions: Cloudy, Cool, 49°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	9.3	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	1:25 PM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	22.4	10.) Purge Rate (mL/min)	300
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:18
5.) Casing Volume (L)	8.0888	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	5.00	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	1:26 PM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
1:40 PM	3.00	12.44	0.83	17	7.12	0.877	9.50
1:42 PM	4.00	12.36	0.71	11	7.10	0.865	9.50
1:44 PM	5.00	12.43	0.68	11	7.08	0.864	9.50

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-9	1:44 PM	12.43	0.68	11.00	7.08	0.864	9.50

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	300 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-11	Date: 3/9/2016
Sample Number: MW-11	Weather Conditions: Cloudy, Cool, 49°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	6.9	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	11:08 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	21.85	10.) Purge Rate (mL/min)	300
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:19
5.) Casing Volume (L)	9.2311	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	5.50	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	11:15 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
11:30 AM	4.50	11.93	2.32	6	7.07	0.542	7.05
11:32 AM	5.00	11.91	2.29	5	7.03	0.541	7.04
11:34 AM	5.50	11.92	2.09	5	7.07	0.542	7.04

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-11	11:34 AM	11.92	2.09	5.00	7.07	0.542	7.04

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	300 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-13	Date: 3/9/2016
Sample Number: MW-13	Weather Conditions: Cloudy, Cool, 49°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	4.62	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	9:20 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	15.19	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:16
5.) Casing Volume (L)	6.5266	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.20	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	9:33 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
9:45 AM	3.00	10.57	0.73	6.5	7.12	0.493	4.80
9:47 AM	3.50	10.48	0.66	6.5	7.18	0.489	4.80
9:49 AM	4.20	10.42	0.63	6.5	7.20	0.487	4.80

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-13	9:49 AM	10.42	0.63	6.50	7.20	0.487	4.80

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	250 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

NEBRASKA CITY UNIT #1

Water Levels Prior to Sampling

	Time	Water Level
MW-2	9:45	8.9
MW-3	9:05	8.95
MW-4	8:48	9.5
MW-5	8:56	10.82
MW-6	8:50	7.55
MW-7	8:35	8.25
MW-8	8:40	8.6
MW-9	9:00	9.3
MW-11	8:33	6.9
MW-12	9:07	9
MW-13	8:23	4.61
NC2MW-4	8:38	6.95

Equipment Calibration Sheet

Date: 3/9/2016
Time: 7:15 AM

Person Calibrating Instrument: Brad Sojka

Instrument Type	Instrument Brand	Instrument Model	Instrument Serial Number
Portable Turbidimeter	LaMotte	2020E	131-3410

Parameter:	Reading	Units
<0.1 Primary Standard	0.09	Ntu
1.0 Primary Standard	1.02	Ntu
<10.0 Primary Standard	10.02	Ntu

Comments:

Equipment Calibration Sheet

Date: 3/9/2016
Time: 7:20 AM

Person Calibrating Instrument: Brad Sojka

Instrument Type	Instrument Brand	Instrument Model	Instrument Serial Number
Multiparameter Water Meter	YSI	556 MPS	10H101496

Parameter:	Reading			Temp	Units
pH 7	7.03	to	7.01	22.38°C	N/A
pH 4	4.03	to	4.01	22.15°C	N/A
pH 10	10.05	to	10.00	22.26°C	N/A
Conductivity	0.98	to	1.002	22.12°C	µS
DO (Start)	99.8%	Saturation	9.50mg/L	21.45°C	mg/L
DO (Cal)	99.2%	Saturation	9.10mg/L	21.37°C	mg/L

Comments:

.

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-2	Date: 6/7/2016
Sample Number: MW-2	Weather Conditions: Sunny, Clear, 85°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	7.2	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:10 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	16.4	10.) Purge Rate (mL/min)	300
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	16
5.) Casing Volume (L)	5.6807	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.5	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	10:12 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
10:24 AM	3.50	13.97	1.20	5	7.08	0.421	7.35
10:26 AM	4.00	14.01	1.17	5	7.00	0.418	7.35
10:28 AM	4.50	13.95	1.15	5	6.99	0.418	7.35

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-2	10:28 AM	13.95	1.15	5	6.99	0.418	7.35

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	300 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-3	Date: 6/7/2016
Sample Number: MW-3	Weather Conditions: Sunny, Clear, 85°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	7.75	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	11:10 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	22.2	10.) Purge Rate (mL/min)	300
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	26
5.) Casing Volume (L)	8.9223	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	8	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	11:12 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
11:34 AM	7.00	12.95	0.18	22	6.88	1.084	7.85
11:36 AM	7.50	12.88	0.18	18	6.89	1.084	7.87
11:38 AM	8.00	12.80	0.17	17	6.90	1.084	7.86

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-3	11:38 AM	12.80	0.17	17	6.90	1.084	7.86

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	300 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-4	Date: 6/7/2016
Sample Number: MW-4	Weather Conditions: Sunny, Clear, 85°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	7.4	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:36 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	17.7	10.) Purge Rate (mL/min)	300
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	19
5.) Casing Volume (L)	6.3599	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	5.5	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	10:37 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
10:50 AM	4.00	13.60	0.20	5	7.12	0.559	7.46
10:52 AM	4.50	13.85	0.19	5	7.20	0.561	7.46
10:54 AM	5.00	13.96	0.19	4	7.25	0.565	7.46
10:56 AM	5.50	14.02	0.18	4	7.29	0.570	7.46

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-4	10:56 AM	14.02	0.18	4	7.29	0.570	7.46

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	300 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: NC2MW-4	Date: 6/7/2016
Sample Number: NC2MW-4	Weather Conditions: Sunny, Clear, 85°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	6.05	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	9:15 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	14.5	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	15
5.) Casing Volume (L)	5.2176	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	3	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	9:16 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
9:27 AM	2.00	12.95	1.79	9.5	6.98	0.639	6.15
9:29 AM	2.50	12.99	1.82	9	6.96	0.639	6.15
9:31 AM	3.00	13.10	1.88	8	6.95	0.639	6.15

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
NC2MW-4	9:31 AM	13.10	1.88	8	6.95	0.639	6.15

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	200 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-9	Date: 6/7/2016
Sample Number: MW-9	Weather Conditions: Sunny, Clear, 85°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	7.88	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	11:55 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	22.4	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	23
5.) Casing Volume (L)	8.9656	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	6	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	11:56 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
12:15 PM	5.00	14.35	0.34	9	6.89	0.654	8.00
12:17 PM	5.50	14.37	0.35	9	6.90	0.656	8.00
12:19 PM	6.00	14.41	0.34	9	6.90	0.656	8.00

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-9	12:19 PM	14.41	0.34	9	6.90	0.656	8.00
DUP	12:21 PM	14.41	0.34	9	6.90	0.656	8.00

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	250 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-11	Date: 6/7/2016
Sample Number: MW-11	Weather Conditions: Sunny, Clear, 85°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	5.85	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	9:45 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	21.85	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	15
5.) Casing Volume (L)	9.8794	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	4	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	9:46 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
9:57 AM	3.00	13.51	0.64	5	7.09	0.498	5.98
9:59 AM	3.50	13.53	0.57	5	7.12	0.499	5.98
10:01 AM	4.00	13.57	0.56	5	7.16	0.501	5.98

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-11	10:01 AM	13.57	0.56	5	7.16	0.501	5.98

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	250 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-13	Date: 6/7/2016
Sample Number: MW-13	Weather Conditions: Sunny, Clear, 85°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	3.95	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	8:40 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	15.19	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	19
5.) Casing Volume (L)	6.9403	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	3.5	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	8:47 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
9:02 AM	2.50	14.02	0.51	16	7.21	0.475	4.03
9:04 AM	3.00	13.91	0.50	14	7.17	0.473	4.04
9:06 AM	3.50	13.92	0.49	10	7.14	0.473	4.04

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-13	9:06 AM	13.92	0.49	10	7.14	0.473	4.04

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	200 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

NEBRASKA CITY UNIT #1

Water Levels Prior to Sampling

	Time	Water Level
MW-2	8:19	7.04
MW-3	8:25	7.75
MW-4	8:21	7.41
MW-5	8:33	9.67
MW-6	8:32	6.31
MW-7	8:16	6.43
MW-8	8:15	6.8
MW-9	8:23	7.88
MW-11	8:29	5.85
MW-12	8:27	7.8
MW-13	8:40	3.95
NC2MW-4	8:38	6.06

Equipment Calibration Sheet

Date: 6/7/2016
Time: 7:20 AM

Person Calibrating Instrument: Brad Sojka

Instrument Type	Instrument Brand	Instrument Model	Instrument Serial Number
Portable Turbidimeter	LaMotte	2020E	131-3410

Parameter:	Reading	Units
<0.1 Primary Standard	0.10	Ntu
1.0 Primary Standard	1.01	Ntu
<10.0 Primary Standard	10.02	Ntu

Comments:

Equipment Calibration Sheet

Date: 6/7/2016
Time: 7:20 AM

Person Calibrating Instrument: Brad Sojka

Instrument Type	Instrument Brand	Instrument Model	Instrument Serial Number
Multiparameter Water Meter	YSI	556 MPS	10H101496

Parameter:	Reading	Temp	Units
pH 7	7.8 to 7.00	22.32°	N/A
pH 4	4.14 to 4.01	22.20°	N/A
pH 10	9.93 to 10.0	22.23°	N/A
Conductivity	0.967 to 1.00	22.05°	µS
DO (Start)	99.6% Saturation 8.45 mg/L	21.65°	mg/L
DO (Cal)	98.5% Saturation 8.72 mg/L	21.69°	mg/L

Comments:

.

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-2	Date: 10/3/2016
Sample Number: MW-2	Weather Conditions: Cloudy, Cool, 58°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	8.45	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:32 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	16.4	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:15
5.) Casing Volume (L)	4.9088	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.00	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	10:33 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
10:44 AM	3.00	19.50	1.26	5	7.27	0.553	8.51
10:46 AM	3.50	19.61	1.36	5	7.28	0.551	8.51
10:48 AM	4.00	19.74	1.19	5	7.29	0.550	8.51

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-2	10:48 AM	19.74	1.19	5.00	7.29	0.550	8.51

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	250 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-3	Date: 10/3/2016
Sample Number: MW-3	Weather Conditions: Cloudy, Cool, 58°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	8.35	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	11:46 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	22.2	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:16
5.) Casing Volume (L)	8.5519	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	3.00	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	11:48 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
12:00 PM	2.00	20.91	0.32	10	7.37	0.983	8.41
12:02 PM	2.50	20.94	0.47	10	7.33	0.970	8.41
12:04 PM	3.00	20.86	0.51	10	7.33	0.963	8.41

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-3	12:04 PM	20.86	0.51	10.00	7.33	0.963	8.41
DUP	12:06 PM	20.86	0.51	10.00	7.33	0.96	8.41

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	200 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-4	Date: 10/3/2016
Sample Number: MW-4	Weather Conditions: Cloudy, Cool, 58°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	9.10	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	11:08 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	17.7	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:16
5.) Casing Volume (L)	5.3102	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.00	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	11:10 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
11:22 AM	3.00	20.67	0.35	5	7.51	0.581	9.15
11:24 AM	3.50	20.62	0.34	5	7.51	0.581	9.15
11:26 AM	4.00	20.49	0.31	5	7.52	0.579	9.15

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-4	11:26 AM	20.49	0.31	5.00	7.52	0.579	9.15
DUP	8:00 AM	20.49	0.31	5.00	7.52	0.58	9.15

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	250 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: NC2MW-4	Date: 7/12/2017
Sample Number: NC2MW-4	Weather Conditions: Cloudy, Cool, 58°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	6.25	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	9:20 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	14.5	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:15
5.) Casing Volume (L)	5.0941	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.00	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	9:21 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
9:32 AM	3.00	12.52	1.88	2	7.33	0.712	6.30
9:34 AM	3.50	12.66	1.85	2	7.33	0.712	6.30
9:36 AM	4.00	12.74	1.86	2	7.33	0.712	6.30

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
NC2MW-4	9:36 AM	12.74	1.86	2.00	7.33	0.712	6.30

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	250 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-9	Date: 10/3/2016
Sample Number: MW-9	Weather Conditions: Cloudy, Cool, 58°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	8.76	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	12:40 PM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	22.4	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:16
5.) Casing Volume (L)	8.4222	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.00	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	12:42 PM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
12:54 PM	3.00	18.65	0.61	8	7.55	0.793	8.82
12:56 PM	3.50	18.61	0.63	8	7.59	0.792	8.82
12:58 PM	4.00	18.74	0.65	7	7.58	0.785	8.82

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-9	12:58 PM	18.74	0.65	7.00	7.58	0.785	8.82

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	250 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-11	Date: 10/3/2016
Sample Number: MW-11	Weather Conditions: Cloudy, Cool, 58°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	6.34	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	9:56 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	21.85	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:15
5.) Casing Volume (L)	9.5769	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	3.50	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	9:57 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
10:08 AM	2.50	16.69	0.51	6	7.46	0.628	6.36
10:10 AM	3.00	16.72	0.48	5	7.48	0.627	6.37
10:12 AM	3.50	16.81	0.45	5	7.36	0.627	6.37

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-11	10:12 AM	16.81	0.45	5.00	7.36	0.627	6.37

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	250 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-13	Date: 10/3/2016
Sample Number: MW-13	Weather Conditions: Cloudy, Cool, 58°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	4.03	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	8:45 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	15.19	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:15
5.) Casing Volume (L)	6.8909	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	3.00	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	8:46 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
8:57 AM	2.00	12.21	2.23	15	7.36	0.811	4.10
8:59 AM	2.50	12.30	2.20	15	7.36	0.812	4.10
9:01 AM	3.00	12.38	2.20	10	7.37	0.814	4.10

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-13	9:01 AM	12.38	2.20	10.00	7.37	0.814	4.10

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	200 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

NEBRASKA CITY UNIT #1

Water Levels Prior to Sampling

	Time	Water Level
MW-2	8:33	8.45
MW-3	8:30	8.35
MW-4	8:35	9.1
MW-5	8:40	12.99
MW-6	8:37	6.86
MW-7	8:20	7.94
MW-8	8:21	8.53
MW-9	8:28	8.76
MW-11	8:23	6.34
MW-12	8:25	8.4
MW-13	8:10	4.03
NC2MW-4	8:15	6.25

Equipment Calibration Sheet

Date: 10/3/2106
Time: 7:15 AM

Person Calibrating Instrument: Brad Sojka

Instrument Type	Instrument Brand	Instrument Model	Instrument Serial Number
Portable Turbidimeter	LaMotte	2020E	131-3410

Parameter:	Reading	Units
<0.1 Primary Standard	0.09	Ntu
1.0 Primary Standard	1.02	Ntu
<10.0 Primary Standard	10.04	Ntu

Comments:

Equipment Calibration Sheet

Date: 10/3/2016
Time: 7:20 AM

Person Calibrating Instrument: Brad Sojka

Instrument Type	Instrument Brand	Instrument Model	Instrument Serial Number
Multiparameter Water Meter	YSI	556 MPS	10H101496

Parameter:	Reading			Temp	Units
pH 7	7.04	to	7.01	22.18°C	N/A
pH 4	4.03	to	4.01	22.20°C	N/A
pH 10	10.04	to	10.02	22.25°C	N/A
Conductivity	0.97	to	1.000	22.18°C	µS
DO (Start)	99.2%	Saturation	9.50mg/L	21.42°C	mg/L
DO (Cal)	99.7%	Saturation	9.07mg/L	21.39°C	mg/L

Comments:

.

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-2	Date: 11/18/2016
Sample Number: MW-2	Weather Conditions: Sunny, Clear, 70°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	9.3	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:05 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	16.4	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	16
5.) Casing Volume (L)	4.3840	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	3.5	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	10:06 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
10:18 AM	2.50	17.42	1.60	7	7.00	0.496	9.42
10:20 AM	3.00	14.36	1.58	7	7.00	0.510	9.43
10:22 AM	3.50	17.29	1.54	5	7.01	0.502	9.44

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-2	10:22 AM	17.29	1.54	5	7.01	0.502	9.44

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	200 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-3	Date: 11/18/2016
Sample Number: MW-3	Weather Conditions: Sunny, Clear, 70°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	9.35	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	11:32 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	22.2	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	16
5.) Casing Volume (L)	7.9344	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	8	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	11:33 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
11:45 AM	3.00	13.42	1.23	12	7.06	0.784	9.50
11:47 AM	3.50	13.45	1.20	10	7.05	0.788	9.50
11:49 AM	4.00	13.59	1.17	10	7.05	0.790	9.50

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-3	11:49 AM	13.59	1.17	10	7.05	0.790	9.50

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	250 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-4	Date: 11/18/2016
Sample Number: MW-4	Weather Conditions: Sunny, Clear, 70°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	10.1	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:40 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	17.7	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	16
5.) Casing Volume (L)	4.6927	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	3.5	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	10:41 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
10:53 AM	2.50	15.47	1.13	7	7.25	0.661	10.23
10:55 AM	3.00	15.51	1.10	7	7.25	0.660	10.23
10:57 AM	3.50	15.55	1.08	5	7.25	0.661	10.23

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-4	10:57 AM	15.55	1.08	5	7.25	0.661	10.23

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	200 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: NC2MW-4	Date: 11/18/2016
Sample Number: NC2MW-4	Weather Conditions: Sunny, Clear, 70°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	6.79	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	8:53 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	14.5	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	15
5.) Casing Volume (L)	4.7606	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	3.5	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	8:55 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
9:06 AM	2.50	15.02	1.80	10	7.31	0.830	6.90
9:08 AM	3.00	15.08	1.77	10	7.30	0.830	6.90
9:10 AM	3.50	15.12	1.73	10	7.30	0.830	6.90

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
NC2MW-4	9:10 AM	15.12	1.73	10	7.30	0.830	6.90

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	250 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-9	Date: 11/18/2016
Sample Number: MW-9	Weather Conditions: Sunny, Clear, 70°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	9.75	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	11:00 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	22.4	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	16
5.) Casing Volume (L)	7.8109	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	4	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	11:02 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
11:14 AM	3.00	13.88	0.90	7	7.10	0.789	9.85
11:16 AM	3.50	13.85	0.87	7	7.10	0.789	9.85
11:18 AM	4.00	13.99	0.83	7	7.08	0.790	9.85

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-9	11:18 AM	13.99	0.83	7	7.08	0.790	9.85
DUP	11:20 AM	13.99	0.83	7	7.08	0.790	9.85

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	250 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-11	Date: 11/18/2016
Sample Number: MW-11	Weather Conditions: Sunny, Clear, 70°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	7.35	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	9:20 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	21.85	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	16
5.) Casing Volume (L)	8.9532	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	3	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	9:22 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
9:34 AM	2.00	14.80	1.10	5	7.32	0.579	7.40
9:36 AM	2.50	14.85	1.08	5	7.30	0.581	7.40
9:38 AM	3.00	14.93	1.08	5	7.32	0.580	7.40

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-11	9:38 AM	14.93	1.08	5	7.32	0.580	7.40

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	200 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-13	Date: 11/18/2016
Sample Number: MW-13	Weather Conditions: Sunny, Clear, 70°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	4.43	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	8:38 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	15.19	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	15
5.) Casing Volume (L)	6.6439	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	3	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	8:42 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
8:53 AM	2.00	15.59	1.10	10	7.75	0.725	4.61
8:55 AM	2.50	15.65	1.08	10	7.75	0.724	4.61
8:57 AM	3.00	15.71	1.07	8	7.75	0.724	4.61

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-13	8:57 AM	8:57 AM	0.49	10	7.14	0.473	4.04

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	200 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

NEBRASKA CITY UNIT #1

Water Levels Prior to Sampling

	Time	Water Level
MW-2	8:23	9.3
MW-3	8:32	9.36
MW-4	8:25	10.1
MW-5	8:29	11.25
MW-6	8:27	8.2
MW-7	8:20	8.72
MW-8	8:21	9.1
MW-9	8:33	7.75
MW-11	8:35	7.37
MW-12	8:34	9.35
MW-13	8:15	4.43
NC2MW-4	8:17	6.79

Equipment Calibration Sheet

Date: 11/18/2016
Time: 7:00 AM

Person Calibrating Instrument: Brad Sojka

Instrument Type	Instrument Brand	Instrument Model	Instrument Serial Number
Portable Turbidimeter	LaMotte	2020E	131-3410

Parameter:	Reading	Units
<0.1 Primary Standard	0.08	Ntu
1.0 Primary Standard	1.05	Ntu
<10.0 Primary Standard	10.07	Ntu

Comments:

Equipment Calibration Sheet

Date: 11/18/2016
Time: 7:00 AM

Person Calibrating Instrument: Brad Sojka

Instrument Type	Instrument Brand	Instrument Model	Instrument Serial Number
Multiparameter Water Meter	YSI	556 MPS	10H101496

Parameter:	Reading	Temp	Units
pH 7	7.11 to 7.00	22.32°	N/A
pH 4	4.08 to 4.01	22.20°	N/A
pH 10	10.05 to 10.0	22.23°	N/A
Conductivity	1.02 to 1.00	22.05°	µS
DO (Start)	99.8% Saturation 8.68 mg/L	21.65°	mg/L
DO (Cal)	98.0% Saturation 8.94 mg/L	21.69°	mg/L

Comments:

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Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-2	Date: 2/14/2017
Sample Number: MW-2	Weather Conditions: Sunny, Clear, 40°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	10.10	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:02 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	16.4	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:16
5.) Casing Volume (L)	3.8900	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.00	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	10:04 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
10:16 AM	3.00	11.52	2.35	8	7.50	0.436	10.36
10:18 AM	3.50	11.50	2.33	8	7.48	0.436	10.37
10:20 AM	4.00	11.52	2.36	8	7.48	0.438	10.37

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-2	10:20 AM	11.52	2.36	8.00	7.48	0.438	10.37

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	250 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-3	Date: 2/14/2017
Sample Number: MW-3	Weather Conditions: Sunny, Clear, 40°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	9.9	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	11:46 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	22.2	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:16
5.) Casing Volume (L)	7.5948	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	3.50	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	11:48 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
12:00 PM	2.50	12.48	1.09	10	7.58	0.730	10.17
12:02 PM	3.00	12.46	1.05	10	7.58	0.732	10.15
12:04 PM	3.50	12.48	1.01	9	7.56	0.730	10.17

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-3	12:04 PM	12.48	1.01	9.00	7.56	0.730	10.17

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	200 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-4	Date: 2/14/2017
Sample Number: MW-4	Weather Conditions: Sunny, Clear, 40°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	10.85	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:26 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	17.7	10.) Purge Rate (mL/min)	300
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:16
5.) Casing Volume (L)	4.2296	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.50	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	10:28 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
10:40 AM	3.50	13.32	1.01	14	7.51	0.536	11.14
10:42 AM	4.00	13.30	1.05	11	7.48	0.561	11.12
10:44 AM	4.50	13.28	1.04	11	7.48	0.560	11.12

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-4	10:44 AM	13.28	1.04	11.00	7.48	0.560	11.12
DUP	10:46 AM	13.28	1.04	11.00	7.48	0.560	11.12

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	300 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: NC2MW-4	Date: 7/12/2017
Sample Number: NC2MW-4	Weather Conditions: Sunny, Clear, 40°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	7.52	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	9:24 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	14.5	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:17
5.) Casing Volume (L)	4.3099	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.00	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	9:25 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
9:38 AM	3.00	9.44	2.85	12	7.75	0.548	7.75
9:40 AM	3.50	9.42	2.80`	10	7.74	0.544	7.74
9:42 AM	4.00	9.38	2.71	8	7.72	0.546	7.74

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
NC2MW-4	9:42 AM	9.38	2.71	8.00	7.72	0.546	7.74

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	250 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-9	Date: 2/14/2017
Sample Number: MW-9	Weather Conditions: Sunny, Clear, 40°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	10.4	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	11:16 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	22.4	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:16
5.) Casing Volume (L)	7.4096	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	3.50	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	11:18 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
11:30 AM	2.50	12.51	1.94	9	7.54	0.662	10.57
11:32 AM	3.00	12.50	1.90	8	7.52	0.659	10.56
11:34 AM	3.50	12.47	1.87	8	7.52	0.651	10.57

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-9	11:34 AM	12.47	1.87	8.00	7.52	0.651	10.57

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	200 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-11	Date: 2/14/2017
Sample Number: MW-11	Weather Conditions: Sunny, Clear, 40°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	7.95	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	12:35 PM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	21.85	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:17
5.) Casing Volume (L)	8.5827	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.00	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	12:37 PM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
12:50 PM	3.00	13.03	2.12	10	7.16	0.570	8.18
12:52 PM	3.50	12.95	2.08	10	7.20	0.568	8.20
12:54 PM	4.00	12.93	1.97	9	7.18	0.560	8.22

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-11	12:54 PM	12.93	1.97	9.00	7.18	0.560	8.22

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	250 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-13	Date: 2/14/2017
Sample Number: MW-13	Weather Conditions: Sunny, Clear, 40°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	5.2	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	8:55 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	15.19	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:17
5.) Casing Volume (L)	6.1685	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	3.50	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	8:57 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
9:10 AM	2.50	9.56	2.10	10	7.23	0.424	5.41
9:12 AM	3.00	9.58	2.08	9	7.28	0.422	5.43
9:14 AM	3.50	9.58	2.05	9	7.29	0.421	5.43

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-13	9:14 AM	9.58	2.05	9.00	7.29	0.421	5.43

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	200 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

NEBRASKA CITY UNIT #1

Water Levels Prior to Sampling

	Time	Water Level
MW-2	8:25	10.1
MW-3	8:34	9.91
MW-4	8:26	10.85
MW-5	8:30	11.7
MW-6	8:28	8.8
MW-7	8:42	9.6
MW-8	8:40	10
MW-9	8:33	10.41
MW-11	8:38	7.95
MW-12	8:36	9.95
MW-13	8:20	5.2
NC2MW-4	8:22	7.52

Equipment Calibration Sheet

Date: 2/14/2017
Time: 7:15 AM

Person Calibrating Instrument: Brad Sojka

Instrument Type	Instrument Brand	Instrument Model	Instrument Serial Number
Portable Turbidimeter	LaMotte	2020E	131-3410

Parameter:	Reading	Units
<0.1 Primary Standard	0.10	Ntu
1.0 Primary Standard	1.02	Ntu
<10.0 Primary Standard	10.01	Ntu

Comments:

Equipment Calibration Sheet

Date: 2/14/2017
Time: 7:20 AM

Person Calibrating Instrument: Brad Sojka

Instrument Type	Instrument Brand	Instrument Model	Instrument Serial Number
Multiparameter Water Meter	YSI	556 MPS	10H101496

Parameter:	Reading			Temp	Units
pH 7	7.02	to	7.01	22.18°C	N/A
pH 4	4.01	to	4.01	22.00°C	N/A
pH 10	10.04	to	10.02	22.21°C	N/A
Conductivity	0.97	to	1.000	22.16°C	µS
DO (Start)	99.5%	Saturation	9.60mg/L	21.50°C	mg/L
DO (Cal)	99.9%	Saturation	9.10mg/L	21.59°C	mg/L

Comments:

.

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-2	Date: 4/25/2017
Sample Number: MW-2	Weather Conditions: Sunny, Clear, 70°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	8.1	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	11:15 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	16.4	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	16
5.) Casing Volume (L)	5.1249	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	4	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	11:16 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
11:28 AM	3.00	11.77	1.07	5	7.43	0.365	8.42
11:30 AM	3.50	11.79	1.06	5	7.40	0.365	8.40
11:32 AM	4.00	11.82	1.06	5	7.40	0.365	8.43

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-2	11:32 AM	11.82	1.06	5	7.40	0.365	8.43

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	250 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-3	Date: 4/25/2017
Sample Number: MW-3	Weather Conditions: Sunny, Clear, 70°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	8.25	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	12:28 PM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	22.2	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	22
5.) Casing Volume (L)	8.6136	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	5	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	12:30 PM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
12:48 PM	4.00	12.66	0.32	20	7.30	0.844	8.60
12:50 PM	4.50	12.64	0.31	18	7.28	0.856	8.61
12:52 PM	5.00	12.62	0.31	18	7.27	0.858	8.60

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-3	12:52 PM	12.62	0.31	18	7.27	0.858	8.60

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	250 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-4	Date: 4/25/2017
Sample Number: MW-4	Weather Conditions: Sunny, Clear, 70°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	8.84	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:43 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	17.7	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	20
5.) Casing Volume (L)	5.4707	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	5	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	10:48 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
11:04 AM	4.00	13.53	0.57	6	7.39	0.589	8.95
11:06 AM	4.50	13.56	0.49	5	7.19	0.507	8.96
11:08 AM	5.00	13.55	0.44	5	7.39	0.510	8.96

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-4	11:08 AM	13.55	0.44	5	7.39	0.510	8.96

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	250 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: NC2MW-4	Date: 4/25/2017
Sample Number: NC2MW-4	Weather Conditions: Sunny, Clear, 70°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	6.2	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:15 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	14.5	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	14
5.) Casing Volume (L)	5.1249	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	3	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	10:16 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
10:26 AM	2.00	11.35	2.00	11	7.31	0.578	6.39
10:28 AM	2.50	11.33	1.95	10	7.30	0.581	6.40
10:30 AM	3.00	11.30	1.90	8	7.28	0.582	6.41

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
NC2MW-4	10:30 AM	11.30	1.90	8	7.28	0.582	6.41

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	200 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-9	Date: 4/25/2017
Sample Number: MW-9	Weather Conditions: Sunny, Clear, 70°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	8.65	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	1:10 PM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	22.4	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	16
5.) Casing Volume (L)	8.4901	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	4	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	1:12 PM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
1:24 PM	3.00	12.78	0.34	10	7.10	0.805	8.80
1:26 PM	3.50	12.79	0.36	8	7.12	0.800	8.80
1:28 PM	4.00	12.75	0.34	8	7.12	0.808	8.80

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-9	1:28 PM	12.75	0.34	8	7.12	0.808	8.80
DUP	1:30 PM	12.75	0.34	8	7.12	0.808	8.80

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	250 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-11	Date: 4/25/2017
Sample Number: MW-11	Weather Conditions: Sunny, Clear, 70°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	6.24	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:45 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	21.85	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	16
5.) Casing Volume (L)	9.6386	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	4	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	10:46 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
10:58 AM	3.00	11.73	0.34	7	7.29	0.490	6.39
11:00 AM	3.50	11.82	0.32	5	7.25	0.490	6.42
11:02 AM	4.00	11.87	0.28	5	7.26	0.489	6.42

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-11	11:02 AM	11.87	0.28	5	7.26	0.489	6.42

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	250 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-13	Date: 4/25/2017
Sample Number: MW-13	Weather Conditions: Sunny, Clear, 70°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	4.02	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	9:42 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	15.19	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	19
5.) Casing Volume (L)	6.8971	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	3.5	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	9:43 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
9:54 AM	2.50	11.25	0.81	10	7.41	0.571	4.33
9:56 AM	3.00	11.28	0.80	8	7.37	0.568	4.30
9:58 AM	3.50	11.24	0.78	7	7.36	0.562	4.30

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-13	9:58 AM	11.24	0.78	7	7.36	0.562	4.30

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	200 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

NEBRASKA CITY UNIT #1

Water Levels Prior to Sampling

	Time	Water Level
MW-2	9:11	8.1
MW-3	9:23	8.25
MW-4	9:13	8.84
MW-5	9:16	10.3
MW-6	9:19	7.02
MW-7	9:06	7.41
MW-8	9:07	7.75
MW-9	9:25	8.65
MW-11	9:09	6.24
MW-12	9:27	8.2
MW-13	9:00	4.02
NC2MW-4	9:02	6.2

Equipment Calibration Sheet

Date: 4/25/2017
Time: 7:05 AM

Person Calibrating Instrument: Brad Sojka

Instrument Type	Instrument Brand	Instrument Model	Instrument Serial Number
Portable Turbidimeter	LaMotte	2020E	131-3410

Parameter:	Reading	Units
<0.1 Primary Standard	0.10	Ntu
1.0 Primary Standard	1.01	Ntu
<10.0 Primary Standard	10.02	Ntu

Comments:

Equipment Calibration Sheet

Date: 4/25/2017
Time: 7:10 AM

Person Calibrating Instrument: Brad Sojka

Instrument Type	Instrument Brand	Instrument Model	Instrument Serial Number
Multiparameter Water Meter	YSI	556 MPS	10H101496

Parameter:	Reading	Temp	Units
pH 7	7.8 to 7.00	22.32°	N/A
pH 4	4.14 to 4.01	22.20°	N/A
pH 10	9.93 to 10.0	22.23°	N/A
Conductivity	0.967 to 1.00	22.05°	µS
DO (Start)	99.6% Saturation 8.45 mg/L	21.65°	mg/L
DO (Cal)	98.5% Saturation 8.72 mg/L	21.69°	mg/L

Comments:

.

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-2	Date: 6/20/2017
Sample Number: MW-2	Weather Conditions: Sunny, Clear, 85°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	7.60	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:34 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	16.4	10.) Purge Rate (mL/min)	300
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:15
5.) Casing Volume (L)	5.4337	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.50	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	10:35 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
10:46 AM	3.50	14.80	1.37	7	7.12	0.510	7.80
10:48 AM	4.00	14.86	1.34	7	7.10	0.508	7.80
10:50 AM	4.50	14.90	1.29	7	7.12	0.502	7.80

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-2	10:50 AM	14.90	1.29	7.00	7.12	0.502	7.80

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	300 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-3	Date: 6/20/2017
Sample Number: MW-3	Weather Conditions: Sunny, Clear, 85°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	7.95	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	12:00 PM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	22.2	10.) Purge Rate (mL/min)	350
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:17
5.) Casing Volume (L)	8.7989	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	6.00	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	12:01 PM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
12:14 PM	5.00	15.55	0.22	20	6.99	1.119	8.15
12:16 PM	5.50	15.68	0.19	14	6.99	1.108	8.15
12:18 PM	6.00	15.65	0.17	12	6.99	1.098	8.15

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-3	12:18 PM	15.65	0.17	12.00	6.99	1.098	8.15

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	350 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-4	Date: 6/20/2017
Sample Number: MW-4	Weather Conditions: Sunny, Clear, 85°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	8.20	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	11:00 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	17.7	10.) Purge Rate (mL/min)	300
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:16
5.) Casing Volume (L)	5.8659	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.50	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	11:02 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
11:14 AM	3.50	15.29	0.29	6	7.19	0.683	8.32
11:16 AM	4.00	15.37	0.25	5	7.22	0.677	8.32
11:18 AM	4.50	15.43	0.21	5	7.22	0.670	8.32

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-4	11:18 AM	15.43	0.21	5.00	7.22	0.670	8.32

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	300 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: NC2MW-4	Date: 6/20/2017
Sample Number: NC2MW-4	Weather Conditions: Sunny, Clear, 85°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	6.75	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:02 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	14.5	10.) Purge Rate (mL/min)	300
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:16
5.) Casing Volume (L)	4.7853	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.50	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	10:04 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
10:16 AM	3.50	14.90	1.70	11	7.17	0.702	6.80
10:18 AM	4.00	14.96	1.65	9	7.14	0.700	6.80
10:20 AM	4.50	15.00	1.62	9	7.13	0.700	6.80

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
NC2MW-4	10:20 AM	15.00	1.62	9.00	7.13	0.700	6.80

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	300 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-9	Date: 6/20/2017
Sample Number: MW-9	Weather Conditions: Sunny, Clear, 85°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	8.15	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	11:24 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	22.4	10.) Purge Rate (mL/min)	300
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:17
5.) Casing Volume (L)	8.7989	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	5.00	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	11:25 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
11:38 AM	4.00	14.98	0.42	12	7.06	0.699	8.25
11:40 AM	4.50	15.07	0.40	10	7.06	0.697	8.25
11:42 AM	5.00	15.10	0.37	9	7.06	0.691	8.25

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-9	11:42 AM	15.10	0.37	9.00	7.06	0.691	8.25
DUP	11:44 AM	15.10	0.37	9.00	7.06	0.691	8.25

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	300 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-11	Date: 6/20/2017
Sample Number: MW-11	Weather Conditions: Sunny, Clear, 85°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	7.85	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	12:30 PM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	21.85	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:17
5.) Casing Volume (L)	8.6445	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.00	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	12:32 PM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
12:45 PM	3.00	14.77	0.79	7	7.20	0.533	8.00
12:47 PM	3.50	14.91	0.71	7	7.19	0.530	8.00
12:49 PM	4.00	15.10	0.68	5	7.19	0.528	8.00

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-11	12:49 PM	15.10	0.68	5.00	7.19	0.528	8.00

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	250 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-13	Date: 6/20/2017
Sample Number: MW-13	Weather Conditions: Sunny, Clear, 85°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	4.72	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	9:30 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	15.19	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:15
5.) Casing Volume (L)	6.4648	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.00	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	9:31 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
9:42 AM	3.00	14.55	0.71	6	7.19	0.548	4.88
9:44 AM	3.50	14.58	0.67	5	7.18	0.540	4.88
9:46 AM	4.00	14.61	0.62	5	7.17	0.533	4.88

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-13	9:46 AM	14.61	0.62	5.00	7.17	0.533	4.88

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	250 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

NEBRASKA CITY UNIT #1

Water Levels Prior to Sampling

	Time	Water Level
MW-2	8:36	7.6
MW-3	8:52	7.95
MW-4	8:46	8.2
MW-5	8:40	10.72
MW-6	8:42	7.42
MW-7	8:59	7.85
MW-8	9:00	8.04
MW-9	8:50	8.15
MW-11	8:34	7.85
MW-12	8:54	8.4
MW-13	8:30	4.72
NC2MW-4	8:32	6.75

Equipment Calibration Sheet

Date: 6/20/2017
Time: 7:30 AM

Person Calibrating Instrument: Brad Sojka

Instrument Type	Instrument Brand	Instrument Model	Instrument Serial Number
Portable Turbidimeter	LaMotte	2020E	131-3410

Parameter:	Reading	Units
<0.1 Primary Standard	0.09	Ntu
1.0 Primary Standard	1.00	Ntu
<10.0 Primary Standard	10.04	Ntu

Comments:

Equipment Calibration Sheet

Date: 6/20/2017
Time: 7:40 AM

Person Calibrating Instrument: Brad Sojka

Instrument Type	Instrument Brand	Instrument Model	Instrument Serial Number
Multiparameter Water Meter	YSI	556 MPS	10H101496

Parameter:	Reading			Temp	Units
pH 7	7.04	to	7.02	22.48°C	N/A
pH 4	4.02	to	4.01	22.31°C	N/A
pH 10	10.09	to	10.03	22.43°C	N/A
Conductivity	0.97	to	1.000	22.28°C	µS
DO (Start)	99.8%	Saturation	9.40mg/L	21.49°C	mg/L
DO (Cal)	99.2%	Saturation	9.01mg/L	21.52°C	mg/L

Comments:

.

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-2	Date: 7/13/2017
Sample Number: MW-2	Weather Conditions: Sunny, Clear, 87°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	8.40	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	12:25 PM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	16.4	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:21
5.) Casing Volume (L)	4.9397	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.50	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	12:26 PM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
12:43 PM	3.50	16.85	0.47	5	7.51	0.523	8.75
12:45 PM	4.00	16.90	0.45	5	7.48	0.520	8.75
12:47 PM	4.50	16.97	0.42	5	7.48	0.518	8.75

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-2	12:47 PM	16.97	0.42	5.00	7.48	0.518	8.75

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	200 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-3	Date: 7/13/2017
Sample Number: MW-3	Weather Conditions: Sunny, Clear, 87°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	8.75	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:58 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	22.2	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:19
5.) Casing Volume (L)	8.3049	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	5.00	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	10:59 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
11:14 AM	4.00	13.93	0.18	15	7.85	0.884	8.88
11:16 AM	4.50	14.01	0.17	12	7.85	0.884	8.88
11:18 AM	5.00	14.10	0.16	12	7.85	0.884	8.88

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-3	11:18 AM	14.10	0.16	12.00	7.85	0.884	8.88

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	250 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-4	Date: 7/13/2017
Sample Number: MW-4	Weather Conditions: Sunny, Clear, 87°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	9.10	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	9:30 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	17.7	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:17
5.) Casing Volume (L)	5.3102	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.50	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	9:31 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
9:44 AM	3.50	14.86	0.72	12	7.71	0.487	9.20
9:46 AM	4.00	14.92	0.65	10	7.68	0.490	9.25
9:48 AM	4.50	14.98	0.62	9	7.62	0.490	9.25

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-4	9:48 AM	14.98	0.62	9.00	7.62	0.490	9.25
DUP	8:00 AM	14.98	0.62	9.00	7.62	0.49	9.25

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	250 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: NC2MW-4	Date: 7/12/2017
Sample Number: NC2MW-4	Weather Conditions: Sunny, Clear, 87°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	7.1	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:25 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	14.5	10.) Purge Rate (mL/min)	300
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:20
5.) Casing Volume (L)	4.5692	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	5.50	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	10:26 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
10:42 AM	4.50	17.28	0.91	8	7.98	0.662	7.30
10:44 AM	5.00	17.30	0.90	8	7.98	0.662	7.30
10:46 AM	5.50	17.32	0.90	8	7.98	0.662	7.30

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
NC2MW-4	10:46 AM	17.32	0.90	8.00	7.98	0.662	7.30

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	300 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-9	Date: 7/13/2017
Sample Number: MW-9	Weather Conditions: Sunny, Clear, 87°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	9.1	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:20 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	22.4	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:23
5.) Casing Volume (L)	8.2123	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	5.50	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	10:23 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
10:42 AM	4.50	14.39	0.57	22	7.65	0.782	9.22
10:44 AM	5.00	14.42	0.55	19	7.62	0.780	9.22
10:46 AM	5.50	14.48	0.51	16	7.58	0.780	9.22

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-9	10:46 AM	14.48	0.51	16.00	7.58	0.780	9.22

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	250 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-11	Date: 7/13/2017
Sample Number: MW-11	Weather Conditions: Sunny, Clear, 87°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	6.25	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	11:40 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	21.85	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:18
5.) Casing Volume (L)	9.6324	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.00	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	11:42 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
11:56 AM	3.00	18.04	0.18	7	7.67	0.450	8.00
11:58 AM	3.50	18.02	0.18	7	7.62	0.450	8.00
12:00 PM	4.00	18.10	0.17	5	7.62	0.450	8.00

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-11	12:00 PM	18.10	0.17	5.00	7.62	0.450	8.00

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	200 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-13	Date: 7/13/2017
Sample Number: MW-13	Weather Conditions: Sunny, Clear, 87°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	5	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	11:01 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	15.19	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:18
5.) Casing Volume (L)	6.2920	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.00	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	11:02 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
11:16 AM	3.00	16.83	0.20	7	8.11	0.553	5.15
11:18 AM	3.50	16.90	0.19	7	8.10	0.550	5.15
11:20 AM	4.00	16.95	0.18	7	8.09	0.550	5.15

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-13	11:20 AM	16.95	0.18	7.00	8.09	0.550	5.15

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	200 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

NEBRASKA CITY UNIT #1

Water Levels Prior to Sampling

	Time	Water Level
MW-2	8:34	8.4
MW-3	8:50	8.75
MW-4	8:44	9.1
MW-5	8:38	10.5
MW-6	8:40	8.1
MW-7	8:57	8.32
MW-8	8:58	8.89
MW-9	8:48	9.1
MW-11	8:32	6.25
MW-12	8:52	8.52
MW-13	8:28	5
NC2MW-4	8:30	7.1

Equipment Calibration Sheet

Date: 7/13/2017
Time: 7:15 AM

Person Calibrating Instrument: Brad Sojka

Instrument Type	Instrument Brand	Instrument Model	Instrument Serial Number
Portable Turbidimeter	LaMotte	2020E	131-3410

Parameter:	Reading	Units
<0.1 Primary Standard	0.10	Ntu
1.0 Primary Standard	1.03	Ntu
<10.0 Primary Standard	10.01	Ntu

Comments:

Equipment Calibration Sheet

Date: 7/13/2017
Time: 7:20 AM

Person Calibrating Instrument: Brad Sojka

Instrument Type	Instrument Brand	Instrument Model	Instrument Serial Number
Multiparameter Water Meter	YSI	556 MPS	10H101496

Parameter:	Reading			Temp	Units
pH 7	7.02	to	7.01	22.28°C	N/A
pH 4	4.04	to	4.01	22.12°C	N/A
pH 10	10.05	to	10.02	22.30°C	N/A
Conductivity	0.96	to	0.999	22.17°C	µS
DO (Start)	99.4%	Saturation	9.62mg/L	21.35°C	mg/L
DO (Cal)	99.8%	Saturation	9.09mg/L	21.42°C	mg/L

Comments:

.

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-2	Date: 11/8/2017
Sample Number: MW-2	Weather Conditions: Cloudy, 36°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	11.55	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:40 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	16.4	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:15
5.) Casing Volume (L)	2.9947	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.00	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	10:41 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
10:52 AM	3.00	16.29	0.65	7	6.95	0.558	11.75
10:54 AM	3.50	16.36	0.64	7	6.99	0.564	11.75
10:56 AM	4.00	16.40	0.62	7	7.02	0.573	11.75

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-2	10:56 AM	16.40	0.62	7.00	7.02	0.573	11.75

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	250 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-3	Date: 11/8/2017
Sample Number: MW-3	Weather Conditions: Cloudy, 36°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	11.9	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	11:28 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	22.2	10.) Purge Rate (mL/min)	300
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:15
5.) Casing Volume (L)	6.3599	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.50	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	11:29 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
11:40 AM	3.50	13.92	0.10	11	7.15	0.852	12.20
11:42 AM	4.00	13.94	0.09	10	7.14	0.850	12.20
11:44 AM	4.50	13.98	0.10	10	7.14	0.854	12.20

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-3	11:44 AM	13.98	0.10	10.00	7.14	0.854	12.20
DUP	8:00 AM	13.98	0.10	10.00	7.14	0.854	12.20

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	300 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-4	Date: 11/8/2017
Sample Number: MW-4	Weather Conditions: Cloudy, 36°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	11.60	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	11:05 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	17.7	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:15
5.) Casing Volume (L)	3.7665	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.00	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	11:07 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
11:18 AM	3.00	16.10	0.13	8	6.99	0.529	11.90
11:20 AM	3.50	16.14	0.14	7	7.01	0.530	11.90
11:22 AM	4.00	16.19	0.12	7	7.05	0.530	11.90

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-4	11:22 AM	16.19	0.12	7.00	7.05	0.530	11.90

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	250 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: NC2MW-4	Date: 7/12/2017
Sample Number: NC2MW-4	Weather Conditions: Cloudy, 36°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	12.2	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	9:14 AM	9.) Dedicated?	**Yes**
3.) Bottom of Casing (+/- 0.01 ft) (ft)	14.5	10.) Purge Rate (mL/min)	150
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:17
5.) Casing Volume (L)	1.4202	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	2.50	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	9:15 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
9:28 AM	1.50	10.38	1.48	5	7.15	0.595	12.70
9:30 AM	2.00	10.02	1.46	5	7.15	0.592	12.70
9:32 AM	2.50	10.10	1.45	5	7.15	0.592	12.70

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
NC2MW-4	9:32 AM	10.10	1.45	5.00	7.15	0.592	12.70

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	150 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-9	Date: 11/8/2017
Sample Number: MW-9	Weather Conditions: Cloudy, 36°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	12.1	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	11:55 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	22.4	10.) Purge Rate (mL/min)	300
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:18
5.) Casing Volume (L)	6.3599	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	5.00	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	11:56 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
12:10 PM	4.00	13.76	0.51	12	7.18	0.845	12.30
12:12 PM	4.50	13.79	0.54	10	7.17	0.845	12.30
12:14 PM	5.00	13.83	0.55	10	7.16	0.845	12.30

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-9	12:14 PM	13.83	0.55	10.00	7.16	0.845	12.30

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	300 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-11	Date: 11/8/2017
Sample Number: MW-11	Weather Conditions: Cloudy, 36°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	10.95	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:12 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	21.85	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:14
5.) Casing Volume (L)	6.7304	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	3.50	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	10:14 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
10:24 AM	2.50	16.05	0.60	5	6.89	0.476	11.25
10:26 AM	3.00	16.03	0.57	5	6.92	0.476	11.25
10:28 AM	3.50	16.00	0.54	5	6.95	0.476	11.25

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-11	10:28 AM	16.00	0.54	5.00	6.95	0.476	11.25

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	250 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City I	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-13	Date: 11/8/2017
Sample Number: MW-13	Weather Conditions: Cloudy, 36°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	8.25	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	9:45 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	15.19	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:16
5.) Casing Volume (L)	4.2852	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.00	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	9:46 AM

*Measured from a defined point on the edge of casing (surveyed top of casing)

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
9:58 AM	3.00	14.78	0.65	8	7.12	0.484	8.60
10:00 AM	3.50	14.73	0.63	8	7.04	0.487	8.60
10:02 AM	4.00	14.67	0.60	8	7.00	0.493	8.60

Well Evacuated to Dryness? No Time to recharge?

Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-13	10:02 AM	14.67	0.60	8.00	7.00	0.493	8.60

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	250 mL/Min	Decontamination Procedure	Alconex, DI Rinse
3.) Sample Appearance Clearity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO_3		

NEBRASKA CITY UNIT #1

Water Levels Prior to Sampling

	Time	Water Level
MW-2	8:34	11.55
MW-3	8:50	11.9
MW-4	8:44	11.6
MW-5	8:38	10.9
MW-6	8:40	8.7
MW-7	8:57	9.05
MW-8	8:58	9.18
MW-9	8:48	12.1
MW-11	8:32	10.95
MW-12	8:52	12.55
MW-13	8:28	8.25
NC2MW-4	8:30	12.2

Equipment Calibration Sheet

Date: 11/8/2017
Time: 7:25 AM

Person Calibrating Instrument: Brad Sojka

Instrument Type	Instrument Brand	Instrument Model	Instrument Serial Number
Portable Turbidimeter	LaMotte	2020E	131-3410

Parameter:	Reading	Units
<0.1 Primary Standard	0.10	Ntu
1.0 Primary Standard	1.02	Ntu
<10.0 Primary Standard	10.01	Ntu

Comments:

Equipment Calibration Sheet

Date: 11/8/2017
Time: 7:25 AM

Person Calibrating Instrument: Brad Sojka

Instrument Type	Instrument Brand	Instrument Model	Instrument Serial Number
Multiparameter Water Meter	YSI	556 MPS	10H101496

Parameter:	Reading			Temp	Units
pH 7	7.03	to	7.01	22.50°C	N/A
pH 4	4.02	to	4.01	22.32°C	N/A
pH 10	10.05	to	10.01	22.31°C	N/A
Conductivity	0.99	to	1.004	22.05°C	µS
DO (Start)	99.6%	Saturation	9.49mg/L	21.46°C	mg/L
DO (Cal)	99.8%	Saturation	9.02mg/L	21.40°C	mg/L

Comments:

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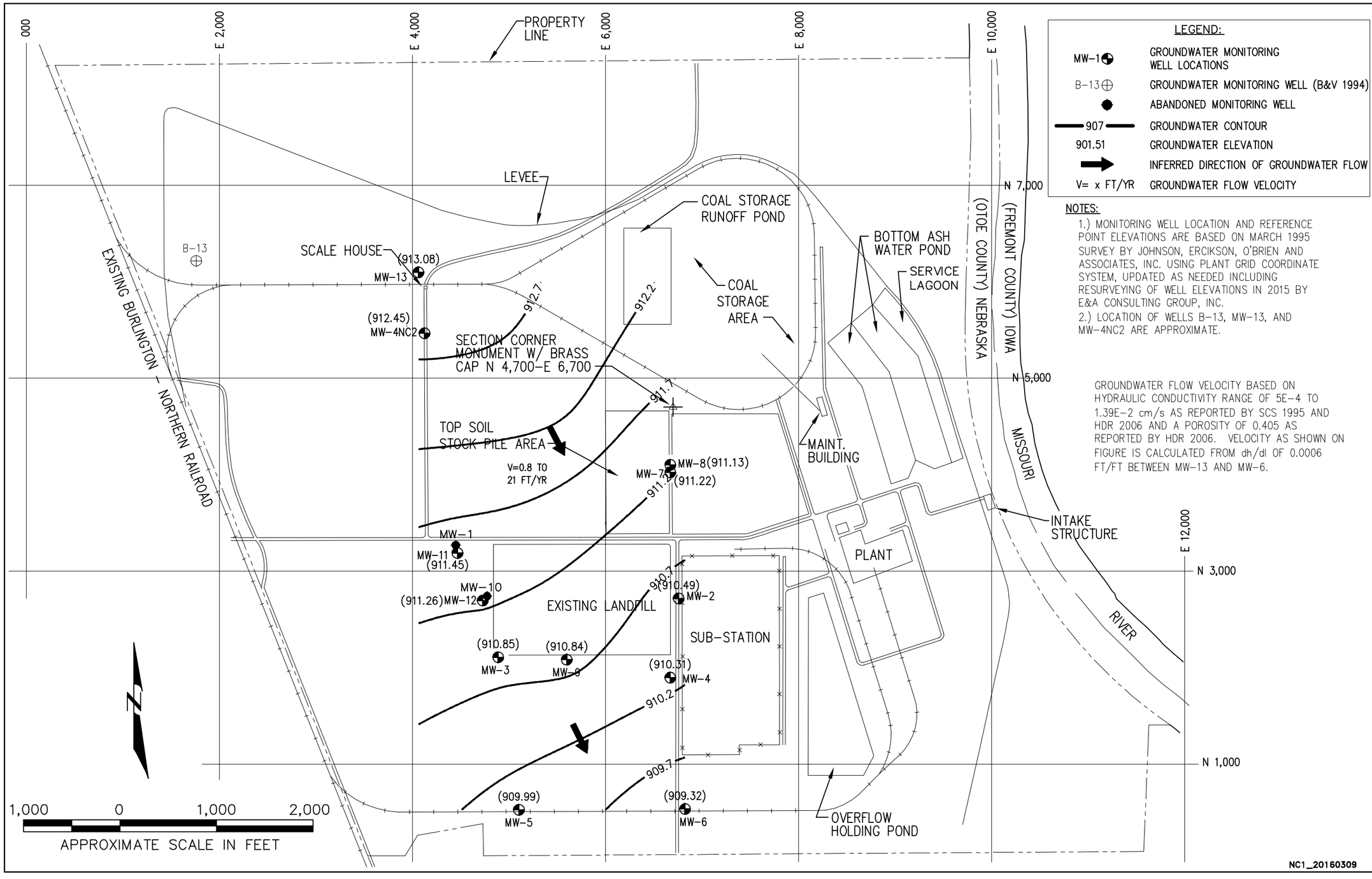
APPENDIX B

FIGURE 1
GROUNDWATER CONTOUR MAP
MARCH 9, 2016

OMAHA PUBLIC POWER DISTRICT
NEBRASKA CITY STATION UNIT 1 ASH LANDFILL
NEBRASKA CITY, NEBRASKA



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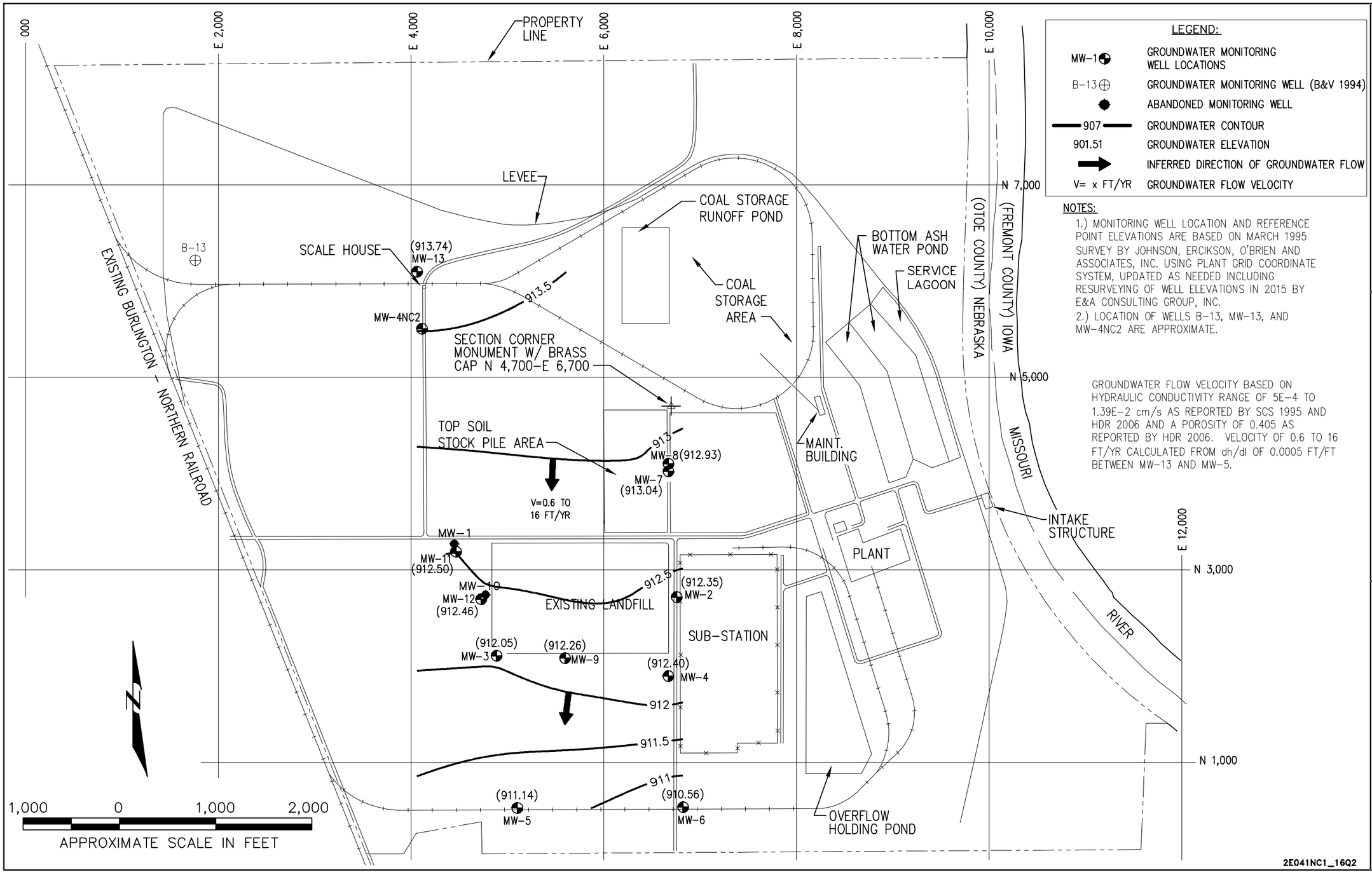


LEGEND:

MW-1	GROUNDWATER MONITORING WELL LOCATIONS
B-13	GROUNDWATER MONITORING WELL (B&V 1994)
	ABANDONED MONITORING WELL
907	GROUNDWATER CONTOUR
901.51	GROUNDWATER ELEVATION
	INFERRED DIRECTION OF GROUNDWATER FLOW
V= x FT/YR	GROUNDWATER FLOW VELOCITY

NOTES:

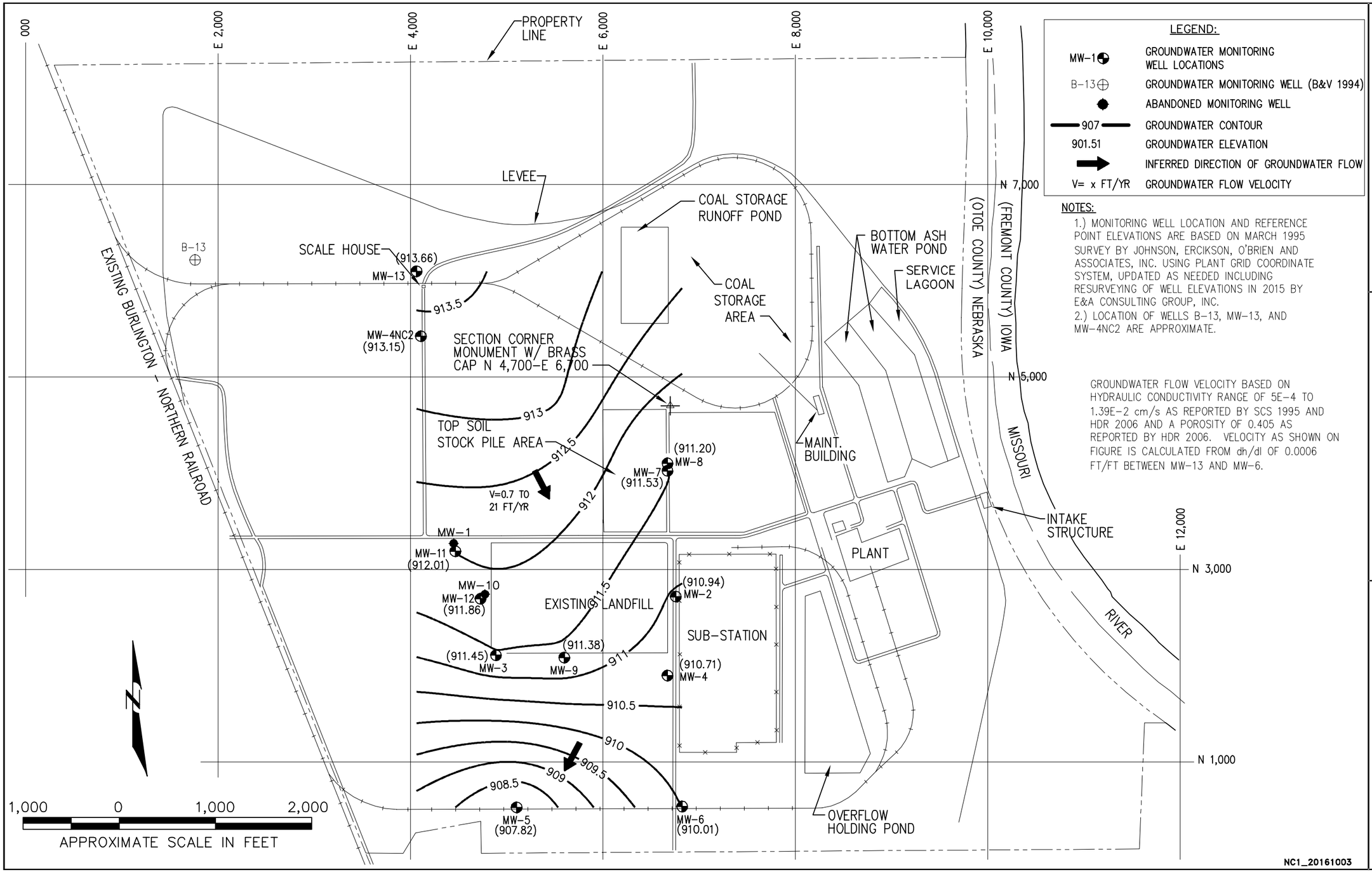
1.) MONITORING WELL LOCATION AND REFERENCE POINT ELEVATIONS ARE BASED ON MARCH 1995 SURVEY BY JOHNSON, ERCIKSON, O'BRIEN AND ASSOCIATES, INC. USING PLANT GRID COORDINATE SYSTEM, UPDATED AS NEEDED INCLUDING RESURVEYING OF WELL ELEVATIONS IN 2015 BY E&A CONSULTING GROUP, INC.

2.) LOCATION OF WELLS B-13, MW-13, AND MW-4NC2 ARE APPROXIMATE.

GROUNDWATER FLOW VELOCITY BASED ON HYDRAULIC CONDUCTIVITY RANGE OF 5E-4 TO 1.39E-2 cm/s AS REPORTED BY SCS 1995 AND HDR 2006 AND A POROSITY OF 0.405 AS REPORTED BY HDR 2006. VELOCITY OF 0.6 TO 16 FT/YR CALCULATED FROM dh/dl OF 0.0005 FT/FT BETWEEN MW-13 AND MW-5.

FIGURE 2
GROUNDWATER CONTOUR MAP
JUNE 7, 2016

OMAHA PUBLIC POWER DISTRICT
NEBRASKA CITY STATION UNIT 1 ASH LANDFILL
NEBRASKA CITY, NEBRASKA



LEGEND:

MW-1	GROUNDWATER MONITORING WELL LOCATIONS
B-13	GROUNDWATER MONITORING WELL (B&V 1994)
	ABANDONED MONITORING WELL
907	GROUNDWATER CONTOUR
901.51	GROUNDWATER ELEVATION
	INFERRED DIRECTION OF GROUNDWATER FLOW
V= x FT/YR	GROUNDWATER FLOW VELOCITY

NOTES:

1.) MONITORING WELL LOCATION AND REFERENCE POINT ELEVATIONS ARE BASED ON MARCH 1995 SURVEY BY JOHNSON, ERCIKSON, O'BRIEN AND ASSOCIATES, INC. USING PLANT GRID COORDINATE SYSTEM, UPDATED AS NEEDED INCLUDING RESURVEYING OF WELL ELEVATIONS IN 2015 BY E&A CONSULTING GROUP, INC.

2.) LOCATION OF WELLS B-13, MW-13, AND MW-4NC2 ARE APPROXIMATE.

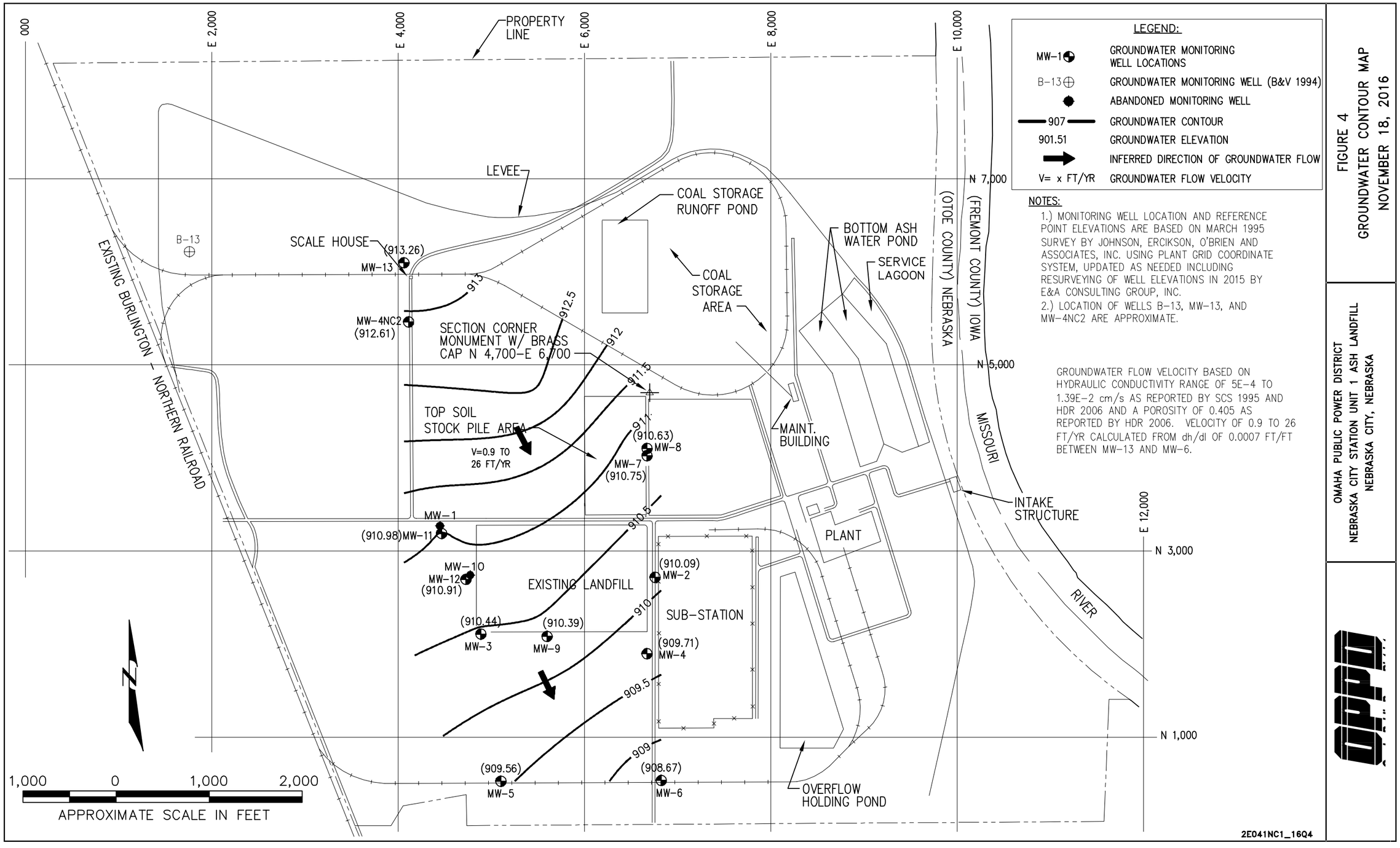
GROUNDWATER FLOW VELOCITY BASED ON HYDRAULIC CONDUCTIVITY RANGE OF 5E-4 TO 1.39E-2 cm/s AS REPORTED BY SCS 1995 AND HDR 2006 AND A POROSITY OF 0.405 AS REPORTED BY HDR 2006. VELOCITY AS SHOWN ON FIGURE IS CALCULATED FROM dh/dl OF 0.0006 FT/FT BETWEEN MW-13 AND MW-6.

FIGURE 3
GROUNDWATER CONTOUR MAP
OCTOBER 3, 2016

OMAHA PUBLIC POWER DISTRICT
NEBRASKA CITY STATION UNIT 1 ASH LANDFILL
NEBRASKA CITY, NEBRASKA

FIGURE 4
GROUNDWATER CONTOUR MAP
NOVEMBER 18, 2016

OMAHA PUBLIC POWER DISTRICT
NEBRASKA CITY STATION UNIT 1 ASH LANDFILL
NEBRASKA CITY, NEBRASKA



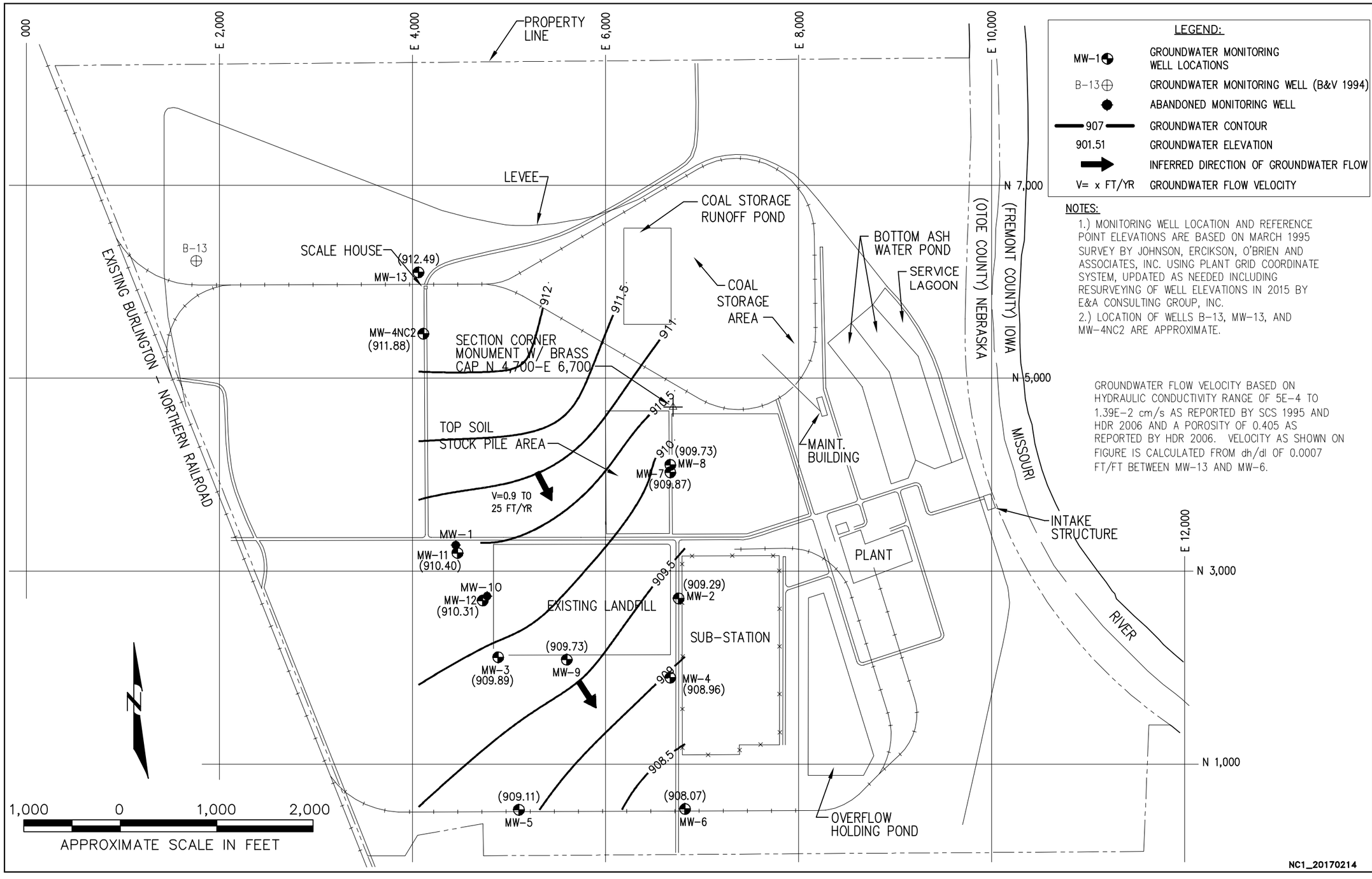
NOTES:

1.) MONITORING WELL LOCATION AND REFERENCE POINT ELEVATIONS ARE BASED ON MARCH 1995 SURVEY BY JOHNSON, ERCIKSON, O'BRIEN AND ASSOCIATES, INC. USING PLANT GRID COORDINATE SYSTEM, UPDATED AS NEEDED INCLUDING RESURVEYING OF WELL ELEVATIONS IN 2015 BY E&A CONSULTING GROUP, INC.

2.) LOCATION OF WELLS B-13, MW-13, AND MW-4NC2 ARE APPROXIMATE.

GROUNDWATER FLOW VELOCITY BASED ON HYDRAULIC CONDUCTIVITY RANGE OF 5E-4 TO 1.39E-2 cm/s AS REPORTED BY SCS 1995 AND HDR 2006 AND A POROSITY OF 0.405 AS REPORTED BY HDR 2006. VELOCITY OF 0.9 TO 26 FT/YR CALCULATED FROM dh/dl OF 0.0007 FT/FT BETWEEN MW-13 AND MW-6.

2E041NC1_16Q4



LEGEND:

MW-1	GROUNDWATER MONITORING WELL LOCATIONS
B-13	GROUNDWATER MONITORING WELL (B&V 1994)
	ABANDONED MONITORING WELL
907	GROUNDWATER CONTOUR
901.51	GROUNDWATER ELEVATION
	INFERRED DIRECTION OF GROUNDWATER FLOW
V= x FT/YR	GROUNDWATER FLOW VELOCITY

NOTES:

1.) MONITORING WELL LOCATION AND REFERENCE POINT ELEVATIONS ARE BASED ON MARCH 1995 SURVEY BY JOHNSON, ERCIKSON, O'BRIEN AND ASSOCIATES, INC. USING PLANT GRID COORDINATE SYSTEM, UPDATED AS NEEDED INCLUDING RESURVEYING OF WELL ELEVATIONS IN 2015 BY E&A CONSULTING GROUP, INC.

2.) LOCATION OF WELLS B-13, MW-13, AND MW-4NC2 ARE APPROXIMATE.

GROUNDWATER FLOW VELOCITY BASED ON HYDRAULIC CONDUCTIVITY RANGE OF 5E-4 TO 1.39E-2 cm/s AS REPORTED BY SCS 1995 AND HDR 2006 AND A POROSITY OF 0.405 AS REPORTED BY HDR 2006. VELOCITY AS SHOWN ON FIGURE IS CALCULATED FROM dh/dl OF 0.0007 FT/FT BETWEEN MW-13 AND MW-6.

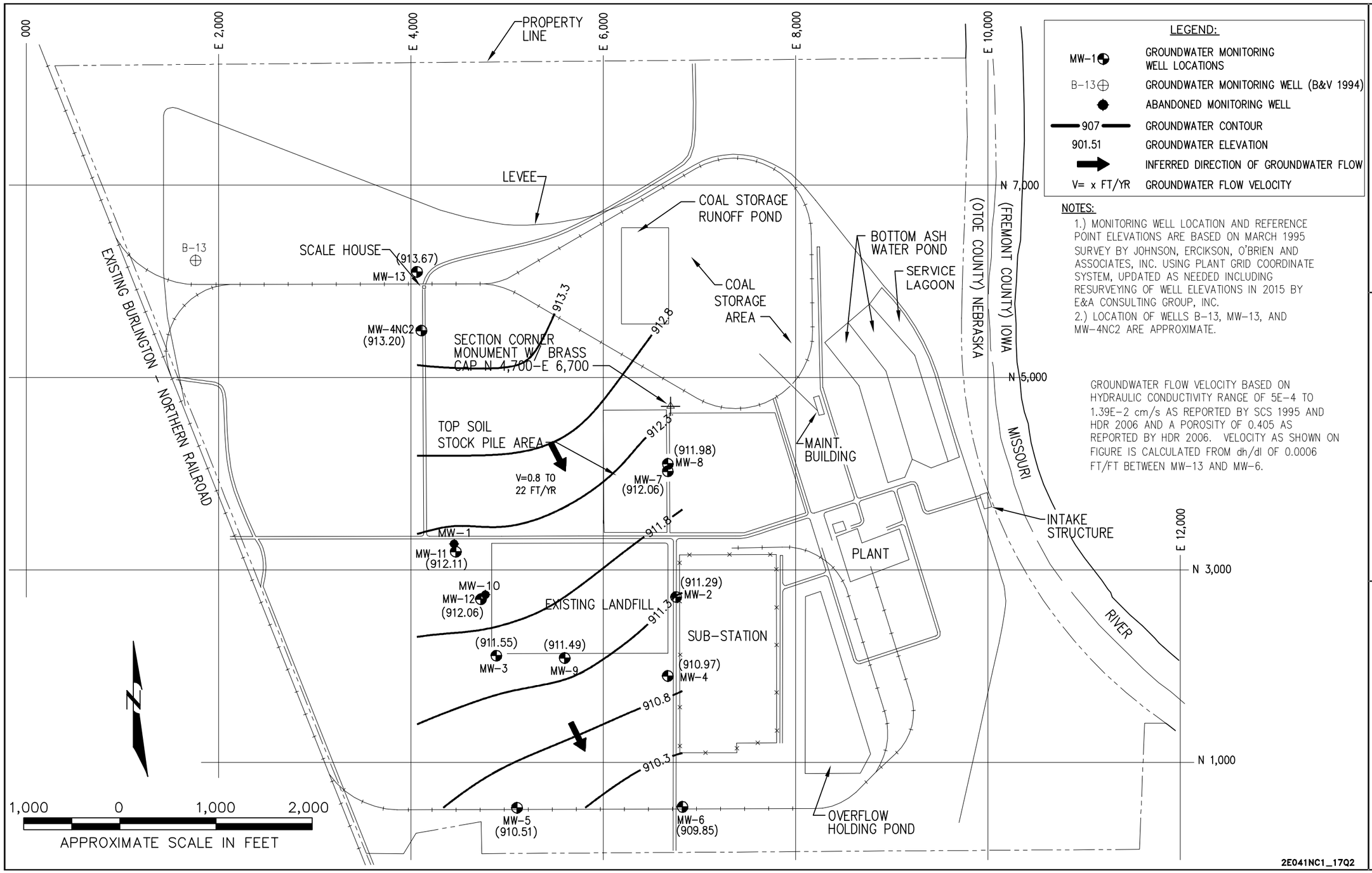
NC1_20170214

FIGURE 5
GROUNDWATER CONTOUR MAP
FEBRUARY 14, 2017

OMAHA PUBLIC POWER DISTRICT
NEBRASKA CITY STATION UNIT 1 ASH LANDFILL
NEBRASKA CITY, NEBRASKA

FIGURE 6
GROUNDWATER CONTOUR MAP
APRIL 25, 2017

OMAHA PUBLIC POWER DISTRICT
NEBRASKA CITY STATION UNIT 1 ASH LANDFILL
NEBRASKA CITY, NEBRASKA



NOTES:

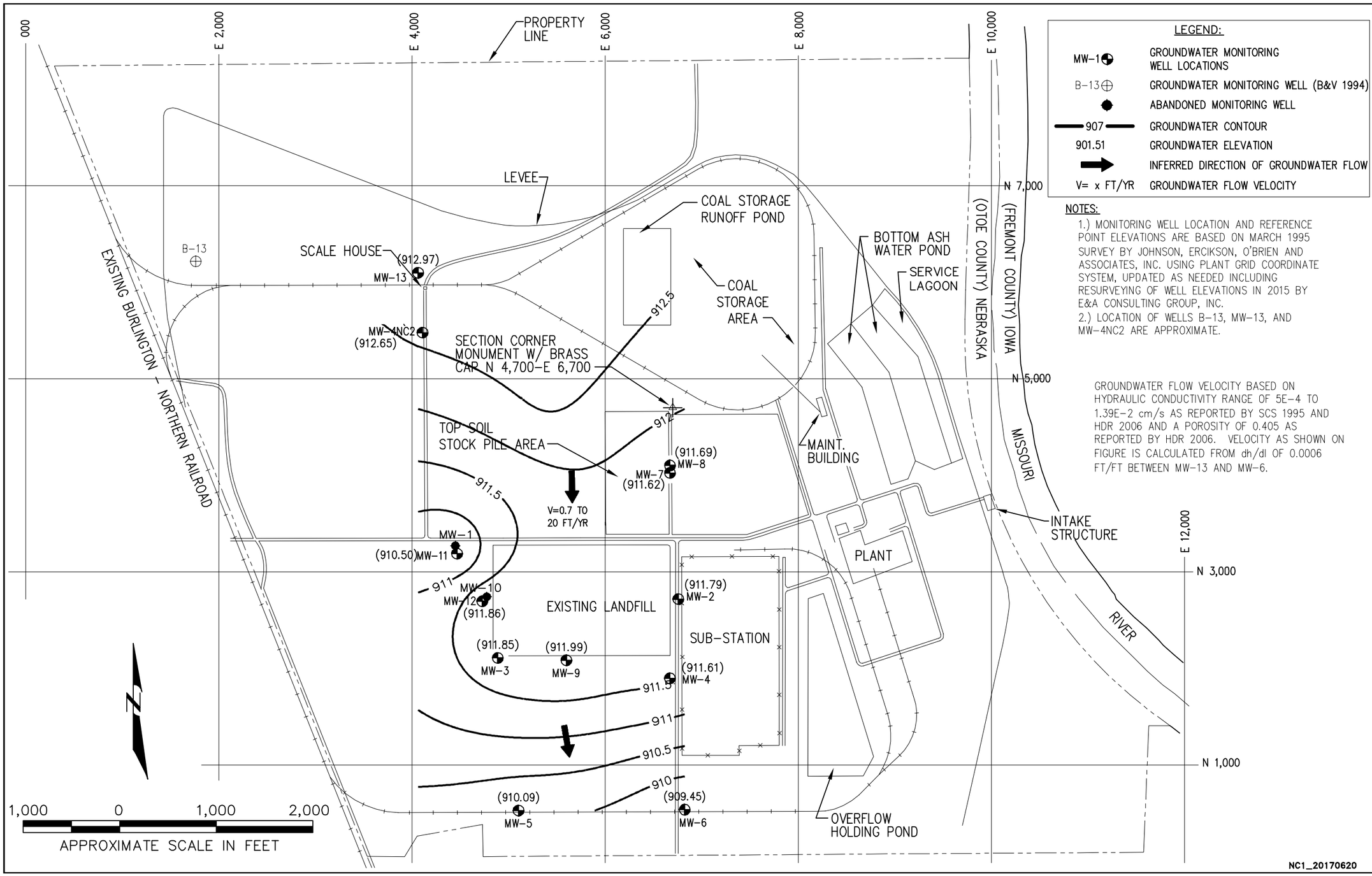
1.) MONITORING WELL LOCATION AND REFERENCE POINT ELEVATIONS ARE BASED ON MARCH 1995 SURVEY BY JOHNSON, ERCIKSON, O'BRIEN AND ASSOCIATES, INC. USING PLANT GRID COORDINATE SYSTEM, UPDATED AS NEEDED INCLUDING RESURVEYING OF WELL ELEVATIONS IN 2015 BY E&A CONSULTING GROUP, INC.

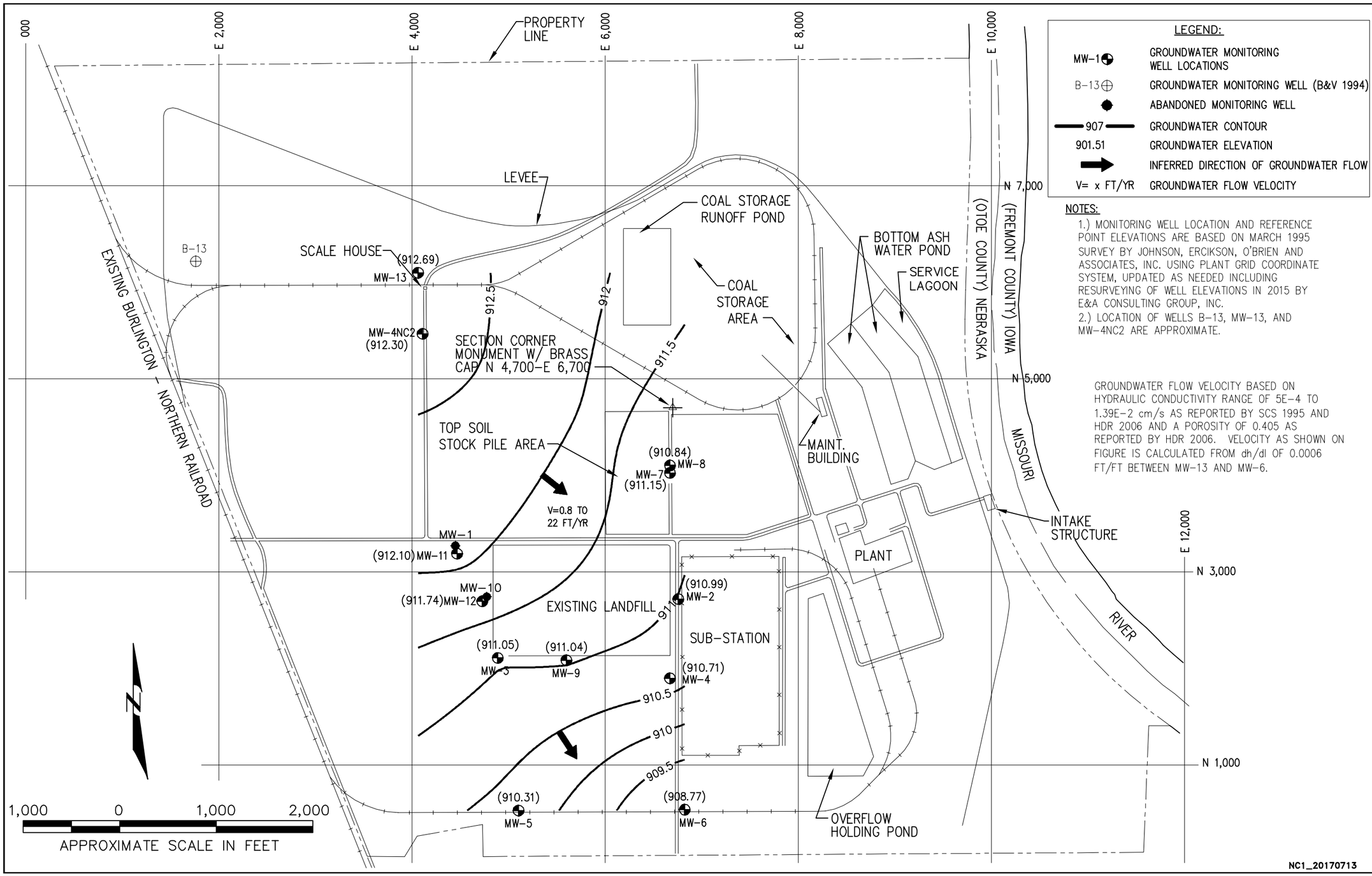
2.) LOCATION OF WELLS B-13, MW-13, AND MW-4NC2 ARE APPROXIMATE.

GROUNDWATER FLOW VELOCITY BASED ON HYDRAULIC CONDUCTIVITY RANGE OF 5E-4 TO 1.39E-2 cm/s AS REPORTED BY SCS 1995 AND HDR 2006 AND A POROSITY OF 0.405 AS REPORTED BY HDR 2006. VELOCITY AS SHOWN ON FIGURE IS CALCULATED FROM dh/dl OF 0.0006 FT/FT BETWEEN MW-13 AND MW-6.

FIGURE 7
GROUNDWATER CONTOUR MAP
JUNE 20, 2017

OMAHA PUBLIC POWER DISTRICT
NEBRASKA CITY STATION UNIT 1 ASH LANDFILL
NEBRASKA CITY, NEBRASKA





LEGEND:

MW-1	GROUNDWATER MONITORING WELL LOCATIONS
B-13	GROUNDWATER MONITORING WELL (B&V 1994)
	ABANDONED MONITORING WELL
907	GROUNDWATER CONTOUR
901.51	GROUNDWATER ELEVATION
	INFERRED DIRECTION OF GROUNDWATER FLOW
V= x FT/YR	GROUNDWATER FLOW VELOCITY

NOTES:

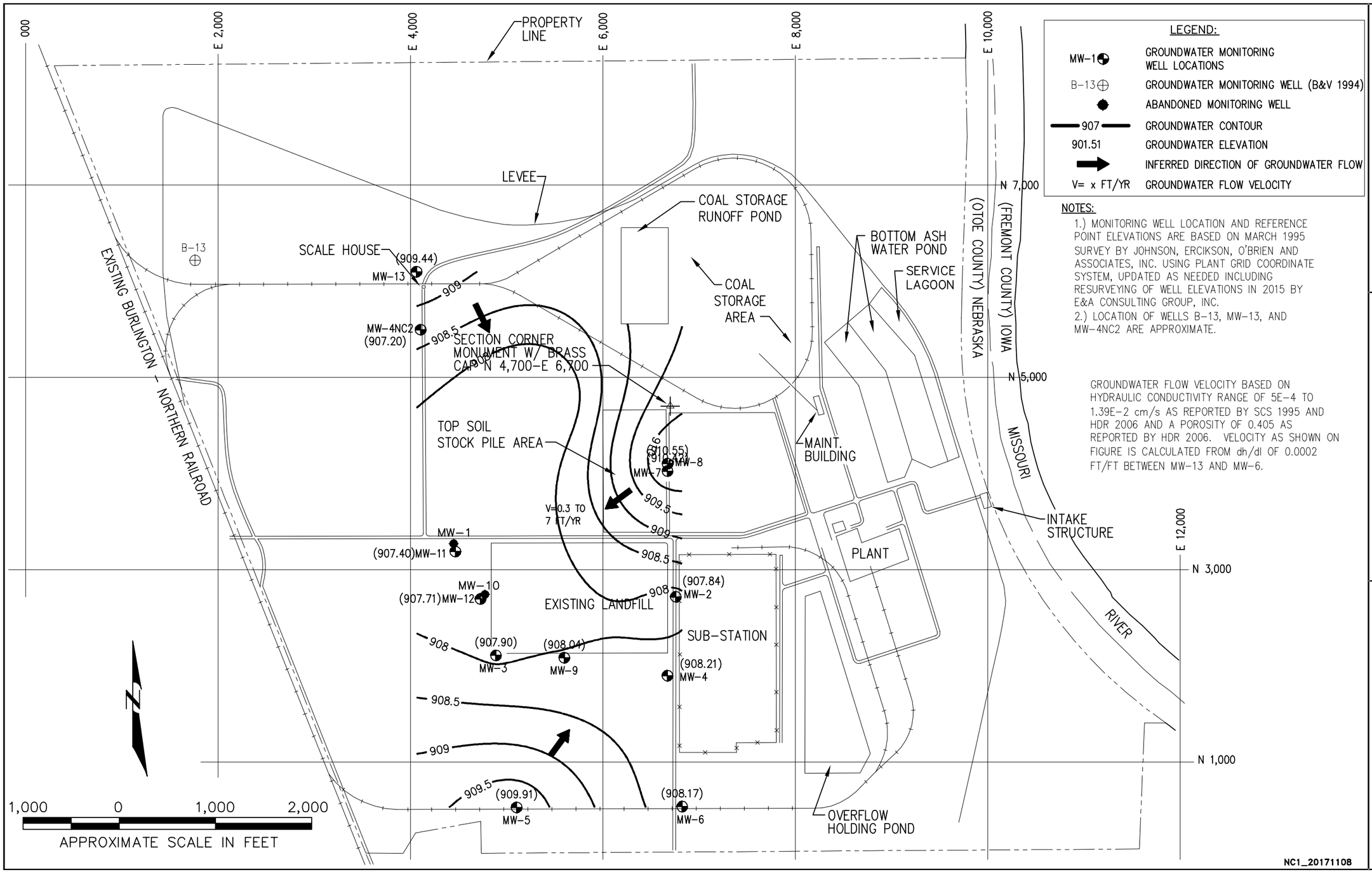
1.) MONITORING WELL LOCATION AND REFERENCE POINT ELEVATIONS ARE BASED ON MARCH 1995 SURVEY BY JOHNSON, ERCIKSON, O'BRIEN AND ASSOCIATES, INC. USING PLANT GRID COORDINATE SYSTEM, UPDATED AS NEEDED INCLUDING RESURVEYING OF WELL ELEVATIONS IN 2015 BY E&A CONSULTING GROUP, INC.

2.) LOCATION OF WELLS B-13, MW-13, AND MW-4NC2 ARE APPROXIMATE.

GROUNDWATER FLOW VELOCITY BASED ON HYDRAULIC CONDUCTIVITY RANGE OF 5E-4 TO 1.39E-2 cm/s AS REPORTED BY SCS 1995 AND HDR 2006 AND A POROSITY OF 0.405 AS REPORTED BY HDR 2006. VELOCITY AS SHOWN ON FIGURE IS CALCULATED FROM dh/dl OF 0.0006 FT/FT BETWEEN MW-13 AND MW-6.

FIGURE 8
GROUNDWATER CONTOUR MAP
JULY 13, 2017

OMAHA PUBLIC POWER DISTRICT
NEBRASKA CITY STATION UNIT 1 ASH LANDFILL
NEBRASKA CITY, NEBRASKA



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NC1_20171108

FIGURE 9
GROUNDWATER CONTOUR MAP
NOVEMBER 8, 2017

OMAHA PUBLIC POWER DISTRICT
NEBRASKA CITY STATION UNIT 1 ASH LANDFILL
NEBRASKA CITY, NEBRASKA

APPENDIX C

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319)277-2401

TestAmerica Job ID: 310-76128-1
Client Project/Site: Nebraska City Unit1 Landfill
Sampling Event: CCR Parameters Q1 2016

For:
Omaha Public Power District
Attn: Accounts Payable, 4E/EP-5
444 South 16th Street Mall
Omaha, Nebraska 68102-2247

Attn: Brad Sojka

Authorized for release by:
3/28/2016 2:11:39 PM

Shawn Hayes, Project Manager II
(319)277-2401
shawn.hayes@testamericainc.com

Table of Contents

Job ID: 310-76128-1

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-76128-1

Comments
No additional comments.

Receipt
The samples were received on 3/11/2016 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 0.5º C, 1.8º C and 2.5º C.

Metals
Method(s)6020A: The %RPD of the matrix spike (MS) and matrix spike duplicate (MSD) for preparation batch 310-120480 recovered outside control limits for all analytes. This is due to the laboratory double spiking the matrix spike aliquot. Percent recoveries were in generally in control with the adjusted spike amount.

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

General Chemistry
Method(s) 9056A: The following samples were diluted due to the nature of the sample matrix: MW13 (310-76128-1), MW4NC2 (310-76128-2), MW11 (310-76128-3), MW4 (310-76128-5), MW9 (310-76128-6), MW2 (310-76128-7), MW6 (310-76128-9) and DUP (310-76128-10). 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.

Sample Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit1 Landfill

TestAmerica Job ID: 310-76128-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-76128-1	MW13	Ground Water	03/09/16 09:49	03/11/16 10:00
310-76128-2	MW4NC2	Ground Water	03/09/16 10:39	03/11/16 10:00
310-76128-3	MW11	Ground Water	03/09/16 11:34	03/11/16 10:00
310-76128-4	MW3	Ground Water	03/09/16 12:28	03/11/16 10:00
310-76128-5	MW4	Ground Water	03/09/16 13:04	03/11/16 10:00
310-76128-6	MW9	Ground Water	03/09/16 13:44	03/11/16 10:00
310-76128-7	MW2	Ground Water	03/09/16 14:19	03/11/16 10:00
310-76128-8	MW5	Ground Water	03/09/16 15:40	03/11/16 10:00
310-76128-9	MW6	Ground Water	03/09/16 14:58	03/11/16 10:00
310-76128-10	DUP	Ground Water	03/09/16 13:06	03/11/16 10:00

Detection Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit1 Landfill

TestAmerica Job ID: 310-76128-1

Client Sample ID: MW13 — Lab Sample ID: 310-76128-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	11.8		5.00		mg/L	5		9056A	Total/NA
Sulfate	44.8		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.00492		0.00200		mg/L	1		6020A	Total/NA
Barium	0.302		0.00200		mg/L	1		6020A	Total/NA
Calcium	96.3		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000817		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	408		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW4NC2 — Lab Sample ID: 310-76128-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	46.2		5.00		mg/L	5		9056A	Total/NA
Barium	0.281		0.00200		mg/L	1		6020A	Total/NA
Calcium	131		1.00		mg/L	5		6020A	Total/NA
Lead	0.00199		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00272		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	546		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW11 — Lab Sample ID: 310-76128-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	128		5.00		mg/L	5		9056A	Total/NA
Barium	0.215		0.00200		mg/L	1		6020A	Total/NA
Boron	0.811		0.200		mg/L	1		6020A	Total/NA
Calcium	99.6		1.00		mg/L	5		6020A	Total/NA
Molybdenum	0.00361		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	468		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW3 — Lab Sample ID: 310-76128-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	14.3		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.508		0.500		mg/L	5		9056A	Total/NA
Sulfate	457		20.0		mg/L	20		9056A	Total/NA
Arsenic	0.0135		0.00200		mg/L	1		6020A	Total/NA
Barium	0.112		0.00200		mg/L	1		6020A	Total/NA
Boron	1.88		0.200		mg/L	1		6020A	Total/NA
Calcium	227		1.00		mg/L	5		6020A	Total/NA
Cobalt	0.00239		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1150		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW4 — Lab Sample ID: 310-76128-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	10.5		5.00		mg/L	5		9056A	Total/NA
Sulfate	373		20.0		mg/L	20		9056A	Total/NA
Arsenic	0.00336		0.00200		mg/L	1		6020A	Total/NA
Barium	0.195		0.00200		mg/L	1		6020A	Total/NA
Boron	1.83		0.200		mg/L	1		6020A	Total/NA
Calcium	227		1.00		mg/L	5		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW4 (Continued) — Lab Sample ID: 310-76128-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Molybdenum	0.00530		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	896		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW9 — Lab Sample ID: 310-76128-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.547	F1 F2	0.500		mg/L	5		9056A	Total/NA
Sulfate	284		20.0		mg/L	20		9056A	Total/NA
Arsenic	0.00995	F2	0.00200		mg/L	1		6020A	Total/NA
Barium	0.0865	F2	0.00200		mg/L	1		6020A	Total/NA
Boron	3.65	F1	0.200		mg/L	1		6020A	Total/NA
Calcium	125		1.00		mg/L	5		6020A	Total/NA
Cobalt	0.00121	F2	0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.0111	F1 F2	0.00200		mg/L	1		6020A	Total/NA
Selenium	0.0634	F1 F2	0.00500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	808		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW2 — Lab Sample ID: 310-76128-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.664		0.500		mg/L	5		9056A	Total/NA
Sulfate	90.2		5.00		mg/L	5		9056A	Total/NA
Barium	0.123		0.00200		mg/L	1		6020A	Total/NA
Boron	0.301		0.200		mg/L	1		6020A	Total/NA
Calcium	122		1.00		mg/L	5		6020A	Total/NA
Molybdenum	0.0444		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	456		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW5 — Lab Sample ID: 310-76128-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.02		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.81		0.500		mg/L	5		9056A	Total/NA
Sulfate	17.4		5.00		mg/L	5		9056A	Total/NA
Barium	0.226		0.00200		mg/L	1		6020A	Total/NA
Calcium	116		1.00		mg/L	5		6020A	Total/NA
Total Dissolved Solids	478		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW6 — Lab Sample ID: 310-76128-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.65		5.00		mg/L	5		9056A	Total/NA
Sulfate	165		5.00		mg/L	5		9056A	Total/NA
Barium	0.302		0.00200		mg/L	1		6020A	Total/NA
Boron	0.298		0.200		mg/L	1		6020A	Total/NA
Calcium	139		1.00		mg/L	5		6020A	Total/NA
Total Dissolved Solids	582		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP — Lab Sample ID: 310-76128-10

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit1 Landfill

TestAmerica Job ID: 310-76128-1

Client Sample ID: DUP (Continued)

Lab Sample ID: 310-76128-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	10.7		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.521		0.500		mg/L	5		9056A	Total/NA
Sulfate	371		20.0		mg/L	20		9056A	Total/NA
Arsenic	0.00345		0.00200		mg/L	1		6020A	Total/NA
Barium	0.180		0.00200		mg/L	1		6020A	Total/NA
Boron	1.77		0.200		mg/L	1		6020A	Total/NA
Calcium	198		1.00		mg/L	5		6020A	Total/NA
Molybdenum	0.0125		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	870		30.0		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW13

Date Collected: 03/09/16 09:49
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-1

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**11.8**		5.00		mg/L			03/15/16 15:50	5
Fluoride	<0.500		0.500		mg/L			03/15/16 15:50	5
Sulfate	**44.8**		5.00		mg/L			03/15/16 15:50	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		03/15/16 07:41	03/15/16 21:27	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		03/15/16 07:31	03/16/16 23:57	1
Arsenic	**0.00492**		0.00200		mg/L		03/15/16 07:31	03/16/16 23:57	1
Barium	**0.302**		0.00200		mg/L		03/15/16 07:31	03/16/16 23:57	1
Beryllium	<0.00100		0.00100		mg/L		03/15/16 07:31	03/16/16 23:57	1
Boron	<0.200		0.200		mg/L		03/15/16 07:31	03/16/16 23:57	1
Cadmium	<0.000500		0.000500		mg/L		03/15/16 07:31	03/16/16 23:57	1
Calcium	**96.3**		0.200		mg/L		03/15/16 07:31	03/16/16 23:57	1
Chromium	<0.00500		0.00500		mg/L		03/15/16 07:31	03/16/16 23:57	1
Cobalt	**0.000817**		0.000500		mg/L		03/15/16 07:31	03/16/16 23:57	1
Lead	<0.000500		0.000500		mg/L		03/15/16 07:31	03/16/16 23:57	1
Molybdenum	<0.00200		0.00200		mg/L		03/15/16 07:31	03/16/16 23:57	1
Selenium	<0.00500		0.00500		mg/L		03/15/16 07:31	03/16/16 23:57	1
Thallium	<0.00100		0.00100		mg/L		03/15/16 07:31	03/16/16 23:57	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		03/15/16 15:53	03/16/16 10:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**408**		30.0		mg/L			03/15/16 08:50	1

Client Sample ID: MW4NC2

Date Collected: 03/09/16 10:39
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-2

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			03/15/16 15:50	5
Fluoride	<0.500		0.500		mg/L			03/15/16 15:50	5
Sulfate	**46.2**		5.00		mg/L			03/15/16 15:50	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		03/15/16 07:41	03/15/16 21:29	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		03/15/16 07:31	03/17/16 00:00	1
Arsenic	<0.00200		0.00200		mg/L		03/15/16 07:31	03/17/16 00:00	1
Barium	**0.281**		0.00200		mg/L		03/15/16 07:31	03/17/16 00:00	1
Beryllium	<0.00100		0.00100		mg/L		03/15/16 07:31	03/17/16 00:00	1
Boron	<0.200		0.200		mg/L		03/15/16 07:31	03/17/16 00:00	1
Cadmium	<0.000500		0.000500		mg/L		03/15/16 07:31	03/17/16 00:00	1
Calcium	**131**		1.00		mg/L		03/15/16 07:31	03/21/16 13:18	5
Chromium	<0.00500		0.00500		mg/L		03/15/16 07:31	03/17/16 00:00	1
Cobalt	<0.000500		0.000500		mg/L		03/15/16 07:31	03/17/16 00:00	1
Lead	**0.00199**		0.000500		mg/L		03/15/16 07:31	03/17/16 00:00	1
Molybdenum	**0.00272**		0.00200		mg/L		03/15/16 07:31	03/17/16 00:00	1
Selenium	<0.00500		0.00500		mg/L		03/15/16 07:31	03/17/16 00:00	1
Thallium	<0.00100		0.00100		mg/L		03/15/16 07:31	03/17/16 00:00	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		03/15/16 15:53	03/16/16 10:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**546**		30.0		mg/L			03/15/16 08:50	1

Client Sample ID: MW11

Date Collected: 03/09/16 11:34
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-3

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			03/15/16 15:50	5
Fluoride	<0.500		0.500		mg/L			03/15/16 15:50	5
Sulfate	**128**		5.00		mg/L			03/15/16 15:50	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		03/15/16 07:41	03/15/16 21:31	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		03/15/16 07:31	03/17/16 00:04	1
Arsenic	<0.00200		0.00200		mg/L		03/15/16 07:31	03/17/16 00:04	1
Barium	**0.215**		0.00200		mg/L		03/15/16 07:31	03/17/16 00:04	1
Beryllium	<0.00100		0.00100		mg/L		03/15/16 07:31	03/17/16 00:04	1
Boron	**0.811**		0.200		mg/L		03/15/16 07:31	03/17/16 00:04	1
Cadmium	<0.000500		0.000500		mg/L		03/15/16 07:31	03/17/16 00:04	1
Calcium	**99.6**		1.00		mg/L		03/15/16 07:31	03/21/16 13:21	5
Chromium	<0.00500		0.00500		mg/L		03/15/16 07:31	03/17/16 00:04	1
Cobalt	<0.000500		0.000500		mg/L		03/15/16 07:31	03/17/16 00:04	1
Lead	<0.000500		0.000500		mg/L		03/15/16 07:31	03/17/16 00:04	1
Molybdenum	**0.00361**		0.00200		mg/L		03/15/16 07:31	03/17/16 00:04	1
Selenium	<0.00500		0.00500		mg/L		03/15/16 07:31	03/17/16 00:04	1
Thallium	<0.00100		0.00100		mg/L		03/15/16 07:31	03/17/16 00:04	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		03/15/16 15:53	03/16/16 10:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**468**		30.0		mg/L			03/15/16 08:50	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit1 Landfill

TestAmerica Job ID: 310-76128-1

Client Sample ID: MW3
Date Collected: 03/09/16 12:28
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-4
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**14.3**		5.00		mg/L			03/15/16 15:50	5
Fluoride	**0.508**		0.500		mg/L			03/15/16 15:50	5
Sulfate	**457**		20.0		mg/L			03/16/16 15:48	20

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		03/15/16 07:41	03/15/16 21:37	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		03/15/16 07:31	03/17/16 00:07	1
Arsenic	**0.0135**		0.00200		mg/L		03/15/16 07:31	03/17/16 00:07	1
Barium	**0.112**		0.00200		mg/L		03/15/16 07:31	03/17/16 00:07	1
Beryllium	<0.00100		0.00100		mg/L		03/15/16 07:31	03/17/16 00:07	1
Boron	**1.88**		0.200		mg/L		03/15/16 07:31	03/17/16 00:07	1
Cadmium	<0.000500		0.000500		mg/L		03/15/16 07:31	03/17/16 00:07	1
Calcium	**227**		1.00		mg/L		03/15/16 07:31	03/21/16 13:25	5
Chromium	<0.00500		0.00500		mg/L		03/15/16 07:31	03/17/16 00:07	1
Cobalt	**0.00239**		0.000500		mg/L		03/15/16 07:31	03/17/16 00:07	1
Lead	<0.000500		0.000500		mg/L		03/15/16 07:31	03/17/16 00:07	1
Molybdenum	<0.00200		0.00200		mg/L		03/15/16 07:31	03/17/16 00:07	1
Selenium	<0.00500		0.00500		mg/L		03/15/16 07:31	03/17/16 00:07	1
Thallium	<0.00100		0.00100		mg/L		03/15/16 07:31	03/17/16 00:07	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		03/15/16 15:53	03/16/16 10:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1150**		30.0		mg/L			03/15/16 08:50	1

Client Sample ID: MW4

Date Collected: 03/09/16 13:04
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-5

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10.5**		5.00		mg/L			03/15/16 15:50	5
Fluoride	<0.500		0.500		mg/L			03/15/16 15:50	5
Sulfate	**373**		20.0		mg/L			03/16/16 15:48	20

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		03/15/16 07:41	03/15/16 21:39	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		03/15/16 07:31	03/17/16 00:11	1
Arsenic	**0.00336**		0.00200		mg/L		03/15/16 07:31	03/17/16 00:11	1
Barium	**0.195**		0.00200		mg/L		03/15/16 07:31	03/17/16 00:11	1
Beryllium	<0.00100		0.00100		mg/L		03/15/16 07:31	03/17/16 00:11	1
Boron	**1.83**		0.200		mg/L		03/15/16 07:31	03/17/16 00:11	1
Cadmium	<0.000500		0.000500		mg/L		03/15/16 07:31	03/17/16 00:11	1
Calcium	**227**		1.00		mg/L		03/15/16 07:31	03/21/16 13:28	5
Chromium	<0.00500		0.00500		mg/L		03/15/16 07:31	03/17/16 00:11	1
Cobalt	<0.000500		0.000500		mg/L		03/15/16 07:31	03/17/16 00:11	1
Lead	<0.000500		0.000500		mg/L		03/15/16 07:31	03/17/16 00:11	1
Molybdenum	**0.00530**		0.00200		mg/L		03/15/16 07:31	03/17/16 00:11	1
Selenium	<0.00500		0.00500		mg/L		03/15/16 07:31	03/17/16 00:11	1
Thallium	<0.00100		0.00100		mg/L		03/15/16 07:31	03/17/16 00:11	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		03/15/16 15:53	03/16/16 10:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**896**		30.0		mg/L			03/15/16 08:50	1

Client Sample ID: MW9

Date Collected: 03/09/16 13:44
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-6

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	F1 F2	5.00		mg/L			03/15/16 15:50	5
Fluoride	**0.547**	**F1 F2**	0.500		mg/L			03/15/16 15:50	5
Sulfate	**284**		20.0		mg/L			03/16/16 15:48	20

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		03/15/16 07:41	03/15/16 21:41	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100	F2	0.00100		mg/L		03/15/16 07:31	03/17/16 00:14	1
Arsenic	**0.00995**	**F2**	0.00200		mg/L		03/15/16 07:31	03/17/16 00:14	1
Barium	**0.0865**	**F2**	0.00200		mg/L		03/15/16 07:31	03/17/16 00:14	1
Beryllium	<0.00100	F2	0.00100		mg/L		03/15/16 07:31	03/17/16 00:14	1
Boron	**3.65**	**F1**	0.200		mg/L		03/15/16 07:31	03/17/16 00:14	1
Cadmium	<0.000500	F2	0.000500		mg/L		03/15/16 07:31	03/17/16 00:14	1
Calcium	**125**		1.00		mg/L		03/15/16 07:31	03/21/16 13:31	5
Chromium	<0.00500	F2	0.00500		mg/L		03/15/16 07:31	03/17/16 00:14	1
Cobalt	**0.00121**	**F2**	0.000500		mg/L		03/15/16 07:31	03/17/16 00:14	1
Lead	<0.000500	F2	0.000500		mg/L		03/15/16 07:31	03/17/16 00:14	1
Molybdenum	**0.0111**	**F1 F2**	0.00200		mg/L		03/15/16 07:31	03/17/16 00:14	1
Selenium	**0.0634**	**F1 F2**	0.00500		mg/L		03/15/16 07:31	03/17/16 00:14	1
Thallium	<0.00100	F2	0.00100		mg/L		03/15/16 07:31	03/17/16 00:14	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		03/15/16 15:53	03/16/16 10:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**808**		30.0		mg/L			03/15/16 08:50	1

Client Sample ID: MW2

Date Collected: 03/09/16 14:19
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-7

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			03/15/16 15:50	5
Fluoride	**0.664**		0.500		mg/L			03/15/16 15:50	5
Sulfate	**90.2**		5.00		mg/L			03/15/16 15:50	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		03/15/16 07:41	03/15/16 21:49	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		03/15/16 07:31	03/17/16 00:37	1
Arsenic	<0.00200		0.00200		mg/L		03/15/16 07:31	03/17/16 00:37	1
Barium	**0.123**		0.00200		mg/L		03/15/16 07:31	03/17/16 00:37	1
Beryllium	<0.00100		0.00100		mg/L		03/15/16 07:31	03/17/16 00:37	1
Boron	**0.301**		0.200		mg/L		03/15/16 07:31	03/17/16 00:37	1
Cadmium	<0.000500		0.000500		mg/L		03/15/16 07:31	03/17/16 00:37	1
Calcium	**122**		1.00		mg/L		03/15/16 07:31	03/21/16 13:50	5
Chromium	<0.00500		0.00500		mg/L		03/15/16 07:31	03/17/16 00:37	1
Cobalt	<0.000500		0.000500		mg/L		03/15/16 07:31	03/17/16 00:37	1
Lead	<0.000500		0.000500		mg/L		03/15/16 07:31	03/17/16 00:37	1
Molybdenum	**0.0444**		0.00200		mg/L		03/15/16 07:31	03/17/16 00:37	1
Selenium	<0.00500		0.00500		mg/L		03/15/16 07:31	03/17/16 00:37	1
Thallium	<0.00100		0.00100		mg/L		03/15/16 07:31	03/17/16 00:37	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		03/15/16 15:53	03/16/16 10:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**456**		30.0		mg/L			03/15/16 08:50	1

Client Sample ID: MW5

Date Collected: 03/09/16 15:40
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-8

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5.02**		5.00		mg/L			03/15/16 15:50	5
Fluoride	**1.81**		0.500		mg/L			03/15/16 15:50	5
Sulfate	**17.4**		5.00		mg/L			03/15/16 15:50	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		03/15/16 07:41	03/15/16 21:51	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		03/15/16 07:31	03/17/16 00:41	1
Arsenic	<0.00200		0.00200		mg/L		03/15/16 07:31	03/17/16 00:41	1
Barium	**0.226**		0.00200		mg/L		03/15/16 07:31	03/17/16 00:41	1
Beryllium	<0.00100		0.00100		mg/L		03/15/16 07:31	03/17/16 00:41	1
Boron	<0.200		0.200		mg/L		03/15/16 07:31	03/17/16 00:41	1
Cadmium	<0.000500		0.000500		mg/L		03/15/16 07:31	03/17/16 00:41	1
Calcium	**116**		1.00		mg/L		03/15/16 07:31	03/21/16 13:53	5
Chromium	<0.00500		0.00500		mg/L		03/15/16 07:31	03/17/16 00:41	1
Cobalt	<0.000500		0.000500		mg/L		03/15/16 07:31	03/17/16 00:41	1
Lead	<0.000500		0.000500		mg/L		03/15/16 07:31	03/17/16 00:41	1
Molybdenum	<0.00200		0.00200		mg/L		03/15/16 07:31	03/17/16 00:41	1
Selenium	<0.00500		0.00500		mg/L		03/15/16 07:31	03/17/16 00:41	1
Thallium	<0.00100		0.00100		mg/L		03/15/16 07:31	03/17/16 00:41	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		03/18/16 08:48	03/18/16 14:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**478**		30.0		mg/L			03/15/16 08:50	1

Client Sample ID: MW6

Date Collected: 03/09/16 14:58
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-9

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5.65**		5.00		mg/L			03/15/16 15:50	5
Fluoride	<0.500		0.500		mg/L			03/15/16 15:50	5
Sulfate	**165**		5.00		mg/L			03/15/16 15:50	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		03/15/16 07:41	03/15/16 21:53	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		03/15/16 07:31	03/17/16 00:44	1
Arsenic	<0.00200		0.00200		mg/L		03/15/16 07:31	03/17/16 00:44	1
Barium	**0.302**		0.00200		mg/L		03/15/16 07:31	03/17/16 00:44	1
Beryllium	<0.00100		0.00100		mg/L		03/15/16 07:31	03/17/16 00:44	1
Boron	**0.298**		0.200		mg/L		03/15/16 07:31	03/17/16 00:44	1
Cadmium	<0.000500		0.000500		mg/L		03/15/16 07:31	03/17/16 00:44	1
Calcium	**139**		1.00		mg/L		03/15/16 07:31	03/21/16 13:56	5
Chromium	<0.00500		0.00500		mg/L		03/15/16 07:31	03/17/16 00:44	1
Cobalt	<0.000500		0.000500		mg/L		03/15/16 07:31	03/17/16 00:44	1
Lead	<0.000500		0.000500		mg/L		03/15/16 07:31	03/17/16 00:44	1
Molybdenum	<0.00200		0.00200		mg/L		03/15/16 07:31	03/17/16 00:44	1
Selenium	<0.00500		0.00500		mg/L		03/15/16 07:31	03/17/16 00:44	1
Thallium	<0.00100		0.00100		mg/L		03/15/16 07:31	03/17/16 00:44	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		03/15/16 15:53	03/16/16 10:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**582**		30.0		mg/L			03/15/16 08:50	1

Client Sample ID: DUP

Date Collected: 03/09/16 13:06
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-10

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10.7**		5.00		mg/L			03/15/16 15:50	5
Fluoride	**0.521**		0.500		mg/L			03/15/16 15:50	5
Sulfate	**371**		20.0		mg/L			03/16/16 15:48	20

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		03/15/16 07:41	03/15/16 21:55	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		03/15/16 07:31	03/17/16 00:47	1
Arsenic	**0.00345**		0.00200		mg/L		03/15/16 07:31	03/17/16 00:47	1
Barium	**0.180**		0.00200		mg/L		03/15/16 07:31	03/17/16 00:47	1
Beryllium	<0.00100		0.00100		mg/L		03/15/16 07:31	03/17/16 00:47	1
Boron	**1.77**		0.200		mg/L		03/15/16 07:31	03/17/16 00:47	1
Cadmium	<0.000500		0.000500		mg/L		03/15/16 07:31	03/17/16 00:47	1
Calcium	**198**		1.00		mg/L		03/15/16 07:31	03/21/16 13:59	5
Chromium	<0.00500		0.00500		mg/L		03/15/16 07:31	03/17/16 00:47	1
Cobalt	<0.000500		0.000500		mg/L		03/15/16 07:31	03/17/16 00:47	1
Lead	<0.000500		0.000500		mg/L		03/15/16 07:31	03/17/16 00:47	1
Molybdenum	**0.0125**		0.00200		mg/L		03/15/16 07:31	03/17/16 00:47	1
Selenium	<0.00500		0.00500		mg/L		03/15/16 07:31	03/17/16 00:47	1
Thallium	<0.00100		0.00100		mg/L		03/15/16 07:31	03/17/16 00:47	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		03/15/16 15:53	03/16/16 10:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**870**		30.0		mg/L			03/15/16 08:50	1

Definitions/Glossary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit1 Landfill

TestAmerica Job ID: 310-76128-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits

Metals

Qualifier	Qualifier Description
F2	MS/MSD RPD exceeds control limits
F1	MS and/or MSD Recovery is outside acceptance limits.
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.

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
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
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)

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-120732/3
Matrix: Water
Analysis Batch: 120732

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			03/15/16 15:50	1
Fluoride	<0.100		0.100		mg/L			03/15/16 15:50	1
Sulfate	<1.00		1.00		mg/L			03/15/16 15:50	1

Lab Sample ID: LCS 310-120732/4
Matrix: Water
Analysis Batch: 120732

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	7.50	7.798		mg/L		104	90 - 110
Fluoride	1.50	1.508		mg/L		101	90 - 110
Sulfate	7.50	7.667		mg/L		102	90 - 110

Lab Sample ID: 310-76128-6 MS
Matrix: Ground Water
Analysis Batch: 120732

Client Sample ID: MW9
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	<5.00	F1 F2	25.0	29.37		mg/L		103	80 - 120
Fluoride	0.547	F1 F2	5.00	5.653		mg/L		102	80 - 120

Lab Sample ID: 310-76128-6 MSD
Matrix: Ground Water
Analysis Batch: 120732

Client Sample ID: MW9
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	<5.00	F1 F2	25.0	35.89	F1 F2	mg/L		129	80 - 120	20	15
Fluoride	0.547	F1 F2	5.00	6.803	F1 F2	mg/L		125	80 - 120	18	15

Lab Sample ID: MB 310-120863/3
Matrix: Water
Analysis Batch: 120863

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			03/16/16 15:48	1
Fluoride	<0.100		0.100		mg/L			03/16/16 15:48	1
Sulfate	<1.00		1.00		mg/L			03/16/16 15:48	1

Lab Sample ID: LCS 310-120863/4
Matrix: Water
Analysis Batch: 120863

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	7.50	7.796		mg/L		104	90 - 110
Fluoride	1.50	1.510		mg/L		101	90 - 110
Sulfate	7.50	7.547		mg/L		101	90 - 110

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: 310-76128-6 MS
Matrix: Ground Water
Analysis Batch: 120863

Client Sample ID: MW9
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	284		100	378.7		mg/L		95	80 - 120

Lab Sample ID: 310-76128-6 MSD
Matrix: Ground Water
Analysis Batch: 120863

Client Sample ID: MW9
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	284		100	384.7		mg/L		101	80 - 120	2	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 310-120483/1-A
Matrix: Water
Analysis Batch: 120687

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 120483

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		03/15/16 07:41	03/15/16 21:22	1

Lab Sample ID: LCS 310-120483/2-A
Matrix: Water
Analysis Batch: 120687

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 120483

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	2.00	1.882		mg/L		94	80 - 120

Lab Sample ID: 310-76128-6 MS
Matrix: Ground Water
Analysis Batch: 120687

Client Sample ID: MW9
Prep Type: Total/NA
Prep Batch: 120483

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	<0.0500		2.00	1.814		mg/L		89	75 - 125

Lab Sample ID: 310-76128-6 MSD
Matrix: Ground Water
Analysis Batch: 120687

Client Sample ID: MW9
Prep Type: Total/NA
Prep Batch: 120483

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lithium	<0.0500		2.00	1.916		mg/L		94	75 - 125	5	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 310-120480/1-A
Matrix: Water
Analysis Batch: 120856

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 120480

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		03/15/16 07:31	03/16/16 23:50	1
Arsenic	<0.00200		0.00200		mg/L		03/15/16 07:31	03/16/16 23:50	1
Barium	<0.00200		0.00200		mg/L		03/15/16 07:31	03/16/16 23:50	1

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

Lab Sample ID: MB 310-120480/1-A
Matrix: Water
Analysis Batch: 120856

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 120480

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00100		0.00100		mg/L		03/15/16 07:31	03/16/16 23:50	1
Boron	<0.200		0.200		mg/L		03/15/16 07:31	03/16/16 23:50	1
Cadmium	<0.000500		0.000500		mg/L		03/15/16 07:31	03/16/16 23:50	1
Calcium	<0.200		0.200		mg/L		03/15/16 07:31	03/16/16 23:50	1
Chromium	<0.00500		0.00500		mg/L		03/15/16 07:31	03/16/16 23:50	1
Cobalt	<0.000500		0.000500		mg/L		03/15/16 07:31	03/16/16 23:50	1
Lead	<0.000500		0.000500		mg/L		03/15/16 07:31	03/16/16 23:50	1
Molybdenum	<0.00200		0.00200		mg/L		03/15/16 07:31	03/16/16 23:50	1
Selenium	<0.00500		0.00500		mg/L		03/15/16 07:31	03/16/16 23:50	1
Thallium	<0.00100		0.00100		mg/L		03/15/16 07:31	03/16/16 23:50	1

Lab Sample ID: LCS 310-120480/2-A
Matrix: Water
Analysis Batch: 120856

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 120480

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0400	0.03713		mg/L		93	80 - 120
Arsenic	0.0800	0.08310		mg/L		104	80 - 120
Barium	0.0800	0.08045		mg/L		101	80 - 120
Beryllium	0.0400	0.03832		mg/L		96	80 - 120
Boron	0.960	0.9163		mg/L		95	80 - 120
Cadmium	0.0400	0.03972		mg/L		99	80 - 120
Calcium	4.00	4.016		mg/L		100	80 - 120
Chromium	0.0800	0.07833		mg/L		98	80 - 120
Cobalt	0.0400	0.03739		mg/L		93	80 - 120
Lead	0.0400	0.03880		mg/L		97	80 - 120
Molybdenum	0.0800	0.07376		mg/L		92	80 - 120
Selenium	0.0800	0.08033		mg/L		100	80 - 120
Thallium	0.0320	0.03291		mg/L		103	80 - 120

Lab Sample ID: 310-76128-6 MS
Matrix: Ground Water
Analysis Batch: 120856

Client Sample ID: MW9
Prep Type: Total/NA
Prep Batch: 120480

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.00100	F2	0.0400	0.03758		mg/L		94	75 - 125
Arsenic	0.00995	F2	0.0800	0.09132		mg/L		102	75 - 125
Barium	0.0865	F2	0.0800	0.1530		mg/L		83	75 - 125
Beryllium	<0.00100	F2	0.0400	0.03834		mg/L		96	75 - 125
Boron	3.65	F1	0.960	4.088	F1	mg/L		45	75 - 125
Cadmium	<0.000500	F2	0.0400	0.03993		mg/L		99	75 - 125
Chromium	<0.00500	F2	0.0800	0.07736		mg/L		97	75 - 125
Cobalt	0.00121	F2	0.0400	0.03779		mg/L		91	75 - 125
Lead	<0.000500	F2	0.0400	0.03855		mg/L		96	75 - 125
Molybdenum	0.0111	F1 F2	0.0800	0.1003		mg/L		111	75 - 125
Selenium	0.0634	F1 F2	0.0800	0.1296		mg/L		83	75 - 125
Thallium	<0.00100	F2	0.0320	0.03119		mg/L		97	75 - 125

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

Lab Sample ID: 310-76128-6 MS
Matrix: Ground Water
Analysis Batch: 121260

Client Sample ID: MW9
Prep Type: Total/NA
Prep Batch: 120480

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	125		4.00	148.8	4	mg/L		585	75 - 125

Lab Sample ID: 310-76128-6 MSD
Matrix: Ground Water
Analysis Batch: 120856

Client Sample ID: MW9
Prep Type: Total/NA
Prep Batch: 120480

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	<0.00100	F2	0.0200	0.02005	F2	mg/L		100	75 - 125	61	20
Arsenic	0.00995	F2	0.0400	0.05152	F2	mg/L		104	75 - 125	56	20
Barium	0.0865	F2	0.0400	0.1199	F2	mg/L		83	75 - 125	24	20
Beryllium	<0.00100	F2	0.0200	0.02111	F2	mg/L		106	75 - 125	58	20
Boron	3.65	F1	0.880	4.226	4	mg/L		65	75 - 125	3	20
Cadmium	<0.000500	F2	0.0200	0.02106	F2	mg/L		105	75 - 125	62	20
Chromium	<0.00500	F2	0.0400	0.03986	F2	mg/L		100	75 - 125	64	20
Cobalt	0.00121	F2	0.0200	0.02045	F2	mg/L		96	75 - 125	60	20
Lead	<0.000500	F2	0.0200	0.02032	F2	mg/L		102	75 - 125	62	20
Molybdenum	0.0111	F1 F2	0.0400	0.06293	F1 F2	mg/L		130	75 - 125	46	20
Selenium	0.0634	F1 F2	0.0400	0.09063	F1 F2	mg/L		68	75 - 125	35	20
Thallium	<0.00100	F2	0.0160	0.01634	F2	mg/L		102	75 - 125	63	20

Lab Sample ID: 310-76128-6 MSD
Matrix: Ground Water
Analysis Batch: 121260

Client Sample ID: MW9
Prep Type: Total/NA
Prep Batch: 120480

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	125		2.00	160.0	4	mg/L		1728	75 - 125	7	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-120611/1-A
Matrix: Water
Analysis Batch: 120754

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 120611

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		03/15/16 15:53	03/16/16 09:57	1

Lab Sample ID: LCS 310-120611/2-A
Matrix: Water
Analysis Batch: 120754

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 120611

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00167	0.001714		mg/L		103	80 - 120

Lab Sample ID: 310-76128-6 MS
Matrix: Ground Water
Analysis Batch: 120754

Client Sample ID: MW9
Prep Type: Total/NA
Prep Batch: 120611

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.000200		0.00167	0.001640		mg/L		98	80 - 120

Lab Sample ID: 310-76128-6 MSD
Matrix: Ground Water
Analysis Batch: 120754

Client Sample ID: MW9
Prep Type: Total/NA
Prep Batch: 120611

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000200		0.00167	0.001646		mg/L		99	80 - 120	0	20

Lab Sample ID: MB 310-120969/1-A
Matrix: Water
Analysis Batch: 121053

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 120969

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		03/18/16 08:48	03/18/16 14:38	1

Lab Sample ID: LCS 310-120969/2-A
Matrix: Water
Analysis Batch: 121053

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 120969

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00167	0.001359		mg/L		82	80 - 120

Lab Sample ID: 310-76128-8 MS
Matrix: Ground Water
Analysis Batch: 121053

Client Sample ID: MW5
Prep Type: Total/NA
Prep Batch: 120969

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.000200		0.00167	0.001560		mg/L		94	80 - 120

Lab Sample ID: 310-76128-8 MSD
Matrix: Ground Water
Analysis Batch: 121053

Client Sample ID: MW5
Prep Type: Total/NA
Prep Batch: 120969

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000200		0.00167	0.001546		mg/L		93	80 - 120	1	20

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

Lab Sample ID: MB 310-120489/1
Matrix: Water
Analysis Batch: 120489

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	<30.0		30.0		mg/L			03/15/16 08:50	1

Lab Sample ID: LCS 310-120489/2
Matrix: Water
Analysis Batch: 120489

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	980.0		mg/L		98	90 - 110

Lab Sample ID: 310-76128-6 DU
Matrix: Ground Water
Analysis Batch: 120489

Client Sample ID: MW9
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	808		774.0		mg/L		4	20

HPLC/IC

Analysis Batch: 120732

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-76128-1	MW13	Total/NA	Ground Water	9056A	
310-76128-2	MW4NC2	Total/NA	Ground Water	9056A	
310-76128-3	MW11	Total/NA	Ground Water	9056A	
310-76128-4	MW3	Total/NA	Ground Water	9056A	
310-76128-5	MW4	Total/NA	Ground Water	9056A	
310-76128-6	MW9	Total/NA	Ground Water	9056A	
310-76128-6 MS	MW9	Total/NA	Ground Water	9056A	
310-76128-6 MSD	MW9	Total/NA	Ground Water	9056A	
310-76128-7	MW2	Total/NA	Ground Water	9056A	
310-76128-8	MW5	Total/NA	Ground Water	9056A	
310-76128-9	MW6	Total/NA	Ground Water	9056A	
310-76128-10	DUP	Total/NA	Ground Water	9056A	
LCS 310-120732/4	Lab Control Sample	Total/NA	Water	9056A	
MB 310-120732/3	Method Blank	Total/NA	Water	9056A	

Analysis Batch: 120863

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-76128-4	MW3	Total/NA	Ground Water	9056A	
310-76128-5	MW4	Total/NA	Ground Water	9056A	
310-76128-6	MW9	Total/NA	Ground Water	9056A	
310-76128-6 MS	MW9	Total/NA	Ground Water	9056A	
310-76128-6 MSD	MW9	Total/NA	Ground Water	9056A	
310-76128-10	DUP	Total/NA	Ground Water	9056A	
LCS 310-120863/4	Lab Control Sample	Total/NA	Water	9056A	
MB 310-120863/3	Method Blank	Total/NA	Water	9056A	

Metals

Prep Batch: 120480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-76128-1	MW13	Total/NA	Ground Water	3010A	
310-76128-2	MW4NC2	Total/NA	Ground Water	3010A	
310-76128-3	MW11	Total/NA	Ground Water	3010A	
310-76128-4	MW3	Total/NA	Ground Water	3010A	
310-76128-5	MW4	Total/NA	Ground Water	3010A	
310-76128-6	MW9	Total/NA	Ground Water	3010A	
310-76128-6 MS	MW9	Total/NA	Ground Water	3010A	
310-76128-6 MSD	MW9	Total/NA	Ground Water	3010A	
310-76128-7	MW2	Total/NA	Ground Water	3010A	
310-76128-8	MW5	Total/NA	Ground Water	3010A	
310-76128-9	MW6	Total/NA	Ground Water	3010A	
310-76128-10	DUP	Total/NA	Ground Water	3010A	
LCS 310-120480/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 310-120480/1-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 120483

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-76128-1	MW13	Total/NA	Ground Water	3010A	
310-76128-2	MW4NC2	Total/NA	Ground Water	3010A	
310-76128-3	MW11	Total/NA	Ground Water	3010A	

Metals (Continued)

Prep Batch: 120483 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-76128-4	MW3	Total/NA	Ground Water	3010A	
310-76128-5	MW4	Total/NA	Ground Water	3010A	
310-76128-6	MW9	Total/NA	Ground Water	3010A	
310-76128-6 MS	MW9	Total/NA	Ground Water	3010A	
310-76128-6 MSD	MW9	Total/NA	Ground Water	3010A	
310-76128-7	MW2	Total/NA	Ground Water	3010A	
310-76128-8	MW5	Total/NA	Ground Water	3010A	
310-76128-9	MW6	Total/NA	Ground Water	3010A	
310-76128-10	DUP	Total/NA	Ground Water	3010A	
LCS 310-120483/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 310-120483/1-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 120611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-76128-1	MW13	Total/NA	Ground Water	7470A	
310-76128-2	MW4NC2	Total/NA	Ground Water	7470A	
310-76128-3	MW11	Total/NA	Ground Water	7470A	
310-76128-4	MW3	Total/NA	Ground Water	7470A	
310-76128-5	MW4	Total/NA	Ground Water	7470A	
310-76128-6	MW9	Total/NA	Ground Water	7470A	
310-76128-6 MS	MW9	Total/NA	Ground Water	7470A	
310-76128-6 MSD	MW9	Total/NA	Ground Water	7470A	
310-76128-7	MW2	Total/NA	Ground Water	7470A	
310-76128-9	MW6	Total/NA	Ground Water	7470A	
310-76128-10	DUP	Total/NA	Ground Water	7470A	
LCS 310-120611/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 310-120611/1-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 120687

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-76128-1	MW13	Total/NA	Ground Water	6010C	120483
310-76128-2	MW4NC2	Total/NA	Ground Water	6010C	120483
310-76128-3	MW11	Total/NA	Ground Water	6010C	120483
310-76128-4	MW3	Total/NA	Ground Water	6010C	120483
310-76128-5	MW4	Total/NA	Ground Water	6010C	120483
310-76128-6	MW9	Total/NA	Ground Water	6010C	120483
310-76128-6 MS	MW9	Total/NA	Ground Water	6010C	120483
310-76128-6 MSD	MW9	Total/NA	Ground Water	6010C	120483
310-76128-7	MW2	Total/NA	Ground Water	6010C	120483
310-76128-8	MW5	Total/NA	Ground Water	6010C	120483
310-76128-9	MW6	Total/NA	Ground Water	6010C	120483
310-76128-10	DUP	Total/NA	Ground Water	6010C	120483
LCS 310-120483/2-A	Lab Control Sample	Total/NA	Water	6010C	120483
MB 310-120483/1-A	Method Blank	Total/NA	Water	6010C	120483

Analysis Batch: 120754

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-76128-1	MW13	Total/NA	Ground Water	7470A	120611
310-76128-2	MW4NC2	Total/NA	Ground Water	7470A	120611
310-76128-3	MW11	Total/NA	Ground Water	7470A	120611
310-76128-4	MW3	Total/NA	Ground Water	7470A	120611

Metals (Continued)

Analysis Batch: 120754 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-76128-5	MW4	Total/NA	Ground Water	7470A	120611
310-76128-6	MW9	Total/NA	Ground Water	7470A	120611
310-76128-6 MS	MW9	Total/NA	Ground Water	7470A	120611
310-76128-6 MSD	MW9	Total/NA	Ground Water	7470A	120611
310-76128-7	MW2	Total/NA	Ground Water	7470A	120611
310-76128-9	MW6	Total/NA	Ground Water	7470A	120611
310-76128-10	DUP	Total/NA	Ground Water	7470A	120611
LCS 310-120611/2-A	Lab Control Sample	Total/NA	Water	7470A	120611
MB 310-120611/1-A	Method Blank	Total/NA	Water	7470A	120611

Analysis Batch: 120856

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-76128-1	MW13	Total/NA	Ground Water	6020A	120480
310-76128-2	MW4NC2	Total/NA	Ground Water	6020A	120480
310-76128-3	MW11	Total/NA	Ground Water	6020A	120480
310-76128-4	MW3	Total/NA	Ground Water	6020A	120480
310-76128-5	MW4	Total/NA	Ground Water	6020A	120480
310-76128-6	MW9	Total/NA	Ground Water	6020A	120480
310-76128-6 MS	MW9	Total/NA	Ground Water	6020A	120480
310-76128-6 MSD	MW9	Total/NA	Ground Water	6020A	120480
310-76128-7	MW2	Total/NA	Ground Water	6020A	120480
310-76128-8	MW5	Total/NA	Ground Water	6020A	120480
310-76128-9	MW6	Total/NA	Ground Water	6020A	120480
310-76128-10	DUP	Total/NA	Ground Water	6020A	120480
LCS 310-120480/2-A	Lab Control Sample	Total/NA	Water	6020A	120480
MB 310-120480/1-A	Method Blank	Total/NA	Water	6020A	120480

Prep Batch: 120969

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-76128-8	MW5	Total/NA	Ground Water	7470A	
310-76128-8 MS	MW5	Total/NA	Ground Water	7470A	
310-76128-8 MSD	MW5	Total/NA	Ground Water	7470A	
LCS 310-120969/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 310-120969/1-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 121053

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-76128-8	MW5	Total/NA	Ground Water	7470A	120969
310-76128-8 MS	MW5	Total/NA	Ground Water	7470A	120969
310-76128-8 MSD	MW5	Total/NA	Ground Water	7470A	120969
LCS 310-120969/2-A	Lab Control Sample	Total/NA	Water	7470A	120969
MB 310-120969/1-A	Method Blank	Total/NA	Water	7470A	120969

Analysis Batch: 121260

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-76128-2	MW4NC2	Total/NA	Ground Water	6020A	120480
310-76128-3	MW11	Total/NA	Ground Water	6020A	120480
310-76128-4	MW3	Total/NA	Ground Water	6020A	120480
310-76128-5	MW4	Total/NA	Ground Water	6020A	120480
310-76128-6	MW9	Total/NA	Ground Water	6020A	120480
310-76128-6 MS	MW9	Total/NA	Ground Water	6020A	120480

Metals (Continued)

Analysis Batch: 121260 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-76128-6 MSD	MW9	Total/NA	Ground Water	6020A	120480
310-76128-7	MW2	Total/NA	Ground Water	6020A	120480
310-76128-8	MW5	Total/NA	Ground Water	6020A	120480
310-76128-9	MW6	Total/NA	Ground Water	6020A	120480
310-76128-10	DUP	Total/NA	Ground Water	6020A	120480

General Chemistry

Analysis Batch: 120489

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-76128-1	MW13	Total/NA	Ground Water	SM 2540C	
310-76128-2	MW4NC2	Total/NA	Ground Water	SM 2540C	
310-76128-3	MW11	Total/NA	Ground Water	SM 2540C	
310-76128-4	MW3	Total/NA	Ground Water	SM 2540C	
310-76128-5	MW4	Total/NA	Ground Water	SM 2540C	
310-76128-6	MW9	Total/NA	Ground Water	SM 2540C	
310-76128-6 DU	MW9	Total/NA	Ground Water	SM 2540C	
310-76128-7	MW2	Total/NA	Ground Water	SM 2540C	
310-76128-8	MW5	Total/NA	Ground Water	SM 2540C	
310-76128-9	MW6	Total/NA	Ground Water	SM 2540C	
310-76128-10	DUP	Total/NA	Ground Water	SM 2540C	
LCS 310-120489/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 310-120489/1	Method Blank	Total/NA	Water	SM 2540C	

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit1 Landfill

TestAmerica Job ID: 310-76128-1

Client Sample ID: MW13

Date Collected: 03/09/16 09:49
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-1

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	120732	03/15/16 15:50	AJG	TAL CF
Total/NA	Prep	3010A			120483	03/15/16 07:41	JNR	TAL CF
Total/NA	Analysis	6010C		1	120687	03/15/16 21:27	OAD	TAL CF
Total/NA	Prep	3010A			120480	03/15/16 07:31	JNR	TAL CF
Total/NA	Analysis	6020A		1	120856	03/16/16 23:57	OAD	TAL CF
Total/NA	Prep	7470A			120611	03/15/16 15:53	ANO	TAL CF
Total/NA	Analysis	7470A		1	120754	03/16/16 10:02	OAD	TAL CF
Total/NA	Analysis	SM 2540C		1	120489	03/15/16 08:50	SAS	TAL CF

Client Sample ID: MW4NC2

Date Collected: 03/09/16 10:39
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-2

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	120732	03/15/16 15:50	AJG	TAL CF
Total/NA	Prep	3010A			120483	03/15/16 07:41	JNR	TAL CF
Total/NA	Analysis	6010C		1	120687	03/15/16 21:29	OAD	TAL CF
Total/NA	Prep	3010A			120480	03/15/16 07:31	JNR	TAL CF
Total/NA	Analysis	6020A		1	120856	03/17/16 00:00	OAD	TAL CF
Total/NA	Prep	3010A			120480	03/15/16 07:31	JNR	TAL CF
Total/NA	Analysis	6020A		5	121260	03/21/16 13:18	OAD	TAL CF
Total/NA	Prep	7470A			120611	03/15/16 15:53	ANO	TAL CF
Total/NA	Analysis	7470A		1	120754	03/16/16 10:03	OAD	TAL CF
Total/NA	Analysis	SM 2540C		1	120489	03/15/16 08:50	SAS	TAL CF

Client Sample ID: MW11

Date Collected: 03/09/16 11:34
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-3

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	120732	03/15/16 15:50	AJG	TAL CF
Total/NA	Prep	3010A			120483	03/15/16 07:41	JNR	TAL CF
Total/NA	Analysis	6010C		1	120687	03/15/16 21:31	OAD	TAL CF
Total/NA	Prep	3010A			120480	03/15/16 07:31	JNR	TAL CF
Total/NA	Analysis	6020A		1	120856	03/17/16 00:04	OAD	TAL CF
Total/NA	Prep	3010A			120480	03/15/16 07:31	JNR	TAL CF
Total/NA	Analysis	6020A		5	121260	03/21/16 13:21	OAD	TAL CF
Total/NA	Prep	7470A			120611	03/15/16 15:53	ANO	TAL CF
Total/NA	Analysis	7470A		1	120754	03/16/16 10:05	OAD	TAL CF
Total/NA	Analysis	SM 2540C		1	120489	03/15/16 08:50	SAS	TAL CF

Client Sample ID: MW3

Lab Sample ID: 310-76128-4

Date Collected: 03/09/16 12:28

Matrix: Ground Water

Date Received: 03/11/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	120732	03/15/16 15:50	AJG	TAL CF
Total/NA	Analysis	9056A		20	120863	03/16/16 15:48	AJG	TAL CF
Total/NA	Prep	3010A			120483	03/15/16 07:41	JNR	TAL CF
Total/NA	Analysis	6010C		1	120687	03/15/16 21:37	OAD	TAL CF
Total/NA	Prep	3010A			120480	03/15/16 07:31	JNR	TAL CF
Total/NA	Analysis	6020A		1	120856	03/17/16 00:07	OAD	TAL CF
Total/NA	Prep	3010A			120480	03/15/16 07:31	JNR	TAL CF
Total/NA	Analysis	6020A		5	121260	03/21/16 13:25	OAD	TAL CF
Total/NA	Prep	7470A			120611	03/15/16 15:53	ANO	TAL CF
Total/NA	Analysis	7470A		1	120754	03/16/16 10:07	OAD	TAL CF
Total/NA	Analysis	SM 2540C		1	120489	03/15/16 08:50	SAS	TAL CF

Client Sample ID: MW4

Lab Sample ID: 310-76128-5

Date Collected: 03/09/16 13:04

Matrix: Ground Water

Date Received: 03/11/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	120732	03/15/16 15:50	AJG	TAL CF
Total/NA	Analysis	9056A		20	120863	03/16/16 15:48	AJG	TAL CF
Total/NA	Prep	3010A			120483	03/15/16 07:41	JNR	TAL CF
Total/NA	Analysis	6010C		1	120687	03/15/16 21:39	OAD	TAL CF
Total/NA	Prep	3010A			120480	03/15/16 07:31	JNR	TAL CF
Total/NA	Analysis	6020A		1	120856	03/17/16 00:11	OAD	TAL CF
Total/NA	Prep	3010A			120480	03/15/16 07:31	JNR	TAL CF
Total/NA	Analysis	6020A		5	121260	03/21/16 13:28	OAD	TAL CF
Total/NA	Prep	7470A			120611	03/15/16 15:53	ANO	TAL CF
Total/NA	Analysis	7470A		1	120754	03/16/16 10:08	OAD	TAL CF
Total/NA	Analysis	SM 2540C		1	120489	03/15/16 08:50	SAS	TAL CF

Client Sample ID: MW9

Lab Sample ID: 310-76128-6

Date Collected: 03/09/16 13:44

Matrix: Ground Water

Date Received: 03/11/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	120732	03/15/16 15:50	AJG	TAL CF
Total/NA	Analysis	9056A		20	120863	03/16/16 15:48	AJG	TAL CF
Total/NA	Prep	3010A			120483	03/15/16 07:41	JNR	TAL CF
Total/NA	Analysis	6010C		1	120687	03/15/16 21:41	OAD	TAL CF
Total/NA	Prep	3010A			120480	03/15/16 07:31	JNR	TAL CF
Total/NA	Analysis	6020A		1	120856	03/17/16 00:14	OAD	TAL CF
Total/NA	Prep	3010A			120480	03/15/16 07:31	JNR	TAL CF
Total/NA	Analysis	6020A		5	121260	03/21/16 13:31	OAD	TAL CF

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit1 Landfill

TestAmerica Job ID: 310-76128-1

Client Sample ID: MW9

Date Collected: 03/09/16 13:44
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-6

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			120611	03/15/16 15:53	ANO	TAL CF
Total/NA	Analysis	7470A		1	120754	03/16/16 10:10	OAD	TAL CF
Total/NA	Analysis	SM 2540C		1	120489	03/15/16 08:50	SAS	TAL CF

Client Sample ID: MW2

Date Collected: 03/09/16 14:19
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-7

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	120732	03/15/16 15:50	AJG	TAL CF
Total/NA	Prep	3010A			120483	03/15/16 07:41	JNR	TAL CF
Total/NA	Analysis	6010C		1	120687	03/15/16 21:49	OAD	TAL CF
Total/NA	Prep	3010A			120480	03/15/16 07:31	JNR	TAL CF
Total/NA	Analysis	6020A		1	120856	03/17/16 00:37	OAD	TAL CF
Total/NA	Prep	3010A			120480	03/15/16 07:31	JNR	TAL CF
Total/NA	Analysis	6020A		5	121260	03/21/16 13:50	OAD	TAL CF
Total/NA	Prep	7470A			120611	03/15/16 15:53	ANO	TAL CF
Total/NA	Analysis	7470A		1	120754	03/16/16 10:27	OAD	TAL CF
Total/NA	Analysis	SM 2540C		1	120489	03/15/16 08:50	SAS	TAL CF

Client Sample ID: MW5

Date Collected: 03/09/16 15:40
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-8

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	120732	03/15/16 15:50	AJG	TAL CF
Total/NA	Prep	3010A			120483	03/15/16 07:41	JNR	TAL CF
Total/NA	Analysis	6010C		1	120687	03/15/16 21:51	OAD	TAL CF
Total/NA	Prep	3010A			120480	03/15/16 07:31	JNR	TAL CF
Total/NA	Analysis	6020A		1	120856	03/17/16 00:41	OAD	TAL CF
Total/NA	Prep	3010A			120480	03/15/16 07:31	JNR	TAL CF
Total/NA	Analysis	6020A		5	121260	03/21/16 13:53	OAD	TAL CF
Total/NA	Prep	7470A			120969	03/18/16 08:48	SAD	TAL CF
Total/NA	Analysis	7470A		1	121053	03/18/16 14:41	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	120489	03/15/16 08:50	SAS	TAL CF

Client Sample ID: MW6

Date Collected: 03/09/16 14:58
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-9

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	120732	03/15/16 15:50	AJG	TAL CF

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit1 Landfill

TestAmerica Job ID: 310-76128-1

Client Sample ID: MW6

Date Collected: 03/09/16 14:58
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-9

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			120483	03/15/16 07:41	JNR	TAL CF
Total/NA	Analysis	6010C		1	120687	03/15/16 21:53	OAD	TAL CF
Total/NA	Prep	3010A			120480	03/15/16 07:31	JNR	TAL CF
Total/NA	Analysis	6020A		1	120856	03/17/16 00:44	OAD	TAL CF
Total/NA	Prep	3010A			120480	03/15/16 07:31	JNR	TAL CF
Total/NA	Analysis	6020A		5	121260	03/21/16 13:56	OAD	TAL CF
Total/NA	Prep	7470A			120611	03/15/16 15:53	ANO	TAL CF
Total/NA	Analysis	7470A		1	120754	03/16/16 10:29	OAD	TAL CF
Total/NA	Analysis	SM 2540C		1	120489	03/15/16 08:50	SAS	TAL CF

Client Sample ID: DUP

Date Collected: 03/09/16 13:06
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-10

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	120732	03/15/16 15:50	AJG	TAL CF
Total/NA	Analysis	9056A		20	120863	03/16/16 15:48	AJG	TAL CF
Total/NA	Prep	3010A			120483	03/15/16 07:41	JNR	TAL CF
Total/NA	Analysis	6010C		1	120687	03/15/16 21:55	OAD	TAL CF
Total/NA	Prep	3010A			120480	03/15/16 07:31	JNR	TAL CF
Total/NA	Analysis	6020A		1	120856	03/17/16 00:47	OAD	TAL CF
Total/NA	Prep	3010A			120480	03/15/16 07:31	JNR	TAL CF
Total/NA	Analysis	6020A		5	121260	03/21/16 13:59	OAD	TAL CF
Total/NA	Prep	7470A			120611	03/15/16 15:53	ANO	TAL CF
Total/NA	Analysis	7470A		1	120754	03/16/16 10:30	OAD	TAL CF
Total/NA	Analysis	SM 2540C		1	120489	03/15/16 08:50	SAS	TAL CF

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401

Certification Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit1 Landfill

TestAmerica Job ID: 310-76128-1

Laboratory: TestAmerica Cedar Falls

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
AIHA-LAP, LLC	IHLAP		101044	11-01-16
Georgia	State Program	4	N/A	09-29-16
Illinois	NELAP	5	200024	11-29-16
Iowa	State Program	7	007	12-01-15 *
Kansas	NELAP	7	E-10341	01-31-15 *
Minnesota	NELAP	5	019-999-319	12-31-16
Minnesota (Petrofund)	State Program	1	3349	08-22-16
North Dakota	State Program	8	R-186	09-29-16
Oregon	NELAP	10	IA100001	09-29-16

* Certification renewal pending - certification considered valid.

Method Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit1 Landfill

TestAmerica Job ID: 310-76128-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	TAL CF
6010C	Metals (ICP)	SW846	TAL CF
6020A	Metals (ICP/MS)	SW846	TAL CF
7470A	Mercury (CVAA)	SW846	TAL CF
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL 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:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

310-76128 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: OMAHA PUB POWER DIST

City/State: OMAHA NE | Project: UNI LANDFILL

Receipt Information

Date/Time Received: 3/11/14 1000 | Received By: BM

Delivery Type: ☐ UPS ☑ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee
☐ TA Courier ☐ TA Field Services ☐ Client Drop-off ☐ Other:_____

Condition of Cooler/Containers

Sample(s) received in Cooler? ☑ Yes ☐ No *If yes:* Cooler ID: BM 8

Multiple Coolers? ☑ Yes ☐ No BM *If yes:* Cooler # 1 of 3

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

Temperature Blank? ☑ Yes ☐ No ID & Bottle Type:

NOTE: If yes, use temp blank for measurement. If no, specify sample ID(s) and bottle type used to take measurement.

Thermometer ID: H | Correction Factor (°C): +0.1

Uncorrected Temp (°C): 2.4 | Corrected Temp (°C): 2.5

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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: OMAHA PUB POW DIST

City/State: OMAHA NE | Project: UNI LANDFILL

Receipt Information

Date/Time Received: 3/11/14 1000 | Received By: BM

Delivery Type: ☐ UPS ☑ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee
☐ TA Courier ☐ TA Field Services ☐ Client Drop-off ☐ Other: _____

Condition of Cooler/Containers

Sample(s) received in Cooler?	☑ Yes	☐ No	*If yes:* Cooler ID: BM 9
Multiple Coolers?	☑ Yes	☑ No	*If yes:* Cooler # 2 of 3
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

Temperature Blank? ☑ Yes ☐ No ID & Bottle Type:

NOTE: If yes, use temp blank for measurement. If no, specify sample ID(s) and bottle type used to take measurement.

Thermometer ID:	H	Correction Factor (°C):	+0.1
Uncorrected Temp (°C):	0.4	Corrected Temp (°C):	0.5

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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: OMAHA PUB POWER DIST

City/State: OMAHA NE | Project: UNI LANDFILL

Receipt Information

Date/Time Received: 3/11/16 1000 | Received By: BM

Delivery Type: ☐ UPS ☑ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ TA Courier ☐ TA Field Services ☐ Client Drop-off ☐ Other: _____

Condition of Cooler/Containers

Sample(s) received in Cooler?	☑ Yes	☐ No	*If yes:* Cooler ID: BM10
Multiple Coolers?	☑ Yes	☑ No	*If yes:* Cooler # 3 of 3
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

Temperature Blank? ☑ Yes ☐ No ID & Bottle Type:

NOTE: If yes, use temp blank for measurement. If no, specify sample ID(s) and bottle type used to take measurement.

Thermometer ID: H | Correction Factor (°C): +0.1

Uncorrected Temp (°C): 1.7 | Corrected Temp (°C): 1.8

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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Phone (319) 277-2401 Fax (319) 277-2425

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Brad Sojka	Lab PM: Hayes, Shawn M	Carrier Tracking No(s):	COC No:
Client Contact: Brad Sojka	Phone: 402-636-2515	E-Mail: shawn.hayes@testamericainc.com		Page:
Company: Omaha Public Power District				Job #:
Address: 444 South 16th Street Mall 9E/EP1	Due Date Requested:			
City: Omaha	TAT Requested (days):			
State, Zip: NE, 68102-2247				
Phone: 402-636-2515(Tel)	PO #:			
Email: bsojka@oppd.com	WO #:			
Project Name: Nebraska City Unit 1 Landfill CCR Q1 2016	TestAmerica Project #: 31007558			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Combined Ra226 and Ra228	6010C Lithium, 6020A CCR List, 7470A Mercury	2540C TDS, 9056A Chloride, Fluoride, Sulfate	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	D	N		
MW13	3/9/16	0949	G	W			2	1	1		
MW4NC2		1039					2	1	1		
MW11		1134					2	1	1		
MW3		1228					2	1	1		
MW4		1304					2	1	1		
MW9		1344					2	1	1		
MW2		1414					2	1	1		
MW5		1540					2	1	1		
MW6		1458					2	1	1		
DUP		1306					2	1	1		
MS/MSD		1346				Y	1	2	1		

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1		3/10/16 1400	OPPD		3/11/16 0900	TA CF
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

3/28/2016

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MW13	310-76128-B-1	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW13	310-76128-C-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-76128-D-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4NC2	310-76128-B-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW4NC2	310-76128-C-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4NC2	310-76128-D-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW11	310-76128-B-3	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW11	310-76128-C-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW11	310-76128-D-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW3	310-76128-B-4	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW3	310-76128-C-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW3	310-76128-D-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4	310-76128-B-5	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW4	310-76128-C-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4	310-76128-D-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-76128-B-6	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW9	310-76128-C-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-76128-D-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-76128-B-7	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW2	310-76128-C-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-76128-D-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW5	310-76128-B-8	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW5	310-76128-C-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW5	310-76128-D-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW6	310-76128-B-9	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW6	310-76128-C-9	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW6	310-76128-D-9	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP	310-76128-B-10	Plastic 250ml - with Nitric Acid	<2	_____	_____
DUP	310-76128-C-10	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP	310-76128-D-10	Plastic 1 liter - Nitric Acid	<2	_____	_____

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-76128-1

Login Number: 76128
List Number: 1
Creator: Facciani, Melene K

List Source: TestAmerica Cedar Falls

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319)277-2401

TestAmerica Job ID: 310-76128-2
Client Project/Site: Nebraska City Unit1 Landfill
Sampling Event: CCR Parameters Q1 and Q3

For:
Omaha Public Power District
Attn: Accounts Payable, 4E/EP-5
444 South 16th Street Mall
Omaha, Nebraska 68102-2247

Attn: Brad Sojka

Authorized for release by:
4/12/2016 2:33:05 PM

Shawn Hayes, Project Manager II
(319)277-2401
shawn.hayes@testamericainc.com

Table of Contents

Case Narrative

Client: Omaha Public Power District
Project/Site: Nebraska City Unit1 Landfill

TestAmerica Job ID: 310-76128-2

Job ID: 310-76128-2

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-76128-2

Comments
No additional comments.

Receipt
The samples were received on 3/11/2016 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 0.5º C, 1.8º C and 2.5º C.

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

Sample Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit1 Landfill

TestAmerica Job ID: 310-76128-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-76128-1	MW13	Ground Water	03/09/16 09:49	03/11/16 10:00
310-76128-2	MW4NC2	Ground Water	03/09/16 10:39	03/11/16 10:00
310-76128-3	MW11	Ground Water	03/09/16 11:34	03/11/16 10:00
310-76128-4	MW3	Ground Water	03/09/16 12:28	03/11/16 10:00
310-76128-5	MW4	Ground Water	03/09/16 13:04	03/11/16 10:00
310-76128-6	MW9	Ground Water	03/09/16 13:44	03/11/16 10:00
310-76128-7	MW2	Ground Water	03/09/16 14:19	03/11/16 10:00
310-76128-8	MW5	Ground Water	03/09/16 15:40	03/11/16 10:00
310-76128-9	MW6	Ground Water	03/09/16 14:58	03/11/16 10:00
310-76128-10	DUP	Ground Water	03/09/16 13:06	03/11/16 10:00

Detection Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit1 Landfill

TestAmerica Job ID: 310-76128-2

Client Sample ID: MW13 — **Lab Sample ID: 310-76128-1**

No Detections.

Client Sample ID: MW4NC2 — **Lab Sample ID: 310-76128-2**

No Detections.

Client Sample ID: MW11 — **Lab Sample ID: 310-76128-3**

No Detections.

Client Sample ID: MW3 — **Lab Sample ID: 310-76128-4**

No Detections.

Client Sample ID: MW4 — **Lab Sample ID: 310-76128-5**

No Detections.

Client Sample ID: MW9 — **Lab Sample ID: 310-76128-6**

No Detections.

Client Sample ID: MW2 — **Lab Sample ID: 310-76128-7**

No Detections.

Client Sample ID: MW5 — **Lab Sample ID: 310-76128-8**

No Detections.

Client Sample ID: MW6 — **Lab Sample ID: 310-76128-9**

No Detections.

Client Sample ID: DUP — **Lab Sample ID: 310-76128-10**

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit1 Landfill

TestAmerica Job ID: 310-76128-2

Client Sample ID: MW13
Date Collected: 03/09/16 09:49
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-1
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.402		0.158	0.162	1.00	0.181	pCi/L	03/17/16 15:05	04/08/16 06:47	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.9*		*40 - 110*	*03/17/16 15:05*	*04/08/16 06:47*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.737		0.262	0.271	1.00	0.353	pCi/L	03/18/16 10:20	04/07/16 15:14	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.9*		*40 - 110*	*03/18/16 10:20*	*04/07/16 15:14*	*1*
Y Carrier	*85.2*		*40 - 110*	*03/18/16 10:20*	*04/07/16 15:14*	*1*

Method: 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	1.14		0.306	0.316	5.00	0.353	pCi/L		04/11/16 13:05	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit1 Landfill

TestAmerica Job ID: 310-76128-2

Client Sample ID: MW4NC2
Date Collected: 03/09/16 10:39
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-2
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.305		0.156	0.159	1.00	0.206	pCi/L	03/17/16 15:05	04/08/16 06:48	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*86.6*		*40 - 110*	*03/17/16 15:05*	*04/08/16 06:48*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.24		0.307	0.327	1.00	0.368	pCi/L	03/18/16 10:20	04/07/16 15:14	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*86.6*		*40 - 110*	*03/18/16 10:20*	*04/07/16 15:14*	*1*
Y Carrier	*87.9*		*40 - 110*	*03/18/16 10:20*	*04/07/16 15:14*	*1*

Method: 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	1.54		0.344	0.364	5.00	0.368	pCi/L		04/11/16 13:05	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit1 Landfill

TestAmerica Job ID: 310-76128-2

Client Sample ID: MW11
Date Collected: 03/09/16 11:34
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-3
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.210		0.120	0.121	1.00	0.150	pCi/L	03/17/16 15:05	04/08/16 06:49	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.2*		*40 - 110*	*03/17/16 15:05*	*04/08/16 06:49*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.504		0.229	0.234	1.00	0.324	pCi/L	03/18/16 10:20	04/07/16 15:14	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.2*		*40 - 110*	*03/18/16 10:20*	*04/07/16 15:14*	*1*
Y Carrier	*85.6*		*40 - 110*	*03/18/16 10:20*	*04/07/16 15:14*	*1*

Method: 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	0.714		0.259	0.263	5.00	0.324	pCi/L		04/11/16 13:05	1

Client Sample ID: MW3

Date Collected: 03/09/16 12:28
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-4

Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.175	U	0.125	0.126	1.00	0.178	pCi/L	03/17/16 15:05	04/08/16 06:49	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.3*		*40 - 110*	*03/17/16 15:05*	*04/08/16 06:49*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0993	U	0.180	0.180	1.00	0.347	pCi/L	03/18/16 10:20	04/07/16 15:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.3*		*40 - 110*	*03/18/16 10:20*	*04/07/16 15:15*	*1*
Y Carrier	*86.4*		*40 - 110*	*03/18/16 10:20*	*04/07/16 15:15*	*1*

Method: 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	0.0759	U	0.219	0.220	5.00	0.347	pCi/L		04/11/16 13:05	1

Client Sample ID: MW4

Date Collected: 03/09/16 13:04
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-5

Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.325**		0.147	0.149	1.00	0.170	pCi/L	03/17/16 15:05	04/08/16 06:49	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.0*		*40 - 110*	*03/17/16 15:05*	*04/08/16 06:49*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.428	U	0.284	0.287	1.00	0.442	pCi/L	03/18/16 10:20	04/07/16 15:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.0*		*40 - 110*	*03/18/16 10:20*	*04/07/16 15:15*	*1*
Y Carrier	*82.6*		*40 - 110*	*03/18/16 10:20*	*04/07/16 15:15*	*1*

Method: 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	**0.753**		0.320	0.324	5.00	0.442	pCi/L		04/11/16 13:05	1

Client Sample ID: MW9

Date Collected: 03/09/16 13:44
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-6

Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.103	U	0.145	0.145	1.00	0.244	pCi/L	03/17/16 15:05	04/08/16 06:49	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.6*		*40 - 110*	*03/17/16 15:05*	*04/08/16 06:49*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.527**		0.235	0.240	1.00	0.333	pCi/L	03/18/16 10:20	04/07/16 15:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.6*		*40 - 110*	*03/18/16 10:20*	*04/07/16 15:15*	*1*
Y Carrier	*85.6*		*40 - 110*	*03/18/16 10:20*	*04/07/16 15:15*	*1*

Method: 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	**0.629**		0.276	0.281	5.00	0.333	pCi/L		04/11/16 13:05	1

Client Sample ID: MW2

Date Collected: 03/09/16 14:19
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-7

Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.137	U	0.103	0.103	1.00	0.147	pCi/L	03/17/16 15:05	04/08/16 06:50	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.0*		*40 - 110*	*03/17/16 15:05*	*04/08/16 06:50*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.358**		0.202	0.205	1.00	0.299	pCi/L	03/18/16 10:20	04/07/16 15:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.0*		*40 - 110*	*03/18/16 10:20*	*04/07/16 15:15*	*1*
Y Carrier	*86.0*		*40 - 110*	*03/18/16 10:20*	*04/07/16 15:15*	*1*

Method: 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	**0.495**		0.227	0.230	5.00	0.299	pCi/L		04/11/16 13:05	1

Client Sample ID: MW5

Date Collected: 03/09/16 15:40
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-8

Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.184		0.113	0.115	1.00	0.149	pCi/L	03/17/16 15:05	04/08/16 06:50	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.3*		*40 - 110*	*03/17/16 15:05*	*04/08/16 06:50*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.133	U	0.200	0.201	1.00	0.337	pCi/L	03/18/16 10:20	04/07/16 15:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.3*		*40 - 110*	*03/18/16 10:20*	*04/07/16 15:15*	*1*
Y Carrier	*86.7*		*40 - 110*	*03/18/16 10:20*	*04/07/16 15:15*	*1*

Method: 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	0.316	U	0.230	0.231	5.00	0.337	pCi/L		04/11/16 13:05	1

Client Sample ID: MW6

Date Collected: 03/09/16 14:58
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-9

Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.249		0.131	0.133	1.00	0.165	pCi/L	03/17/16 15:05	04/08/16 06:50	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.3*		*40 - 110*	*03/17/16 15:05*	*04/08/16 06:50*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.358		0.231	0.234	1.00	0.355	pCi/L	03/18/16 10:20	04/07/16 15:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.3*		*40 - 110*	*03/18/16 10:20*	*04/07/16 15:15*	*1*
Y Carrier	*85.2*		*40 - 110*	*03/18/16 10:20*	*04/07/16 15:15*	*1*

Method: 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	0.607		0.266	0.269	5.00	0.355	pCi/L		04/11/16 13:05	1

Client Sample ID: DUP

Date Collected: 03/09/16 13:06
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-10

Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.102	U	0.103	0.103	1.00	0.161	pCi/L	03/17/16 15:05	04/08/16 06:50	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*80.9*		*40 - 110*	*03/17/16 15:05*	*04/08/16 06:50*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.704**		0.299	0.306	1.00	0.421	pCi/L	03/18/16 10:20	04/07/16 15:16	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*80.9*		*40 - 110*	*03/18/16 10:20*	*04/07/16 15:16*	*1*
Y Carrier	*81.1*		*40 - 110*	*03/18/16 10:20*	*04/07/16 15:16*	*1*

Method: 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	**0.806**		0.316	0.323	5.00	0.421	pCi/L		04/11/16 13:05	1

Definitions/Glossary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit1 Landfill

TestAmerica Job ID: 310-76128-2

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
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
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)

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-241030/1-A
Matrix: Water
Analysis Batch: 244971

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 241030

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.002129	U	0.0902	0.0902	1.00	0.180	pCi/L	03/17/16 15:05	04/08/16 06:47	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.7*		*40 - 110*	*03/17/16 15:05*	*04/08/16 06:47*	*1*

Lab Sample ID: LCS 160-241030/2-A
Matrix: Water
Analysis Batch: 244971

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 241030

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.2	15.03		1.57	1.00	0.199	pCi/L	135	68 - 137		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*90.3*		*40 - 110*

Lab Sample ID: 310-76128-6 DU
Matrix: Ground Water
Analysis Batch: 244971

Client Sample ID: MW9
Prep Type: Total/NA
Prep Batch: 241030

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Radium-226	0.103	U		0.1735		0.112	1.00	0.150	pCi/L			0.27	1

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ba Carrier	*93.2*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-241099/1-A
Matrix: Water
Analysis Batch: 244700

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 241099

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.05775	U	0.227	0.227	1.00	0.397	pCi/L	03/18/16 10:20	04/07/16 15:14	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.7*		*40 - 110*	*03/18/16 10:20*	*04/07/16 15:14*	*1*
Y Carrier	*85.6*		*40 - 110*	*03/18/16 10:20*	*04/07/16 15:14*	*1*

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

Lab Sample ID: LCS 160-241099/2-A
Matrix: Water
Analysis Batch: 244700

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 241099

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			15.4	19.87		2.06	1.00	0.395	pCi/L	129	56 - 140		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*90.3*		*40 - 110*
Y Carrier	*84.9*		*40 - 110*

Lab Sample ID: 310-76128-6 DU
Matrix: Ground Water
Analysis Batch: 244700

Client Sample ID: MW9
Prep Type: Total/NA
Prep Batch: 241099

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Radium-228	0.527			0.4242		0.222	1.00	0.318	pCi/L			0.22	1

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ba Carrier	*93.2*		*40 - 110*
Y Carrier	*84.9*		*40 - 110*

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

Lab Sample ID: 310-76128-6 DU
Matrix: Ground Water
Analysis Batch: 245272

Client Sample ID: MW9
Prep Type: Total/NA

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Combined Radium 226 + 228	0.629			0.5977		0.249	5.00	0.318	pCi/L			0.06	

Client: Omaha Public Power District
Project/Site: Nebraska City Unit1 Landfill

TestAmerica Job ID: 310-76128-2

Rad

Prep Batch: 241030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-76128-1	MW13	Total/NA	Ground Water	PrecSep-21	
310-76128-2	MW4NC2	Total/NA	Ground Water	PrecSep-21	
310-76128-3	MW11	Total/NA	Ground Water	PrecSep-21	
310-76128-4	MW3	Total/NA	Ground Water	PrecSep-21	
310-76128-5	MW4	Total/NA	Ground Water	PrecSep-21	
310-76128-6	MW9	Total/NA	Ground Water	PrecSep-21	
310-76128-6 DU	MW9	Total/NA	Ground Water	PrecSep-21	
310-76128-7	MW2	Total/NA	Ground Water	PrecSep-21	
310-76128-8	MW5	Total/NA	Ground Water	PrecSep-21	
310-76128-9	MW6	Total/NA	Ground Water	PrecSep-21	
310-76128-10	DUP	Total/NA	Ground Water	PrecSep-21	
LCS 160-241030/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
MB 160-241030/1-A	Method Blank	Total/NA	Water	PrecSep-21	

Prep Batch: 241099

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-76128-1	MW13	Total/NA	Ground Water	PrecSep_0	
310-76128-2	MW4NC2	Total/NA	Ground Water	PrecSep_0	
310-76128-3	MW11	Total/NA	Ground Water	PrecSep_0	
310-76128-4	MW3	Total/NA	Ground Water	PrecSep_0	
310-76128-5	MW4	Total/NA	Ground Water	PrecSep_0	
310-76128-6	MW9	Total/NA	Ground Water	PrecSep_0	
310-76128-6 DU	MW9	Total/NA	Ground Water	PrecSep_0	
310-76128-7	MW2	Total/NA	Ground Water	PrecSep_0	
310-76128-8	MW5	Total/NA	Ground Water	PrecSep_0	
310-76128-9	MW6	Total/NA	Ground Water	PrecSep_0	
310-76128-10	DUP	Total/NA	Ground Water	PrecSep_0	
LCS 160-241099/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
MB 160-241099/1-A	Method Blank	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit1 Landfill

TestAmerica Job ID: 310-76128-2

Client Sample ID: MW13
Date Collected: 03/09/16 09:49
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-1
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			241030	03/17/16 15:05	MRB	TAL SL
Total/NA	Analysis	9315		1	244971	04/08/16 06:47	RTM	TAL SL
Total/NA	Prep	PrecSep_0			241099	03/18/16 10:20	CMC	TAL SL
Total/NA	Analysis	9320		1	244700	04/07/16 15:14	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	245272	04/11/16 13:05	RTM	TAL SL

Client Sample ID: MW4NC2
Date Collected: 03/09/16 10:39
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-2
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			241030	03/17/16 15:05	MRB	TAL SL
Total/NA	Analysis	9315		1	244971	04/08/16 06:48	RTM	TAL SL
Total/NA	Prep	PrecSep_0			241099	03/18/16 10:20	CMC	TAL SL
Total/NA	Analysis	9320		1	244700	04/07/16 15:14	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	245272	04/11/16 13:05	RTM	TAL SL

Client Sample ID: MW11
Date Collected: 03/09/16 11:34
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-3
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			241030	03/17/16 15:05	MRB	TAL SL
Total/NA	Analysis	9315		1	244971	04/08/16 06:49	RTM	TAL SL
Total/NA	Prep	PrecSep_0			241099	03/18/16 10:20	CMC	TAL SL
Total/NA	Analysis	9320		1	244700	04/07/16 15:14	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	245272	04/11/16 13:05	RTM	TAL SL

Client Sample ID: MW3
Date Collected: 03/09/16 12:28
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-4
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			241030	03/17/16 15:05	MRB	TAL SL
Total/NA	Analysis	9315		1	244971	04/08/16 06:49	RTM	TAL SL
Total/NA	Prep	PrecSep_0			241099	03/18/16 10:20	CMC	TAL SL
Total/NA	Analysis	9320		1	244700	04/07/16 15:15	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	245272	04/11/16 13:05	RTM	TAL SL

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit1 Landfill

TestAmerica Job ID: 310-76128-2

Client Sample ID: MW4

Date Collected: 03/09/16 13:04
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-5

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			241030	03/17/16 15:05	MRB	TAL SL
Total/NA	Analysis	9315		1	244971	04/08/16 06:49	RTM	TAL SL
Total/NA	Prep	PrecSep_0			241099	03/18/16 10:20	CMC	TAL SL
Total/NA	Analysis	9320		1	244700	04/07/16 15:15	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	245272	04/11/16 13:05	RTM	TAL SL

Client Sample ID: MW9

Date Collected: 03/09/16 13:44
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-6

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			241030	03/17/16 15:05	MRB	TAL SL
Total/NA	Analysis	9315		1	244971	04/08/16 06:49	RTM	TAL SL
Total/NA	Prep	PrecSep_0			241099	03/18/16 10:20	CMC	TAL SL
Total/NA	Analysis	9320		1	244700	04/07/16 15:15	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	245272	04/11/16 13:05	RTM	TAL SL

Client Sample ID: MW2

Date Collected: 03/09/16 14:19
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-7

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			241030	03/17/16 15:05	MRB	TAL SL
Total/NA	Analysis	9315		1	244971	04/08/16 06:50	RTM	TAL SL
Total/NA	Prep	PrecSep_0			241099	03/18/16 10:20	CMC	TAL SL
Total/NA	Analysis	9320		1	244700	04/07/16 15:15	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	245272	04/11/16 13:05	RTM	TAL SL

Client Sample ID: MW5

Date Collected: 03/09/16 15:40
Date Received: 03/11/16 10:00

Lab Sample ID: 310-76128-8

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			241030	03/17/16 15:05	MRB	TAL SL
Total/NA	Analysis	9315		1	244971	04/08/16 06:50	RTM	TAL SL
Total/NA	Prep	PrecSep_0			241099	03/18/16 10:20	CMC	TAL SL
Total/NA	Analysis	9320		1	244700	04/07/16 15:15	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	245272	04/11/16 13:05	RTM	TAL SL

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit1 Landfill

TestAmerica Job ID: 310-76128-2

Client Sample ID: MW6

Lab Sample ID: 310-76128-9

Date Collected: 03/09/16 14:58

Matrix: Ground Water

Date Received: 03/11/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			241030	03/17/16 15:05	MRB	TAL SL
Total/NA	Analysis	9315		1	244971	04/08/16 06:50	RTM	TAL SL
Total/NA	Prep	PrecSep_0			241099	03/18/16 10:20	CMC	TAL SL
Total/NA	Analysis	9320		1	244700	04/07/16 15:15	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	245272	04/11/16 13:05	RTM	TAL SL

Client Sample ID: DUP

Lab Sample ID: 310-76128-10

Date Collected: 03/09/16 13:06

Matrix: Ground Water

Date Received: 03/11/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			241030	03/17/16 15:05	MRB	TAL SL
Total/NA	Analysis	9315		1	244971	04/08/16 06:50	RTM	TAL SL
Total/NA	Prep	PrecSep_0			241099	03/18/16 10:20	CMC	TAL SL
Total/NA	Analysis	9320		1	244700	04/07/16 15:16	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	245272	04/11/16 13:05	RTM	TAL SL

Laboratory References:

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

Certification Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit1 Landfill

TestAmerica Job ID: 310-76128-2

Laboratory: TestAmerica Cedar Falls

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
AIHA-LAP, LLC	IHLAP		101044	11-01-16
Georgia	State Program	4	N/A	09-29-16
Illinois	NELAP	5	200024	11-29-16
Iowa	State Program	7	007	12-01-15 *
Kansas	NELAP	7	E-10341	01-31-15 *
Minnesota	NELAP	5	019-999-319	12-31-16
Minnesota (Petrofund)	State Program	1	3349	08-22-16
North Dakota	State Program	8	R-186	09-29-16
Oregon	NELAP	10	IA100001	09-29-16

Laboratory: TestAmerica St. Louis

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	MO00054	06-30-16
California	State Program	9	2886	03-31-18
Connecticut	State Program	1	PH-0241	03-31-17
Florida	NELAP	4	E87689	06-30-16
Illinois	NELAP	5	003757	11-30-16
Iowa	State Program	7	373	12-01-16
Kansas	NELAP	7	E-10236	05-31-16
Kentucky (DW)	State Program	4	90125	12-31-16
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-16 *
Louisiana (DW)	NELAP	6	LA160008	12-31-16
Maryland	State Program	3	310	09-30-16
Missouri	State Program	7	780	06-30-16
Nevada	State Program	9	MO000542016-1	07-31-16
New Jersey	NELAP	2	MO002	06-30-16
New York	NELAP	2	11616	03-31-17
North Dakota	State Program	8	R207	06-30-16
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-16
Pennsylvania	NELAP	3	68-00540	02-28-17 *
South Carolina	State Program	4	85002001	06-30-16
Texas	NELAP	6	T104704193-15-9	07-31-16
USDA	Federal		P330-07-00122	01-09-17
Utah	NELAP	8	MO000542015-7	07-31-16
Virginia	NELAP	3	460230	06-14-16
Washington	State Program	10	C592	08-30-16
West Virginia DEP	State Program	3	381	08-31-16

* Certification renewal pending - certification considered valid.

Method Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit1 Landfill

TestAmerica Job ID: 310-76128-2

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL

Protocol References:

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:

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

310-76128 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: OMAHA PUB POWER DIST

City/State: OMAHA NE | Project: UNI LANDFILL

Receipt Information

Date/Time Received: 3/11/14 1000 | Received By: BM

Delivery Type: ☐ UPS ☑ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee
☐ TA Courier ☐ TA Field Services ☐ Client Drop-off ☐ Other:_____

Condition of Cooler/Containers

Sample(s) received in Cooler?	☑ Yes	☐ No	*If yes:* Cooler ID: BM 8
Multiple Coolers?	☑ Yes	☐ No BM	*If yes:* Cooler # 1 of 3
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

Temperature Blank? ☑ Yes ☐ No ID & Bottle Type:

NOTE: If yes, use temp blank for measurement. If no, specify sample ID(s) and bottle type used to take measurement.

Thermometer ID: H | Correction Factor (°C): +0.1

Uncorrected Temp (°C): 2.4 | Corrected Temp (°C): 2.5

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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: OMAHA PUB POW DIST

City/State: OMAHA NE | Project: UNI LANDFILL

Receipt Information

Date/Time Received: 3/11/16 1000 | Received By: BM

Delivery Type: ☐ UPS ☑ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee
☐ TA Courier ☐ TA Field Services ☐ Client Drop-off ☐ Other: _____

Condition of Cooler/Containers

Sample(s) received in Cooler?	☑ Yes	☐ No	*If yes:* Cooler ID: BM 9
Multiple Coolers?	☑ Yes	☑ No	*If yes:* Cooler # 2 of 3
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

Temperature Blank? ☑ Yes ☐ No ID & Bottle Type:

NOTE: If yes, use temp blank for measurement. If no, specify sample ID(s) and bottle type used to take measurement.

Thermometer ID:	H	Correction Factor (°C):	+0.1
Uncorrected Temp (°C):	0.4	Corrected Temp (°C):	0.5

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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: OMAHA PUB POWER DIST

City/State: OMAHA NE | Project: UNI LANDFILL

Receipt Information

Date/Time Received: 3/11/16 1000 | Received By: BM

Delivery Type: ☐ UPS ☑ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee
☐ TA Courier ☐ TA Field Services ☐ Client Drop-off ☐ Other: _____

Condition of Cooler/Containers

Sample(s) received in Cooler? ☑ Yes ☐ No — *If yes:* Cooler ID: BM10

Multiple Coolers? ☑ Yes ☐ No — *If yes:* Cooler # 3 of 3

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

Temperature Blank? ☑ Yes ☐ No — ID & Bottle Type:

NOTE: If yes, use temp blank for measurement. If no, specify sample ID(s) and bottle type used to take measurement.

Thermometer ID: H | Correction Factor (°C): +0.1

Uncorrected Temp (°C): 1.7 | Corrected Temp (°C): 1.8

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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Phone (319) 277-2401 Fax (319) 277-2425

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Brad Sojka	Lab PM: Hayes, Shawn M	Carrier Tracking No(s):	COC No:
Client Contact: Brad Sojka	Phone: 402-636-2515	E-Mail: shawn.hayes@testamericainc.com		Page:
Company: Omaha Public Power District				Job #:
Address: 444 South 16th Street Mall 9E/EP1	Due Date Requested:			
City: Omaha	TAT Requested (days):			
State, Zip: NE, 68102-2247				
Phone: 402-636-2515(Tel)	PO #:			
Email: bsojka@oppd.com	WO #:			
Project Name: Nebraska City Unit 1 Landfill CCR Q1 2016	TestAmerica Project #: 31007558			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Combined Ra226 and Ra228	6010C Lithium, 6020A CCR List, 7470A Mercury	2540C TDS, 9056A Chloride, Fluoride, Sulfate	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	D	N		
MW13	3/9/16	0949	G	W			2	1	1		
MW4NC2		1039					2	1	1		
MW11		1134					2	1	1		
MW3		1228					2	1	1		
MW4		1304					2	1	1		
MW9		1344					2	1	1		
MW2		1414					2	1	1		
MW5		1540					2	1	1		
MW6		1458					2	1	1		
DUP		1306					2	1	1		
MS/MSD		1346				Y	1	2	1		

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1		3/10/16 1400	OPPD		3/11/16 0900	TA CF
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

4/12/2016

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MW13	310-76128-B-1	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW13	310-76128-C-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-76128-D-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4NC2	310-76128-B-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW4NC2	310-76128-C-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4NC2	310-76128-D-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW11	310-76128-B-3	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW11	310-76128-C-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW11	310-76128-D-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW3	310-76128-B-4	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW3	310-76128-C-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW3	310-76128-D-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4	310-76128-B-5	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW4	310-76128-C-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4	310-76128-D-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-76128-B-6	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW9	310-76128-C-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-76128-D-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-76128-B-7	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW2	310-76128-C-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-76128-D-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW5	310-76128-B-8	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW5	310-76128-C-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW5	310-76128-D-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW6	310-76128-B-9	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW6	310-76128-C-9	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW6	310-76128-D-9	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP	310-76128-B-10	Plastic 250ml - with Nitric Acid	<2	_____	_____
DUP	310-76128-C-10	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP	310-76128-D-10	Plastic 1 liter - Nitric Acid	<2	_____	_____

TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Phone (319) 277-2401 Fax (319) 277-2425

Chain of Custody Record

TestAmerica

Client Information (Sub Contract Lab)	Sampler	Lab PM: Hayes, Shawn M	Carrier Tracking No(s):	COC No: 310-6222.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: shawn.hayes@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 310-76128-2
Address: 13715 Rider Trail North, ,	Due Date Requested: 3/23/2016			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Nebraska City Unit1 Landfill CCR	Project #: 31007558			
Site: 310 OPPD Nebraska City Unit 1	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Ra226Ra228_GFPC	9315_Ra226/PrecSep_21 Standard Target List	9320_Ra228/PrecSep_0 Standard Target List	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW13 (310-76128-1)	3/9/16	09:49 Central		Water			X	X	X	2	
MW4NC2 (310-76128-2)	3/9/16	10:39 Central		Water			X	X	X	2	
MW11 (310-76128-3)	3/9/16	11:34 Central		Water			X	X	X	2	
MW3 (310-76128-4)	3/9/16	12:28 Central		Water			X	X	X	2	
MW4 (310-76128-5)	3/9/16	13:04 Central		Water			X	X	X	2	
MW9 (310-76128-6)	3/9/16	13:44 Central		Water			X	X	X	2	
MW9 (310-76128-6DU)	3/9/16	13:44 Central	DU	Water			X	X	X	1	Client Specified Sample Duplicate
MW2 (310-76128-7)	3/9/16	14:19 Central		Water			X	X	X	2	
MW5 (310-76128-8)	3/9/16	15:40 Central		Water			X	X	X	2	
MW6 (310-76128-9)	3/9/16	14:58 Central		Water			X	X	X	2	
DUP (310-76128-10)	3/9/16	13:06 Central		Water			X	X	X	2	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	T. Delk	3/16/16 15:07		C McG	03/16/16 0925	
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

4/12/2016

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-76128-2

Login Number: 76128
List Number: 1
Creator: Facciani, Melene K

List Source: TestAmerica Cedar Falls

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-76128-2

Login Number: 76128
List Number: 2
Creator: McKinney, Gerrod E

List Source: TestAmerica St. Louis
List Creation: 03/16/16 01:27 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
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.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.0, 1.7
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?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Tracer/Carrier Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit1 Landfill

TestAmerica Job ID: 310-76128-2

Method: 9315 - Radium-226 (GFPC)

Matrix: Ground Water — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Ba (40-110)
310-76128-1	MW13	92.9
310-76128-2	MW4NC2	86.6
310-76128-3	MW11	91.2
310-76128-4	MW3	88.3
310-76128-5	MW4	88.0
310-76128-6	MW9	92.6
310-76128-6 DU	MW9	93.2
310-76128-7	MW2	96.0
310-76128-8	MW5	94.3
310-76128-9	MW6	92.3
310-76128-10	DUP	80.9

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9315 - Radium-226 (GFPC)

Matrix: Water — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Ba (40-110)
LCS 160-241030/2-A	Lab Control Sample	90.3
MB 160-241030/1-A	Method Blank	87.7

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Ground Water — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
310-76128-1	MW13	92.9	85.2
310-76128-2	MW4NC2	86.6	87.9
310-76128-3	MW11	91.2	85.6
310-76128-4	MW3	88.3	86.4
310-76128-5	MW4	88.0	82.6
310-76128-6	MW9	92.6	85.6
310-76128-6 DU	MW9	93.2	84.9
310-76128-7	MW2	96.0	86.0
310-76128-8	MW5	94.3	86.7
310-76128-9	MW6	92.3	85.2
310-76128-10	DUP	80.9	81.1

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

Tracer/Carrier Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit1 Landfill

TestAmerica Job ID: 310-76128-2

Method: 9320 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)									
Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)								
LCS 160-241099/2-A	Lab Control Sample	90.3	84.9								
MB 160-241099/1-A	Method Blank	87.7	85.6								

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319)277-2401

TestAmerica Job ID: 310-82364-1
Client Project/Site: Nebraska City Unit 1 Landfill
Sampling Event: CCR and Landfill Q2 and Q4
Revision: 1

For:
Omaha Public Power District
Attn: Accounts Payable, 4E/EP-5
444 South 16th Street Mall
Omaha, Nebraska 68102-2247

Attn: Brad Sojka

Authorized for release by:
7/12/2016 12:47:24 PM

Shawn Hayes, Project Manager II
(319)277-2401
shawn.hayes@testamericainc.com

Table of Contents

Job ID: 310-82364-1

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-82364-1

Comments
No additional comments.

Receipt
The samples were received on 6/9/2016 9:25 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.1° C and 5.9° C.

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

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

Job ID: 310-82364-2

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-82364-2

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

Sample Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-82364-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-82364-11	MW13	Ground Water	06/07/16 09:06	06/09/16 09:25
310-82364-12	MW4NC2	Ground Water	06/07/16 09:31	06/09/16 09:25
310-82364-13	MW11	Ground Water	06/07/16 10:01	06/09/16 09:25
310-82364-14	MW3	Ground Water	06/07/16 11:38	06/09/16 09:25
310-82364-15	MW4	Ground Water	06/07/16 10:56	06/09/16 09:25
310-82364-16	MW9	Ground Water	06/07/16 12:19	06/09/16 09:25
310-82364-17	MW2	Ground Water	06/07/16 10:28	06/09/16 09:25
310-82364-18	MW5	Ground Water	06/07/16 13:24	06/09/16 09:25
310-82364-19	MW6	Ground Water	06/07/16 12:55	06/09/16 09:25
310-82364-20	DUP	Ground Water	06/07/16 12:21	06/09/16 09:25

Client Sample ID: MW13
Date Collected: 06/07/16 09:06
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82364-11
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**11.7**		5.00		mg/L			06/09/16 09:16	5
Fluoride	<0.500		0.500		mg/L			06/09/16 09:16	5
Sulfate	**39.3**		5.00		mg/L			06/09/16 09:16	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/10/16 08:08	06/13/16 13:21	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 22:49	1
Arsenic	**0.00591**		0.00200		mg/L		06/10/16 07:54	07/09/16 22:49	1
Barium	**0.317**		0.00200		mg/L		06/10/16 07:54	07/09/16 22:49	1
Beryllium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 22:49	1
Boron	<0.200		0.200		mg/L		06/10/16 07:54	07/09/16 22:49	1
Cadmium	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 22:49	1
Calcium	**87.1**		0.200		mg/L		06/10/16 07:54	07/11/16 23:49	1
Chromium	<0.00500		0.00500		mg/L		06/10/16 07:54	07/11/16 23:49	1
Cobalt	**0.00118**		0.000500		mg/L		06/10/16 07:54	07/11/16 23:49	1
Lead	**0.000623**	**B**	0.000500		mg/L		06/10/16 07:54	07/11/16 23:49	1
Molybdenum	<0.00200		0.00200		mg/L		06/10/16 07:54	07/11/16 23:49	1
Selenium	<0.00500		0.00500		mg/L		06/10/16 07:54	07/09/16 22:49	1
Thallium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 22:49	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/13/16 09:16	06/14/16 12:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**484**		60.0		mg/L			06/09/16 13:35	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.359**		0.0970	0.102	1.00	0.101	pCi/L	06/15/16 13:40	07/07/16 06:59	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.6*		*40 - 110*	*06/15/16 13:40*	*07/07/16 06:59*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.331	U	0.234	0.236	1.00	0.364	pCi/L	06/15/16 14:37	06/30/16 18:30	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.6*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:30*	*1*
Y Carrier	*87.9*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:30*	*1*

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-82364-1

Client Sample ID: MW13
Date Collected: 06/07/16 09:06
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82364-11
Matrix: Ground Water

Method: 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	0.690		0.254	0.257	5.00	0.364	pCi/L		07/08/16 20:20	1

Client Sample ID: MW4NC2

Date Collected: 06/07/16 09:31
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82364-12

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			06/09/16 09:16	5
Fluoride	<0.500		0.500		mg/L			06/09/16 09:16	5
Sulfate	**45.6**		5.00		mg/L			06/09/16 09:16	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/10/16 08:08	06/13/16 13:23	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 22:52	1
Arsenic	<0.00200		0.00200		mg/L		06/10/16 07:54	07/09/16 22:52	1
Barium	**0.293**		0.00200		mg/L		06/10/16 07:54	07/09/16 22:52	1
Beryllium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 22:52	1
Boron	<0.200		0.200		mg/L		06/10/16 07:54	07/09/16 22:52	1
Cadmium	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 22:52	1
Calcium	**129**		0.200		mg/L		06/10/16 07:54	07/11/16 23:52	1
Chromium	<0.00500		0.00500		mg/L		06/10/16 07:54	07/11/16 23:52	1
Cobalt	<0.000500		0.000500		mg/L		06/10/16 07:54	07/11/16 23:52	1
Lead	**0.000951**	**B**	0.000500		mg/L		06/10/16 07:54	07/11/16 23:52	1
Molybdenum	**0.00283**		0.00200		mg/L		06/10/16 07:54	07/11/16 23:52	1
Selenium	<0.00500		0.00500		mg/L		06/10/16 07:54	07/09/16 22:52	1
Thallium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 22:52	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/13/16 09:16	06/14/16 12:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**660**		60.0		mg/L			06/09/16 13:35	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.323**		0.0822	0.0871	1.00	0.0694	pCi/L	06/15/16 13:40	07/07/16 06:59	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.0*		*40 - 110*	*06/15/16 13:40*	*07/07/16 06:59*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.884**		0.269	0.281	1.00	0.350	pCi/L	06/15/16 14:37	06/30/16 18:30	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.0*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:30*	*1*
Y Carrier	*91.2*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:30*	*1*

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-82364-1

Client Sample ID: MW4NC2
Date Collected: 06/07/16 09:31
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82364-12
Matrix: Ground Water

Method: 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	1.21		0.281	0.294	5.00	0.350	pCi/L		07/08/16 20:20	1

Client Sample ID: MW11
Date Collected: 06/07/16 10:01
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82364-13
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5.16**		5.00		mg/L			06/09/16 09:16	5
Fluoride	<0.500		0.500		mg/L			06/09/16 09:16	5
Sulfate	**27.1**		5.00		mg/L			06/09/16 09:16	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/10/16 08:08	06/13/16 13:25	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 22:55	1
Arsenic	<0.00200		0.00200		mg/L		06/10/16 07:54	07/09/16 22:55	1
Barium	**0.212**		0.00200		mg/L		06/10/16 07:54	07/09/16 22:55	1
Beryllium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 22:55	1
Boron	**0.704**		0.200		mg/L		06/10/16 07:54	07/09/16 22:55	1
Cadmium	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 22:55	1
Calcium	**93.4**		0.200		mg/L		06/10/16 07:54	07/11/16 23:55	1
Chromium	<0.00500		0.00500		mg/L		06/10/16 07:54	07/11/16 23:55	1
Cobalt	<0.000500		0.000500		mg/L		06/10/16 07:54	07/11/16 23:55	1
Lead	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 22:55	1
Molybdenum	**0.00477**		0.00200		mg/L		06/10/16 07:54	07/11/16 23:55	1
Selenium	<0.00500		0.00500		mg/L		06/10/16 07:54	07/09/16 22:55	1
Thallium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 22:55	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/13/16 09:16	06/14/16 12:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**536**		60.0		mg/L			06/09/16 13:35	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.190**		0.0693	0.0714	1.00	0.0751	pCi/L	06/15/16 13:40	07/07/16 06:59	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.4*		*40 - 110*	*06/15/16 13:40*	*07/07/16 06:59*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.400**		0.223	0.226	1.00	0.331	pCi/L	06/15/16 14:37	06/30/16 18:30	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.4*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:30*	*1*
Y Carrier	*91.2*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:30*	*1*

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-82364-1

Client Sample ID: MW11
Date Collected: 06/07/16 10:01
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82364-13
Matrix: Ground Water

Method: 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	0.589		0.233	0.237	5.00	0.331	pCi/L		07/08/16 20:20	1

Client Sample ID: MW3

Date Collected: 06/07/16 11:38
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82364-14

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**18.4**		5.00		mg/L			06/09/16 09:16	5
Fluoride	<0.500		0.500		mg/L			06/09/16 09:16	5
Sulfate	**446**		20.0		mg/L			06/10/16 15:12	20

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/10/16 08:08	06/13/16 13:27	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 22:58	1
Arsenic	**0.00901**		0.00200		mg/L		06/10/16 07:54	07/09/16 22:58	1
Barium	**0.111**		0.00200		mg/L		06/10/16 07:54	07/09/16 22:58	1
Beryllium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 22:58	1
Boron	**2.56**		0.200		mg/L		06/10/16 07:54	07/09/16 22:58	1
Cadmium	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 22:58	1
Calcium	**213**		0.200		mg/L		06/10/16 07:54	07/11/16 23:58	1
Chromium	<0.00500		0.00500		mg/L		06/10/16 07:54	07/11/16 23:58	1
Cobalt	**0.00364**		0.000500		mg/L		06/10/16 07:54	07/11/16 23:58	1
Lead	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 22:58	1
Molybdenum	<0.00200		0.00200		mg/L		06/10/16 07:54	07/11/16 23:58	1
Selenium	<0.00500		0.00500		mg/L		06/10/16 07:54	07/09/16 22:58	1
Thallium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 22:58	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/13/16 09:16	06/14/16 12:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1180**		60.0		mg/L			06/09/16 13:35	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.191**		0.0702	0.0723	1.00	0.0747	pCi/L	06/15/16 13:40	07/07/16 06:59	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.8*		*40 - 110*	*06/15/16 13:40*	*07/07/16 06:59*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.619**		0.256	0.262	1.00	0.355	pCi/L	06/15/16 14:37	06/30/16 18:30	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.8*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:30*	*1*
Y Carrier	*90.5*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:30*	*1*

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-82364-1

Client Sample ID: MW3
Date Collected: 06/07/16 11:38
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82364-14
Matrix: Ground Water

Method: 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		0.265	0.272	5.00	0.355	pCi/L		07/08/16 20:20	1

Client Sample ID: MW4
Date Collected: 06/07/16 10:56
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82364-15
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			06/09/16 09:16	5
Fluoride	<0.500		0.500		mg/L			06/09/16 09:16	5
Sulfate	**344**		10.0		mg/L			06/10/16 15:12	10

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/10/16 08:08	06/13/16 13:29	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:01	1
Arsenic	**0.00290**		0.00200		mg/L		06/10/16 07:54	07/09/16 23:01	1
Barium	**0.100**		0.00200		mg/L		06/10/16 07:54	07/09/16 23:01	1
Beryllium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:01	1
Boron	**1.22**		0.200		mg/L		06/10/16 07:54	07/09/16 23:01	1
Cadmium	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 23:01	1
Calcium	**107**		0.200		mg/L		06/10/16 07:54	07/12/16 00:01	1
Chromium	<0.00500		0.00500		mg/L		06/10/16 07:54	07/12/16 00:01	1
Cobalt	<0.000500		0.000500		mg/L		06/10/16 07:54	07/12/16 00:01	1
Lead	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 23:01	1
Molybdenum	**0.0170**		0.00200		mg/L		06/10/16 07:54	07/12/16 00:01	1
Selenium	<0.00500		0.00500		mg/L		06/10/16 07:54	07/09/16 23:01	1
Thallium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:01	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/13/16 09:16	06/14/16 12:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**667**		100		mg/L			06/09/16 13:35	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.236**		0.0725	0.0755	1.00	0.0631	pCi/L	06/15/16 13:40	07/07/16 06:59	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*86.9*		*40 - 110*	*06/15/16 13:40*	*07/07/16 06:59*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.134	U	0.230	0.231	1.00	0.390	pCi/L	06/15/16 14:37	06/30/16 18:30	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*86.9*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:30*	*1*
Y Carrier	*89.7*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:30*	*1*

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-82364-1

Client Sample ID: MW4
Date Collected: 06/07/16 10:56
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82364-15
Matrix: Ground Water

Method: 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	0.370	U	0.241	0.243	5.00	0.390	pCi/L		07/08/16 20:20	1

Client Sample ID: MW9
Date Collected: 06/07/16 12:19
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82364-16
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			06/09/16 09:16	5
Fluoride	<0.500		0.500		mg/L			06/09/16 09:16	5
Sulfate	**133**		5.00		mg/L			06/09/16 09:16	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/10/16 08:08	06/13/16 13:35	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:04	1
Arsenic	**0.00624**		0.00200		mg/L		06/10/16 07:54	07/09/16 23:04	1
Barium	**0.0816**		0.00200		mg/L		06/10/16 07:54	07/09/16 23:04	1
Beryllium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:04	1
Boron	**2.44**		0.200		mg/L		06/10/16 07:54	07/09/16 23:04	1
Cadmium	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 23:04	1
Calcium	**126**		0.200		mg/L		06/10/16 07:54	07/12/16 00:04	1
Chromium	<0.00500		0.00500		mg/L		06/10/16 07:54	07/12/16 00:04	1
Cobalt	<0.000500		0.000500		mg/L		06/10/16 07:54	07/12/16 00:04	1
Lead	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 23:04	1
Molybdenum	**0.0204**		0.00200		mg/L		06/10/16 07:54	07/12/16 00:04	1
Selenium	**0.00958**		0.00500		mg/L		06/10/16 07:54	07/09/16 23:04	1
Thallium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:04	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/13/16 09:16	06/14/16 12:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**660**		60.0		mg/L			06/09/16 13:35	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.156**		0.0641	0.0656	1.00	0.0718	pCi/L	06/15/16 13:40	07/07/16 06:59	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.6*		*40 - 110*	*06/15/16 13:40*	*07/07/16 06:59*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.421	U	0.280	0.283	1.00	0.435	pCi/L	06/15/16 14:37	06/30/16 18:30	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.6*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:30*	*1*
Y Carrier	*89.3*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:30*	*1*

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-82364-1

Client Sample ID: MW9
Date Collected: 06/07/16 12:19
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82364-16
Matrix: Ground Water

Method: 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		0.287	0.290	5.00	0.435	pCi/L		07/08/16 20:20	1

Client Sample ID: MW2
Date Collected: 06/07/16 10:28
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82364-17
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			06/09/16 09:16	5
Fluoride	<0.500		0.500		mg/L			06/09/16 09:16	5
Sulfate	**60.1**		5.00		mg/L			06/09/16 09:16	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/10/16 08:08	06/13/16 13:37	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:07	1
Arsenic	<0.00200		0.00200		mg/L		06/10/16 07:54	07/09/16 23:07	1
Barium	**0.0956**		0.00200		mg/L		06/10/16 07:54	07/09/16 23:07	1
Beryllium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:07	1
Boron	**0.205**		0.200		mg/L		06/10/16 07:54	07/09/16 23:07	1
Cadmium	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 23:07	1
Calcium	**94.4**		0.200		mg/L		06/10/16 07:54	07/12/16 00:17	1
Chromium	<0.00500		0.00500		mg/L		06/10/16 07:54	07/12/16 00:17	1
Cobalt	<0.000500		0.000500		mg/L		06/10/16 07:54	07/12/16 00:17	1
Lead	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 23:07	1
Molybdenum	**0.0718**		0.00200		mg/L		06/10/16 07:54	07/12/16 00:17	1
Selenium	<0.00500		0.00500		mg/L		06/10/16 07:54	07/09/16 23:07	1
Thallium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:07	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/13/16 09:16	06/14/16 12:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**404**		60.0		mg/L			06/09/16 13:35	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.173**		0.0773	0.0789	1.00	0.0984	pCi/L	06/15/16 13:40	07/07/16 07:29	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.5*		*40 - 110*	*06/15/16 13:40*	*07/07/16 07:29*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.132	U	0.242	0.242	1.00	0.410	pCi/L	06/15/16 14:37	06/30/16 18:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.5*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:31*	*1*
Y Carrier	*92.7*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:31*	*1*

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-82364-1

Client Sample ID: MW2
Date Collected: 06/07/16 10:28
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82364-17
Matrix: Ground Water

Method: 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	0.305	U	0.254	0.255	5.00	0.410	pCi/L		07/08/16 20:20	1

Client Sample ID: MW5
Date Collected: 06/07/16 13:24
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82364-18
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			06/09/16 09:16	5
Fluoride	<0.500		0.500		mg/L			06/09/16 09:16	5
Sulfate	**15.5**		5.00		mg/L			06/09/16 09:16	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/10/16 08:08	06/13/16 13:39	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:10	1
Arsenic	<0.00200		0.00200		mg/L		06/10/16 07:54	07/09/16 23:10	1
Barium	**0.248**		0.00200		mg/L		06/10/16 07:54	07/09/16 23:10	1
Beryllium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:10	1
Boron	<0.200		0.200		mg/L		06/10/16 07:54	07/09/16 23:10	1
Cadmium	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 23:10	1
Calcium	**116**		0.200		mg/L		06/10/16 07:54	07/12/16 00:20	1
Chromium	<0.00500		0.00500		mg/L		06/10/16 07:54	07/12/16 00:20	1
Cobalt	<0.000500		0.000500		mg/L		06/10/16 07:54	07/12/16 00:20	1
Lead	**0.000932**	**B**	0.000500		mg/L		06/10/16 07:54	07/12/16 00:20	1
Molybdenum	<0.00200		0.00200		mg/L		06/10/16 07:54	07/12/16 00:20	1
Selenium	<0.00500		0.00500		mg/L		06/10/16 07:54	07/09/16 23:10	1
Thallium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:10	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/13/16 09:16	06/14/16 12:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**532**		60.0		mg/L			06/09/16 13:35	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.207**		0.0824	0.0845	1.00	0.101	pCi/L	06/15/16 13:40	07/07/16 07:29	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.0*		*40 - 110*	*06/15/16 13:40*	*07/07/16 07:29*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0778	U	0.226	0.226	1.00	0.391	pCi/L	06/15/16 14:37	06/30/16 18:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.0*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:31*	*1*
Y Carrier	*95.0*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:31*	*1*

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-82364-1

Client Sample ID: MW5
Date Collected: 06/07/16 13:24
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82364-18
Matrix: Ground Water

Method: 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	0.285	U	0.241	0.242	5.00	0.391	pCi/L		07/08/16 20:20	1

Client Sample ID: MW6
Date Collected: 06/07/16 12:55
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82364-19
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			06/09/16 09:16	5
Fluoride	<0.500		0.500		mg/L			06/09/16 09:16	5
Sulfate	**137**		5.00		mg/L			06/09/16 09:16	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/10/16 08:08	06/13/16 13:41	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:14	1
Arsenic	<0.00200		0.00200		mg/L		06/10/16 07:54	07/09/16 23:14	1
Barium	**0.186**		0.00200		mg/L		06/10/16 07:54	07/09/16 23:14	1
Beryllium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:14	1
Boron	**0.220**		0.200		mg/L		06/10/16 07:54	07/09/16 23:14	1
Cadmium	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 23:14	1
Calcium	**149**		0.200		mg/L		06/10/16 07:54	07/12/16 00:23	1
Chromium	<0.00500		0.00500		mg/L		06/10/16 07:54	07/12/16 00:23	1
Cobalt	<0.000500		0.000500		mg/L		06/10/16 07:54	07/12/16 00:23	1
Lead	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 23:14	1
Molybdenum	<0.00200		0.00200		mg/L		06/10/16 07:54	07/12/16 00:23	1
Selenium	<0.00500		0.00500		mg/L		06/10/16 07:54	07/09/16 23:14	1
Thallium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:14	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/13/16 09:16	06/14/16 12:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**628**		60.0		mg/L			06/09/16 13:35	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.0863**		0.0586	0.0591	1.00	0.0832	pCi/L	06/15/16 13:40	07/07/16 11:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*80.6*		*40 - 110*	*06/15/16 13:40*	*07/07/16 11:24*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.286	U	0.272	0.273	1.00	0.439	pCi/L	06/15/16 14:37	06/30/16 18:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*80.6*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:31*	*1*
Y Carrier	*85.6*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:31*	*1*

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-82364-1

Client Sample ID: MW6
Date Collected: 06/07/16 12:55
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82364-19
Matrix: Ground Water

Method: 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	0.372	U	0.278	0.280	5.00	0.439	pCi/L		07/08/16 20:20	1

Client Sample ID: DUP

Date Collected: 06/07/16 12:21
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82364-20

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			06/09/16 09:16	5
Fluoride	<0.500		0.500		mg/L			06/09/16 09:16	5
Sulfate	**150**		5.00		mg/L			06/09/16 09:16	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/10/16 08:08	06/13/16 13:43	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:17	1
Arsenic	**0.00553**		0.00200		mg/L		06/10/16 07:54	07/09/16 23:17	1
Barium	**0.0814**		0.00200		mg/L		06/10/16 07:54	07/09/16 23:17	1
Beryllium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:17	1
Boron	**2.42**		0.200		mg/L		06/10/16 07:54	07/09/16 23:17	1
Cadmium	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 23:17	1
Calcium	**130**		0.200		mg/L		06/10/16 07:54	07/12/16 00:26	1
Chromium	**0.0209**		0.00500		mg/L		06/10/16 07:54	07/12/16 00:26	1
Cobalt	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 23:17	1
Lead	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 23:17	1
Molybdenum	**0.0266**		0.00200		mg/L		06/10/16 07:54	07/12/16 00:26	1
Selenium	**0.0117**		0.00500		mg/L		06/10/16 07:54	07/09/16 23:17	1
Thallium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:17	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/13/16 09:16	06/14/16 12:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**684**		60.0		mg/L			06/09/16 13:35	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.139**		0.0637	0.0649	1.00	0.0763	pCi/L	06/15/16 13:40	07/07/16 11:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.2*		*40 - 110*	*06/15/16 13:40*	*07/07/16 11:24*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.221	U	0.218	0.219	1.00	0.353	pCi/L	06/15/16 14:37	06/30/16 18:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.2*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:31*	*1*
Y Carrier	*95.0*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:31*	*1*

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-82364-1

Client Sample ID: DUP
Date Collected: 06/07/16 12:21
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82364-20
Matrix: Ground Water

Method: 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	0.361		0.227	0.228	5.00	0.353	pCi/L		07/08/16 20:20	1

Definitions/Glossary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-82364-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.
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
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
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)

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-130548/31
Matrix: Water
Analysis Batch: 130548

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			06/09/16 09:16	1
Fluoride	<0.100		0.100		mg/L			06/09/16 09:16	1
Sulfate	<1.00		1.00		mg/L			06/09/16 09:16	1

Lab Sample ID: LCS 310-130548/32
Matrix: Water
Analysis Batch: 130548

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	7.50	7.950		mg/L		106	90 - 110
Fluoride	1.50	1.517		mg/L		101	90 - 110
Sulfate	7.50	7.798		mg/L		104	90 - 110

Lab Sample ID: MB 310-130645/3
Matrix: Water
Analysis Batch: 130645

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			06/10/16 15:12	1
Sulfate	<1.00		1.00		mg/L			06/10/16 15:12	1

Lab Sample ID: LCS 310-130645/4
Matrix: Water
Analysis Batch: 130645

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	7.50	7.741		mg/L		103	90 - 110
Sulfate	7.50	7.799		mg/L		104	90 - 110

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 310-130502/1-A
Matrix: Water
Analysis Batch: 130860

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 130502

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/10/16 08:08	06/13/16 13:06	1

Lab Sample ID: LCS 310-130502/2-A
Matrix: Water
Analysis Batch: 130860

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 130502

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	2.00	1.856		mg/L		93	80 - 120

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 310-82364-20 DU
Matrix: Ground Water
Analysis Batch: 130860

Client Sample ID: DUP
Prep Type: Total/NA
Prep Batch: 130502

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Lithium	<0.0500			<0.0500		mg/L				NC	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 310-130496/1-A
Matrix: Water
Analysis Batch: 133568

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 130496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 22:34	1
Arsenic	<0.00200		0.00200		mg/L		06/10/16 07:54	07/09/16 22:34	1
Barium	<0.00200		0.00200		mg/L		06/10/16 07:54	07/09/16 22:34	1
Beryllium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 22:34	1
Cadmium	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 22:34	1
Calcium	<0.200		0.200		mg/L		06/10/16 07:54	07/09/16 22:34	1
Cobalt	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 22:34	1
Selenium	<0.00500		0.00500		mg/L		06/10/16 07:54	07/09/16 22:34	1
Thallium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 22:34	1

Lab Sample ID: MB 310-130496/1-A
Matrix: Water
Analysis Batch: 133747

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 130496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.200		0.200		mg/L		06/10/16 07:54	07/11/16 23:43	1
Chromium	<0.00500		0.00500		mg/L		06/10/16 07:54	07/11/16 23:43	1
Lead	0.0005830		0.000500		mg/L		06/10/16 07:54	07/11/16 23:43	1
Molybdenum	<0.00200		0.00200		mg/L		06/10/16 07:54	07/11/16 23:43	1

Lab Sample ID: LCS 310-130496/2-A
Matrix: Water
Analysis Batch: 133568

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 130496

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Antimony			0.0200	0.02019		mg/L		101	80 - 120		
Arsenic			0.0400	0.04170		mg/L		104	80 - 120		
Barium			0.0400	0.04472		mg/L		112	80 - 120		
Beryllium			0.0200	0.02070		mg/L		104	80 - 120		
Cadmium			0.0200	0.02206		mg/L		110	80 - 120		
Calcium			2.00	2.263		mg/L		113	80 - 120		
Cobalt			0.0200	0.02064		mg/L		103	80 - 120		
Lead			0.0200	0.02121		mg/L		106	80 - 120		
Selenium			0.0400	0.04300		mg/L		107	80 - 120		
Thallium			0.0160	0.01692		mg/L		106	80 - 120		

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

Lab Sample ID: LCS 310-130496/2-A
Matrix: Water
Analysis Batch: 133747

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 130496

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Boron			0.880	0.8629		mg/L		98	80 - 120		
Chromium			0.0400	0.04240		mg/L		106	80 - 120		
Molybdenum			0.0400	0.04113		mg/L		103	80 - 120		

Lab Sample ID: 310-82364-20 DU
Matrix: Ground Water
Analysis Batch: 133568

Client Sample ID: DUP
Prep Type: Total/NA
Prep Batch: 130496

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Antimony	<0.00100			<0.00100		mg/L				NC	20
Arsenic	0.00553			0.005603		mg/L				1	20
Barium	0.0814			0.08296		mg/L				2	20
Beryllium	<0.00100			<0.00100		mg/L				NC	20
Boron	2.42			2.526		mg/L				4	20
Cadmium	<0.000500			<0.000500		mg/L				NC	20
Cobalt	<0.000500			0.001930		mg/L				NC	20
Lead	<0.000500			<0.000500		mg/L				NC	20
Selenium	0.0117			0.01188		mg/L				2	20
Thallium	<0.00100			<0.00100		mg/L				NC	20

Lab Sample ID: 310-82364-20 DU
Matrix: Ground Water
Analysis Batch: 133747

Client Sample ID: DUP
Prep Type: Total/NA
Prep Batch: 130496

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Calcium	130			132.7		mg/L				2	20
Chromium	0.0209			0.01767		mg/L				17	20
Molybdenum	0.0266			0.02703		mg/L				2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-130707/1-A
Matrix: Water
Analysis Batch: 130934

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 130707

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/13/16 09:16	06/14/16 12:03	1

Lab Sample ID: LCS 310-130707/2-A
Matrix: Water
Analysis Batch: 130934

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 130707

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			0.00167	0.001628		mg/L		98	80 - 120		

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 310-82364-11 MS
Matrix: Ground Water
Analysis Batch: 130934

Client Sample ID: MW13
Prep Type: Total/NA
Prep Batch: 130707

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	<0.000200		0.00167	0.001776		mg/L		107	80 - 120		

Lab Sample ID: 310-82364-11 MSD
Matrix: Ground Water
Analysis Batch: 130934

Client Sample ID: MW13
Prep Type: Total/NA
Prep Batch: 130707

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000200		0.00167	0.001762		mg/L		106	80 - 120	1	20

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

Lab Sample ID: MB 310-130440/1
Matrix: Water
Analysis Batch: 130440

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	<30.0		30.0		mg/L			06/09/16 13:35	1

Lab Sample ID: LCS 310-130440/2
Matrix: Water
Analysis Batch: 130440

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	1090		mg/L		109	90 - 110		

Lab Sample ID: 310-82364-19 DU
Matrix: Ground Water
Analysis Batch: 130440

Client Sample ID: MW6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	628			628.0		mg/L				0	20

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-256526/1-A
Matrix: Water
Analysis Batch: 259553

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 256526

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.03092	U	0.0480	0.0481	1.00	0.0824	pCi/L	06/15/16 13:40	07/07/16 06:58	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*86.6*		*40 - 110*	*06/15/16 13:40*	*07/07/16 06:58*	*1*

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: LCS 160-256526/2-A
Matrix: Water
Analysis Batch: 259442

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 256526

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.2	13.35		1.30	1.00	0.0973	pCi/L	120	68 - 137		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*89.5*		*40 - 110*

Lab Sample ID: LCSD 160-256526/3-A
Matrix: Water
Analysis Batch: 259553

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 256526

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			11.2	14.88		1.45	1.00	0.0831	pCi/L	133	68 - 137	0.56	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*83.5*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-256540/1-A
Matrix: Water
Analysis Batch: 258661

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 256540

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.2470	U	0.260	0.261	1.00	0.424	pCi/L	06/15/16 14:37	06/30/16 18:29	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*86.6*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:29*	*1*
Y Carrier	*85.2*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:29*	*1*

Lab Sample ID: LCS 160-256540/2-A
Matrix: Water
Analysis Batch: 258661

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 256540

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			14.9	15.81		1.68	1.00	0.359	pCi/L	106	56 - 140		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*89.5*		*40 - 110*
Y Carrier	*92.0*		*40 - 110*

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

Lab Sample ID: LCSD 160-256540/3-A
Matrix: Water
Analysis Batch: 258661

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 256540

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			14.9	18.67		1.96	1.00	0.370	pCi/L	125	56 - 140	0.79	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*83.5*		*40 - 110*
Y Carrier	*91.6*		*40 - 110*

HPLC/IC

Analysis Batch: 130548

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82364-11	MW13	Total/NA	Ground Water	9056A	
310-82364-12	MW4NC2	Total/NA	Ground Water	9056A	
310-82364-13	MW11	Total/NA	Ground Water	9056A	
310-82364-14	MW3	Total/NA	Ground Water	9056A	
310-82364-15	MW4	Total/NA	Ground Water	9056A	
310-82364-16	MW9	Total/NA	Ground Water	9056A	
310-82364-17	MW2	Total/NA	Ground Water	9056A	
310-82364-18	MW5	Total/NA	Ground Water	9056A	
310-82364-19	MW6	Total/NA	Ground Water	9056A	
310-82364-20	DUP	Total/NA	Ground Water	9056A	
LCS 310-130548/32	Lab Control Sample	Total/NA	Water	9056A	
MB 310-130548/31	Method Blank	Total/NA	Water	9056A	

Analysis Batch: 130645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82364-14	MW3	Total/NA	Ground Water	9056A	
310-82364-15	MW4	Total/NA	Ground Water	9056A	
LCS 310-130645/4	Lab Control Sample	Total/NA	Water	9056A	
MB 310-130645/3	Method Blank	Total/NA	Water	9056A	

Metals

Prep Batch: 130496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82364-11	MW13	Total/NA	Ground Water	3010A	
310-82364-12	MW4NC2	Total/NA	Ground Water	3010A	
310-82364-13	MW11	Total/NA	Ground Water	3010A	
310-82364-14	MW3	Total/NA	Ground Water	3010A	
310-82364-15	MW4	Total/NA	Ground Water	3010A	
310-82364-16	MW9	Total/NA	Ground Water	3010A	
310-82364-17	MW2	Total/NA	Ground Water	3010A	
310-82364-18	MW5	Total/NA	Ground Water	3010A	
310-82364-19	MW6	Total/NA	Ground Water	3010A	
310-82364-20	DUP	Total/NA	Ground Water	3010A	
310-82364-20 DU	DUP	Total/NA	Ground Water	3010A	
LCS 310-130496/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 310-130496/1-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 130502

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82364-11	MW13	Total/NA	Ground Water	3010A	
310-82364-12	MW4NC2	Total/NA	Ground Water	3010A	
310-82364-13	MW11	Total/NA	Ground Water	3010A	
310-82364-14	MW3	Total/NA	Ground Water	3010A	
310-82364-15	MW4	Total/NA	Ground Water	3010A	
310-82364-16	MW9	Total/NA	Ground Water	3010A	
310-82364-17	MW2	Total/NA	Ground Water	3010A	
310-82364-18	MW5	Total/NA	Ground Water	3010A	
310-82364-19	MW6	Total/NA	Ground Water	3010A	
310-82364-20	DUP	Total/NA	Ground Water	3010A	

Metals (Continued)

Prep Batch: 130502 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82364-20 DU	DUP	Total/NA	Ground Water	3010A	
LCS 310-130502/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 310-130502/1-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 130707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82364-11	MW13	Total/NA	Ground Water	7470A	
310-82364-11 MS	MW13	Total/NA	Ground Water	7470A	
310-82364-11 MSD	MW13	Total/NA	Ground Water	7470A	
310-82364-12	MW4NC2	Total/NA	Ground Water	7470A	
310-82364-13	MW11	Total/NA	Ground Water	7470A	
310-82364-14	MW3	Total/NA	Ground Water	7470A	
310-82364-15	MW4	Total/NA	Ground Water	7470A	
310-82364-16	MW9	Total/NA	Ground Water	7470A	
310-82364-17	MW2	Total/NA	Ground Water	7470A	
310-82364-18	MW5	Total/NA	Ground Water	7470A	
310-82364-19	MW6	Total/NA	Ground Water	7470A	
310-82364-20	DUP	Total/NA	Ground Water	7470A	
LCS 310-130707/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 310-130707/1-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 130860

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82364-11	MW13	Total/NA	Ground Water	6010C	130502
310-82364-12	MW4NC2	Total/NA	Ground Water	6010C	130502
310-82364-13	MW11	Total/NA	Ground Water	6010C	130502
310-82364-14	MW3	Total/NA	Ground Water	6010C	130502
310-82364-15	MW4	Total/NA	Ground Water	6010C	130502
310-82364-16	MW9	Total/NA	Ground Water	6010C	130502
310-82364-17	MW2	Total/NA	Ground Water	6010C	130502
310-82364-18	MW5	Total/NA	Ground Water	6010C	130502
310-82364-19	MW6	Total/NA	Ground Water	6010C	130502
310-82364-20	DUP	Total/NA	Ground Water	6010C	130502
310-82364-20 DU	DUP	Total/NA	Ground Water	6010C	130502
LCS 310-130502/2-A	Lab Control Sample	Total/NA	Water	6010C	130502
MB 310-130502/1-A	Method Blank	Total/NA	Water	6010C	130502

Analysis Batch: 130934

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82364-11	MW13	Total/NA	Ground Water	7470A	130707
310-82364-11 MS	MW13	Total/NA	Ground Water	7470A	130707
310-82364-11 MSD	MW13	Total/NA	Ground Water	7470A	130707
310-82364-12	MW4NC2	Total/NA	Ground Water	7470A	130707
310-82364-13	MW11	Total/NA	Ground Water	7470A	130707
310-82364-14	MW3	Total/NA	Ground Water	7470A	130707
310-82364-15	MW4	Total/NA	Ground Water	7470A	130707
310-82364-16	MW9	Total/NA	Ground Water	7470A	130707
310-82364-17	MW2	Total/NA	Ground Water	7470A	130707
310-82364-18	MW5	Total/NA	Ground Water	7470A	130707
310-82364-19	MW6	Total/NA	Ground Water	7470A	130707
310-82364-20	DUP	Total/NA	Ground Water	7470A	130707

Metals (Continued)

Analysis Batch: 130934 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 310-130707/2-A	Lab Control Sample	Total/NA	Water	7470A	130707
MB 310-130707/1-A	Method Blank	Total/NA	Water	7470A	130707

Analysis Batch: 133568

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82364-11	MW13	Total/NA	Ground Water	6020A	130496
310-82364-12	MW4NC2	Total/NA	Ground Water	6020A	130496
310-82364-13	MW11	Total/NA	Ground Water	6020A	130496
310-82364-14	MW3	Total/NA	Ground Water	6020A	130496
310-82364-15	MW4	Total/NA	Ground Water	6020A	130496
310-82364-16	MW9	Total/NA	Ground Water	6020A	130496
310-82364-17	MW2	Total/NA	Ground Water	6020A	130496
310-82364-18	MW5	Total/NA	Ground Water	6020A	130496
310-82364-19	MW6	Total/NA	Ground Water	6020A	130496
310-82364-20	DUP	Total/NA	Ground Water	6020A	130496
310-82364-20 DU	DUP	Total/NA	Ground Water	6020A	130496
LCS 310-130496/2-A	Lab Control Sample	Total/NA	Water	6020A	130496
MB 310-130496/1-A	Method Blank	Total/NA	Water	6020A	130496

Analysis Batch: 133747

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82364-11	MW13	Total/NA	Ground Water	6020A	130496
310-82364-12	MW4NC2	Total/NA	Ground Water	6020A	130496
310-82364-13	MW11	Total/NA	Ground Water	6020A	130496
310-82364-14	MW3	Total/NA	Ground Water	6020A	130496
310-82364-15	MW4	Total/NA	Ground Water	6020A	130496
310-82364-16	MW9	Total/NA	Ground Water	6020A	130496
310-82364-17	MW2	Total/NA	Ground Water	6020A	130496
310-82364-18	MW5	Total/NA	Ground Water	6020A	130496
310-82364-19	MW6	Total/NA	Ground Water	6020A	130496
310-82364-20	DUP	Total/NA	Ground Water	6020A	130496
310-82364-20 DU	DUP	Total/NA	Ground Water	6020A	130496
LCS 310-130496/2-A	Lab Control Sample	Total/NA	Water	6020A	130496
MB 310-130496/1-A	Method Blank	Total/NA	Water	6020A	130496

General Chemistry

Analysis Batch: 130440

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82364-11	MW13	Total/NA	Ground Water	SM 2540C	
310-82364-12	MW4NC2	Total/NA	Ground Water	SM 2540C	
310-82364-13	MW11	Total/NA	Ground Water	SM 2540C	
310-82364-14	MW3	Total/NA	Ground Water	SM 2540C	
310-82364-15	MW4	Total/NA	Ground Water	SM 2540C	
310-82364-16	MW9	Total/NA	Ground Water	SM 2540C	
310-82364-17	MW2	Total/NA	Ground Water	SM 2540C	
310-82364-18	MW5	Total/NA	Ground Water	SM 2540C	
310-82364-19	MW6	Total/NA	Ground Water	SM 2540C	
310-82364-19 DU	MW6	Total/NA	Ground Water	SM 2540C	
310-82364-20	DUP	Total/NA	Ground Water	SM 2540C	

General Chemistry (Continued)

Analysis Batch: 130440 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 310-130440/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 310-130440/1	Method Blank	Total/NA	Water	SM 2540C	

Rad

Prep Batch: 256526

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82364-11	MW13	Total/NA	Ground Water	PrecSep-21	
310-82364-12	MW4NC2	Total/NA	Ground Water	PrecSep-21	
310-82364-13	MW11	Total/NA	Ground Water	PrecSep-21	
310-82364-14	MW3	Total/NA	Ground Water	PrecSep-21	
310-82364-15	MW4	Total/NA	Ground Water	PrecSep-21	
310-82364-16	MW9	Total/NA	Ground Water	PrecSep-21	
310-82364-17	MW2	Total/NA	Ground Water	PrecSep-21	
310-82364-18	MW5	Total/NA	Ground Water	PrecSep-21	
310-82364-19	MW6	Total/NA	Ground Water	PrecSep-21	
310-82364-20	DUP	Total/NA	Ground Water	PrecSep-21	
LCS 160-256526/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-256526/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	
MB 160-256526/1-A	Method Blank	Total/NA	Water	PrecSep-21	

Prep Batch: 256540

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82364-11	MW13	Total/NA	Ground Water	PrecSep_0	
310-82364-12	MW4NC2	Total/NA	Ground Water	PrecSep_0	
310-82364-13	MW11	Total/NA	Ground Water	PrecSep_0	
310-82364-14	MW3	Total/NA	Ground Water	PrecSep_0	
310-82364-15	MW4	Total/NA	Ground Water	PrecSep_0	
310-82364-16	MW9	Total/NA	Ground Water	PrecSep_0	
310-82364-17	MW2	Total/NA	Ground Water	PrecSep_0	
310-82364-18	MW5	Total/NA	Ground Water	PrecSep_0	
310-82364-19	MW6	Total/NA	Ground Water	PrecSep_0	
310-82364-20	DUP	Total/NA	Ground Water	PrecSep_0	
LCS 160-256540/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-256540/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	
MB 160-256540/1-A	Method Blank	Total/NA	Water	PrecSep_0	

Client Sample ID: MW13

Lab Sample ID: 310-82364-11

Date Collected: 06/07/16 09:06

Matrix: Ground Water

Date Received: 06/09/16 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	130548	06/09/16 09:16	AJG	TAL CF
Total/NA	Prep	3010A			130502	06/10/16 08:08	JNR	TAL CF
Total/NA	Analysis	6010C		1	130860	06/13/16 13:21	OAD	TAL CF
Total/NA	Prep	3010A			130496	06/10/16 07:54	JNR	TAL CF
Total/NA	Analysis	6020A		1	133568	07/09/16 22:49	OAD	TAL CF
Total/NA	Prep	3010A			130496	06/10/16 07:54	JNR	TAL CF
Total/NA	Analysis	6020A		1	133747	07/11/16 23:49	OAD	TAL CF
Total/NA	Prep	7470A			130707	06/13/16 09:16	SAD	TAL CF
Total/NA	Analysis	7470A		1	130934	06/14/16 12:06	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	130440	06/09/16 13:35	JIS	TAL CF
Total/NA	Prep	PrecSep-21			256526	06/15/16 13:40	MCJ	TAL SL
Total/NA	Analysis	9315		1	259553	07/07/16 06:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			256540	06/15/16 14:37	MCJ	TAL SL
Total/NA	Analysis	9320		1	258661	06/30/16 18:30	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	259792	07/08/16 20:20	RTM	TAL SL

Client Sample ID: MW4NC2

Lab Sample ID: 310-82364-12

Date Collected: 06/07/16 09:31

Matrix: Ground Water

Date Received: 06/09/16 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	130548	06/09/16 09:16	AJG	TAL CF
Total/NA	Prep	3010A			130502	06/10/16 08:08	JNR	TAL CF
Total/NA	Analysis	6010C		1	130860	06/13/16 13:23	OAD	TAL CF
Total/NA	Prep	3010A			130496	06/10/16 07:54	JNR	TAL CF
Total/NA	Analysis	6020A		1	133568	07/09/16 22:52	OAD	TAL CF
Total/NA	Prep	3010A			130496	06/10/16 07:54	JNR	TAL CF
Total/NA	Analysis	6020A		1	133747	07/11/16 23:52	OAD	TAL CF
Total/NA	Prep	7470A			130707	06/13/16 09:16	SAD	TAL CF
Total/NA	Analysis	7470A		1	130934	06/14/16 12:10	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	130440	06/09/16 13:35	JIS	TAL CF
Total/NA	Prep	PrecSep-21			256526	06/15/16 13:40	MCJ	TAL SL
Total/NA	Analysis	9315		1	259553	07/07/16 06:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			256540	06/15/16 14:37	MCJ	TAL SL
Total/NA	Analysis	9320		1	258661	06/30/16 18:30	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	259792	07/08/16 20:20	RTM	TAL SL

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-82364-1

Client Sample ID: MW11

Date Collected: 06/07/16 10:01
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82364-13

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	130548	06/09/16 09:16	AJG	TAL CF
Total/NA	Prep	3010A			130502	06/10/16 08:08	JNR	TAL CF
Total/NA	Analysis	6010C		1	130860	06/13/16 13:25	OAD	TAL CF
Total/NA	Prep	3010A			130496	06/10/16 07:54	JNR	TAL CF
Total/NA	Analysis	6020A		1	133568	07/09/16 22:55	OAD	TAL CF
Total/NA	Prep	3010A			130496	06/10/16 07:54	JNR	TAL CF
Total/NA	Analysis	6020A		1	133747	07/11/16 23:55	OAD	TAL CF
Total/NA	Prep	7470A			130707	06/13/16 09:16	SAD	TAL CF
Total/NA	Analysis	7470A		1	130934	06/14/16 12:12	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	130440	06/09/16 13:35	JIS	TAL CF
Total/NA	Prep	PrecSep-21			256526	06/15/16 13:40	MCJ	TAL SL
Total/NA	Analysis	9315		1	259553	07/07/16 06:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			256540	06/15/16 14:37	MCJ	TAL SL
Total/NA	Analysis	9320		1	258661	06/30/16 18:30	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	259792	07/08/16 20:20	RTM	TAL SL

Client Sample ID: MW3

Date Collected: 06/07/16 11:38
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82364-14

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		20	130645	06/10/16 15:12	AJG	TAL CF
Total/NA	Analysis	9056A		5	130548	06/09/16 09:16	AJG	TAL CF
Total/NA	Prep	3010A			130502	06/10/16 08:08	JNR	TAL CF
Total/NA	Analysis	6010C		1	130860	06/13/16 13:27	OAD	TAL CF
Total/NA	Prep	3010A			130496	06/10/16 07:54	JNR	TAL CF
Total/NA	Analysis	6020A		1	133568	07/09/16 22:58	OAD	TAL CF
Total/NA	Prep	3010A			130496	06/10/16 07:54	JNR	TAL CF
Total/NA	Analysis	6020A		1	133747	07/11/16 23:58	OAD	TAL CF
Total/NA	Prep	7470A			130707	06/13/16 09:16	SAD	TAL CF
Total/NA	Analysis	7470A		1	130934	06/14/16 12:13	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	130440	06/09/16 13:35	JIS	TAL CF
Total/NA	Prep	PrecSep-21			256526	06/15/16 13:40	MCJ	TAL SL
Total/NA	Analysis	9315		1	259553	07/07/16 06:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			256540	06/15/16 14:37	MCJ	TAL SL
Total/NA	Analysis	9320		1	258661	06/30/16 18:30	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	259792	07/08/16 20:20	RTM	TAL SL

Client Sample ID: MW4

Lab Sample ID: 310-82364-15

Date Collected: 06/07/16 10:56

Matrix: Ground Water

Date Received: 06/09/16 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		10	130645	06/10/16 15:12	AJG	TAL CF
Total/NA	Analysis	9056A		5	130548	06/09/16 09:16	AJG	TAL CF
Total/NA	Prep	3010A			130502	06/10/16 08:08	JNR	TAL CF
Total/NA	Analysis	6010C		1	130860	06/13/16 13:29	OAD	TAL CF
Total/NA	Prep	3010A			130496	06/10/16 07:54	JNR	TAL CF
Total/NA	Analysis	6020A		1	133568	07/09/16 23:01	OAD	TAL CF
Total/NA	Prep	3010A			130496	06/10/16 07:54	JNR	TAL CF
Total/NA	Analysis	6020A		1	133747	07/12/16 00:01	OAD	TAL CF
Total/NA	Prep	7470A			130707	06/13/16 09:16	SAD	TAL CF
Total/NA	Analysis	7470A		1	130934	06/14/16 12:18	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	130440	06/09/16 13:35	JIS	TAL CF
Total/NA	Prep	PrecSep-21			256526	06/15/16 13:40	MCJ	TAL SL
Total/NA	Analysis	9315		1	259553	07/07/16 06:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			256540	06/15/16 14:37	MCJ	TAL SL
Total/NA	Analysis	9320		1	258661	06/30/16 18:30	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	259792	07/08/16 20:20	RTM	TAL SL

Client Sample ID: MW9

Lab Sample ID: 310-82364-16

Date Collected: 06/07/16 12:19

Matrix: Ground Water

Date Received: 06/09/16 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	130548	06/09/16 09:16	AJG	TAL CF
Total/NA	Prep	3010A			130502	06/10/16 08:08	JNR	TAL CF
Total/NA	Analysis	6010C		1	130860	06/13/16 13:35	OAD	TAL CF
Total/NA	Prep	3010A			130496	06/10/16 07:54	JNR	TAL CF
Total/NA	Analysis	6020A		1	133568	07/09/16 23:04	OAD	TAL CF
Total/NA	Prep	3010A			130496	06/10/16 07:54	JNR	TAL CF
Total/NA	Analysis	6020A		1	133747	07/12/16 00:04	OAD	TAL CF
Total/NA	Prep	7470A			130707	06/13/16 09:16	SAD	TAL CF
Total/NA	Analysis	7470A		1	130934	06/14/16 12:20	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	130440	06/09/16 13:35	JIS	TAL CF
Total/NA	Prep	PrecSep-21			256526	06/15/16 13:40	MCJ	TAL SL
Total/NA	Analysis	9315		1	259553	07/07/16 06:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			256540	06/15/16 14:37	MCJ	TAL SL
Total/NA	Analysis	9320		1	258661	06/30/16 18:30	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	259792	07/08/16 20:20	RTM	TAL SL

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-82364-1

Client Sample ID: MW2

Date Collected: 06/07/16 10:28
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82364-17

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	130548	06/09/16 09:16	AJG	TAL CF
Total/NA	Prep	3010A			130502	06/10/16 08:08	JNR	TAL CF
Total/NA	Analysis	6010C		1	130860	06/13/16 13:37	OAD	TAL CF
Total/NA	Prep	3010A			130496	06/10/16 07:54	JNR	TAL CF
Total/NA	Analysis	6020A		1	133568	07/09/16 23:07	OAD	TAL CF
Total/NA	Prep	3010A			130496	06/10/16 07:54	JNR	TAL CF
Total/NA	Analysis	6020A		1	133747	07/12/16 00:17	OAD	TAL CF
Total/NA	Prep	7470A			130707	06/13/16 09:16	SAD	TAL CF
Total/NA	Analysis	7470A		1	130934	06/14/16 12:21	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	130440	06/09/16 13:35	JIS	TAL CF
Total/NA	Prep	PrecSep-21			256526	06/15/16 13:40	MCJ	TAL SL
Total/NA	Analysis	9315		1	259442	07/07/16 07:29	RTM	TAL SL
Total/NA	Prep	PrecSep_0			256540	06/15/16 14:37	MCJ	TAL SL
Total/NA	Analysis	9320		1	258661	06/30/16 18:31	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	259792	07/08/16 20:20	RTM	TAL SL

Client Sample ID: MW5

Date Collected: 06/07/16 13:24
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82364-18

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	130548	06/09/16 09:16	AJG	TAL CF
Total/NA	Prep	3010A			130502	06/10/16 08:08	JNR	TAL CF
Total/NA	Analysis	6010C		1	130860	06/13/16 13:39	OAD	TAL CF
Total/NA	Prep	3010A			130496	06/10/16 07:54	JNR	TAL CF
Total/NA	Analysis	6020A		1	133568	07/09/16 23:10	OAD	TAL CF
Total/NA	Prep	3010A			130496	06/10/16 07:54	JNR	TAL CF
Total/NA	Analysis	6020A		1	133747	07/12/16 00:20	OAD	TAL CF
Total/NA	Prep	7470A			130707	06/13/16 09:16	SAD	TAL CF
Total/NA	Analysis	7470A		1	130934	06/14/16 12:23	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	130440	06/09/16 13:35	JIS	TAL CF
Total/NA	Prep	PrecSep-21			256526	06/15/16 13:40	MCJ	TAL SL
Total/NA	Analysis	9315		1	259442	07/07/16 07:29	RTM	TAL SL
Total/NA	Prep	PrecSep_0			256540	06/15/16 14:37	MCJ	TAL SL
Total/NA	Analysis	9320		1	258661	06/30/16 18:31	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	259792	07/08/16 20:20	RTM	TAL SL

Client Sample ID: MW6

Date Collected: 06/07/16 12:55
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82364-19

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	130548	06/09/16 09:16	AJG	TAL CF

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-82364-1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			130502	06/10/16 08:08	JNR	TAL CF
Total/NA	Analysis	6010C		1	130860	06/13/16 13:41	OAD	TAL CF
Total/NA	Prep	3010A			130496	06/10/16 07:54	JNR	TAL CF
Total/NA	Analysis	6020A		1	133568	07/09/16 23:14	OAD	TAL CF
Total/NA	Prep	3010A			130496	06/10/16 07:54	JNR	TAL CF
Total/NA	Analysis	6020A		1	133747	07/12/16 00:23	OAD	TAL CF
Total/NA	Prep	7470A			130707	06/13/16 09:16	SAD	TAL CF
Total/NA	Analysis	7470A		1	130934	06/14/16 12:25	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	130440	06/09/16 13:35	JIS	TAL CF
Total/NA	Prep	PrecSep-21			256526	06/15/16 13:40	MCJ	TAL SL
Total/NA	Analysis	9315		1	259442	07/07/16 11:24	RTM	TAL SL
Total/NA	Prep	PrecSep_0			256540	06/15/16 14:37	MCJ	TAL SL
Total/NA	Analysis	9320		1	258661	06/30/16 18:31	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	259792	07/08/16 20:20	RTM	TAL SL

Client Sample ID: DUP

Date Collected: 06/07/16 12:21
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82364-20

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	130548	06/09/16 09:16	AJG	TAL CF
Total/NA	Prep	3010A			130502	06/10/16 08:08	JNR	TAL CF
Total/NA	Analysis	6010C		1	130860	06/13/16 13:43	OAD	TAL CF
Total/NA	Prep	3010A			130496	06/10/16 07:54	JNR	TAL CF
Total/NA	Analysis	6020A		1	133568	07/09/16 23:17	OAD	TAL CF
Total/NA	Prep	3010A			130496	06/10/16 07:54	JNR	TAL CF
Total/NA	Analysis	6020A		1	133747	07/12/16 00:26	OAD	TAL CF
Total/NA	Prep	7470A			130707	06/13/16 09:16	SAD	TAL CF
Total/NA	Analysis	7470A		1	130934	06/14/16 12:26	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	130440	06/09/16 13:35	JIS	TAL CF
Total/NA	Prep	PrecSep-21			256526	06/15/16 13:40	MCJ	TAL SL
Total/NA	Analysis	9315		1	259442	07/07/16 11:24	RTM	TAL SL
Total/NA	Prep	PrecSep_0			256540	06/15/16 14:37	MCJ	TAL SL
Total/NA	Analysis	9320		1	258661	06/30/16 18:31	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	259792	07/08/16 20:20	RTM	TAL SL

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401

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

Certification Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-82364-1

Laboratory: TestAmerica Cedar Falls

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
AIHA-LAP, LLC	IHLAP		101044	11-01-16
Georgia	State Program	4	N/A	09-29-16
Illinois	NELAP	5	200024	11-29-16
Iowa	State Program	7	007	12-01-17
Kansas	NELAP	7	E-10341	01-31-15 *
Minnesota	NELAP	5	019-999-319	12-31-16
Minnesota (Petrofund)	State Program	1	3349	08-22-16
North Dakota	State Program	8	R-186	09-29-16
Oregon	NELAP	10	IA100001	09-29-16

Laboratory: TestAmerica St. Louis

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	MO00054	06-30-17
California	State Program	9	2886	03-31-18
Connecticut	State Program	1	PH-0241	03-31-17
Florida	NELAP	4	E87689	06-30-17
Illinois	NELAP	5	003757	11-30-16
Iowa	State Program	7	373	12-01-16
Kansas	NELAP	7	E-10236	07-31-16 *
Kentucky (DW)	State Program	4	90125	12-31-16
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-17
Louisiana (DW)	NELAP	6	LA160008	12-31-16
Maryland	State Program	3	310	09-30-16 *
Missouri	State Program	7	780	06-30-17
Nevada	State Program	9	MO000542016-1	07-31-16 *
New Jersey	NELAP	2	MO002	06-30-17
New York	NELAP	2	11616	03-31-17
North Dakota	State Program	8	R207	06-30-16 *
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-16 *
Pennsylvania	NELAP	3	68-00540	02-28-17 *
South Carolina	State Program	4	85002001	06-30-16 *
Texas	NELAP	6	T104704193-15-9	07-31-16 *
USDA	Federal		P330-07-00122	01-09-17
Utah	NELAP	8	MO000542015-7	07-31-16 *
Virginia	NELAP	3	460230	06-14-17
Washington	State Program	10	C592	08-30-16 *
West Virginia DEP	State Program	3	381	08-31-16 *

* Certification renewal pending - certification considered valid.

Method Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-82364-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	TAL CF
6010C	Metals (ICP)	SW846	TAL CF
6020A	Metals (ICP/MS)	SW846	TAL CF
7470A	Mercury (CVAA)	SW846	TAL CF
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL CF
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL

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

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401
TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Phone (319) 277-2401 Fax (319) 277-2425

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Brad Sojka	Lab PM: Hayes, Shawn M	Carrier Tracking No(s):	COC No:
Client Contact: Brad Sojka	Phone: 402-636-2515	E-Mail: shawn.hayes@testamericainc.com		Page:
Company: Omaha Public Power District				Job #:

Address: 444 South 16th Street Mall 9E/EP1	Due Date Requested:
City: Omaha	TAT Requested (days):
State, Zip: NE, 68102-2247	
Phone: 402-636-2515(Tel)	PO #:
Email: bsojka@oppd.com	WO #:
Project Name: Nebraska City Unit 1 Landfill CCR	TestAmerica Project #: 31007558
Site:	SSOW#:

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Combined Ra226 and Ra228	6010C Lithium, 6020A CCR List, 7470A Mercury	2540C TDS, 9056A Chloride, Fluoride, Sulfate	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	D	N		
MW13	6/7/16	0906	G	GW	N	N	2	1	1		
MW4NC2		0931	G	GW							
MW11		1001	G	GW							
MW3		1138	G	GW							
MW4		1056	G	GW							
MW9		1219	G	GW							
MW2		1028	G	GW							
MW5		1324	G	GW							
MW6		1255	G	GW							
DUP		1221	G	GW							

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown* ☐ *Radiological*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 6/8/16 1000	Company: OPPD	Received by:	Date/Time: 6/9/16 925	Company: TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

7/12/2016

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Omaha Public Power District

City/State: | Project: Nebraska City Unit 1

Receipt Information

Date/Time Received: 6/9/16 9:25 | Received By: JD

Delivery Type: ☐ UPS ☑ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ TA Courier ☐ TA Field Services ☐ Client Drop-off ☐ Other:_____

Condition of Cooler/Containers

Sample(s) received in Cooler? ☑ Yes ☐ No *If yes:* Cooler ID: 93

Multiple Coolers? ☑ Yes ☐ No *If yes:* Cooler # 1 of 4/10 2

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

Temperature Blank? ☑ Yes ☐ No ID & Bottle Type: MW-11 / LT HNO3

NOTE: If yes, use temp blank for measurement. If no, specify sample ID(s) and bottle type used to take measurement.

Thermometer ID: H | Correction Factor (°C): +0.1

Uncorrected Temp (°C): 5.8 | Corrected Temp (°C): 5.9

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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Omaha Public Power District

City/State: | Project: Nebraska City Unit 1

Receipt Information

Date/Time Received: 6/9/16 9:25 | Received By: TO

Delivery Type: ☐ UPS ☑ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ TA Courier ☐ TA Field Services ☐ Client Drop-off ☐ Other: _____

Condition of Cooler/Containers

Sample(s) received in Cooler? ☑ Yes ☐ No *If yes:* Cooler ID: F-0

Multiple Coolers? ☑ Yes ☐ No *If yes:* Cooler # 2 of 4 (2 TO)

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

Temperature Blank? ☑ Yes ☐ No ID & Bottle Type:

NOTE: If yes, use temp blank for measurement. If no, specify sample ID(s) and bottle type used to take measurement.

Thermometer ID: H | Correction Factor (°C): +0.1

Uncorrected Temp (°C): 3.0 | Corrected Temp (°C): 3.1

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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MW13	310-82364-A-11	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW13	310-82364-B-11	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-82364-C-11	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4NC2	310-82364-A-12	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW4NC2	310-82364-B-12	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4NC2	310-82364-C-12	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW11	310-82364-A-13	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW11	310-82364-B-13	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW11	310-82364-C-13	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW3	310-82364-A-14	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW3	310-82364-B-14	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW3	310-82364-C-14	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4	310-82364-A-15	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW4	310-82364-B-15	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4	310-82364-C-15	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-82364-A-16	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW9	310-82364-B-16	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-82364-C-16	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-82364-A-17	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW2	310-82364-B-17	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-82364-C-17	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW5	310-82364-A-18	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW5	310-82364-B-18	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW5	310-82364-C-18	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW6	310-82364-A-19	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW6	310-82364-B-19	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW6	310-82364-C-19	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP	310-82364-A-20	Plastic 250ml - with Nitric Acid	<2	_____	_____
DUP	310-82364-B-20	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP	310-82364-C-20	Plastic 1 liter - Nitric Acid	<2	_____	_____

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-82364-1

Login Number: 82364
List Number: 1
Creator: Worthy, Ashley L

List Source: TestAmerica Cedar Falls

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Tracer/Carrier Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-82364-1

Method: 9315 - Radium-226 (GFPC)

Matrix: Ground Water — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Ba (40-110)
310-82364-11	MW13	90.6
310-82364-12	MW4NC2	96.0
310-82364-13	MW11	93.4
310-82364-14	MW3	85.8
310-82364-15	MW4	86.9
310-82364-16	MW9	88.6
310-82364-17	MW2	85.5
310-82364-18	MW5	88.0
310-82364-19	MW6	80.6
310-82364-20	DUP	85.2

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9315 - Radium-226 (GFPC)

Matrix: Water — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Ba (40-110)
LCS 160-256526/2-A	Lab Control Sample	89.5
LCSD 160-256526/3-A	Lab Control Sample Dup	83.5
MB 160-256526/1-A	Method Blank	86.6

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Ground Water — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
310-82364-11	MW13	90.6	87.9
310-82364-12	MW4NC2	96.0	91.2
310-82364-13	MW11	93.4	91.2
310-82364-14	MW3	85.8	90.5
310-82364-15	MW4	86.9	89.7
310-82364-16	MW9	88.6	89.3
310-82364-17	MW2	85.5	92.7
310-82364-18	MW5	88.0	95.0
310-82364-19	MW6	80.6	85.6
310-82364-20	DUP	85.2	95.0

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

Tracer/Carrier Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-82364-1

Method: 9320 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)									
Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)								
LCS 160-256540/2-A	Lab Control Sample	89.5	92.0								
LCSD 160-256540/3-A	Lab Control Sample Dup	83.5	91.6								
MB 160-256540/1-A	Method Blank	86.6	85.2								

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319)277-2401

TestAmerica Job ID: 310-91145-1
Client Project/Site: Nebraska City Unit 1 Landfill
Sampling Event: CCR and Landfill Q2 and Q4

For:
Omaha Public Power District
Attn: Accounts Payable, 4E/EP-5
444 South 16th Street Mall
Omaha, Nebraska 68102-2247

Attn: Brad Sojka

Authorized for release by:
10/20/2016 7:26:37 PM

Shawn Hayes, Project Manager II
(319)277-2401
shawn.hayes@testamericainc.com

Table of Contents

Case Narrative

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-91145-1

Job ID: 310-91145-1

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-91145-1

Comments
No additional comments.

Receipt
The samples were received on 10/7/2016 9:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.9º C.

Metals
Method(s) 6010C: The continuing calibration verification (CCV) associated with batch 310-144747 recovered above the upper control limit for Lithium. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. MW9 (310-91145-6), MW2 (310-91145-7) and DUP (310-91145-8)

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

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

Sample Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-91145-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-91145-1	MW13	Ground Water	10/03/16 09:01	10/07/16 09:15
310-91145-2	MW4NC2	Ground Water	10/03/16 09:36	10/07/16 09:15
310-91145-3	MW11	Ground Water	10/03/16 10:12	10/07/16 09:15
310-91145-4	MW3	Ground Water	10/03/16 12:04	10/07/16 09:15
310-91145-5	MW4	Ground Water	10/03/16 11:26	10/07/16 09:15
310-91145-6	MW9	Ground Water	10/03/16 12:58	10/07/16 09:15
310-91145-7	MW2	Ground Water	10/03/16 10:48	10/07/16 09:15
310-91145-8	DUP	Ground Water	10/03/16 12:06	10/07/16 09:15

Detection Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-91145-1

Client Sample ID: MW13 — Lab Sample ID: 310-91145-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	10.7		5.00		mg/L	5		9056A	Total/NA
Sulfate	29.7		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.00709		0.00200		mg/L	1		6020A	Total/NA
Barium	0.319		0.00200		mg/L	1		6020A	Total/NA
Calcium	85.4		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.00103		0.000500		mg/L	1		6020A	Total/NA
Iron	0.892		0.100		mg/L	1		6020A	Total/NA
Molybdenum	0.00264		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	388		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW4NC2 — Lab Sample ID: 310-91145-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	32.0		5.00		mg/L	5		9056A	Total/NA
Barium	0.283		0.00200		mg/L	1		6020A	Total/NA
Calcium	127		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.00421		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	542		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW11 — Lab Sample ID: 310-91145-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	122		5.00		mg/L	5		9056A	Total/NA
Barium	0.233		0.00200		mg/L	1		6020A	Total/NA
Boron	1.35		0.200		mg/L	1		6020A	Total/NA
Calcium	107		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.00820		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	528		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW3 — Lab Sample ID: 310-91145-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	10.5		5.00		mg/L	5		9056A	Total/NA
Sulfate	326		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.00761		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0887		0.00200		mg/L	1		6020A	Total/NA
Boron	1.63		0.200		mg/L	1		6020A	Total/NA
Calcium	147		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.00267		0.000500		mg/L	1		6020A	Total/NA
Iron	2.66		0.100		mg/L	1		6020A	Total/NA
Total Dissolved Solids	794		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW4 — Lab Sample ID: 310-91145-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	262		20.0		mg/L	20		9056A	Total/NA
Arsenic	0.00320		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0900		0.00200		mg/L	1		6020A	Total/NA
Boron	1.29		0.200		mg/L	1		6020A	Total/NA
Calcium	104		0.200		mg/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-91145-1

Client Sample ID: MW4 (Continued) — Lab Sample ID: 310-91145-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Molybdenum	0.0297		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	546		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW9 — Lab Sample ID: 310-91145-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.578		0.500		mg/L	5		9056A	Total/NA
Sulfate	244		20.0		mg/L	20		9056A	Total/NA
Arsenic	0.00605		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0847		0.00200		mg/L	1		6020A	Total/NA
Boron	3.57		0.200		mg/L	1		6020A	Total/NA
Calcium	149		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000683		0.000500		mg/L	1		6020A	Total/NA
Iron	1.14		0.100		mg/L	1		6020A	Total/NA
Molybdenum	0.0435		0.00200		mg/L	1		6020A	Total/NA
Selenium	0.0388		0.00500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	740		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW2 — Lab Sample ID: 310-91145-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	39.8		5.00		mg/L	5		9056A	Total/NA
Barium	0.104		0.00200		mg/L	1		6020A	Total/NA
Boron	0.327		0.200		mg/L	1		6020A	Total/NA
Calcium	103		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.120		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	370		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP — Lab Sample ID: 310-91145-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	11.9		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.625		0.500		mg/L	5		9056A	Total/NA
Sulfate	311		20.0		mg/L	20		9056A	Total/NA
Arsenic	0.00821		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0911		0.00200		mg/L	1		6020A	Total/NA
Boron	1.67		0.200		mg/L	1		6020A	Total/NA
Calcium	151		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.00273		0.000500		mg/L	1		6020A	Total/NA
Iron	2.74		0.100		mg/L	1		6020A	Total/NA
Total Dissolved Solids	814		30.0		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW13
Date Collected: 10/03/16 09:01
Date Received: 10/07/16 09:15

Lab Sample ID: 310-91145-1
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10.7**		5.00		mg/L			10/10/16 14:01	5
Fluoride	<0.500		0.500		mg/L			10/10/16 14:01	5
Sulfate	**29.7**		5.00		mg/L			10/10/16 14:01	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		10/11/16 10:00	10/12/16 17:00	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 17:34	1
Arsenic	**0.00709**		0.00200		mg/L		10/10/16 07:29	10/13/16 17:34	1
Barium	**0.319**		0.00200		mg/L		10/10/16 07:29	10/13/16 17:34	1
Beryllium	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 17:34	1
Boron	<0.200		0.200		mg/L		10/10/16 07:29	10/13/16 17:34	1
Cadmium	<0.000500		0.000500		mg/L		10/10/16 07:29	10/13/16 17:34	1
Calcium	**85.4**		0.200		mg/L		10/10/16 07:29	10/13/16 17:34	1
Chromium	<0.00500		0.00500		mg/L		10/10/16 07:29	10/13/16 17:34	1
Cobalt	**0.00103**		0.000500		mg/L		10/10/16 07:29	10/13/16 17:34	1
Iron	**0.892**		0.100		mg/L		10/10/16 07:29	10/13/16 17:34	1
Lead	<0.000500		0.000500		mg/L		10/10/16 07:29	10/13/16 17:34	1
Molybdenum	**0.00264**		0.00200		mg/L		10/10/16 07:29	10/13/16 17:34	1
Selenium	<0.00500		0.00500		mg/L		10/10/16 07:29	10/13/16 17:34	1
Silver	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 17:34	1
Thallium	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 17:34	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		10/10/16 09:55	10/10/16 16:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**388**		30.0		mg/L			10/08/16 12:38	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-91145-1

Client Sample ID: MW4NC2
Date Collected: 10/03/16 09:36
Date Received: 10/07/16 09:15

Lab Sample ID: 310-91145-2
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			10/10/16 14:01	5
Fluoride	<0.500		0.500		mg/L			10/10/16 14:01	5
Sulfate	**32.0**		5.00		mg/L			10/10/16 14:01	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		10/11/16 10:00	10/12/16 17:08	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 17:37	1
Arsenic	<0.00200		0.00200		mg/L		10/10/16 07:29	10/13/16 17:37	1
Barium	**0.283**		0.00200		mg/L		10/10/16 07:29	10/13/16 17:37	1
Beryllium	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 17:37	1
Boron	<0.200		0.200		mg/L		10/10/16 07:29	10/13/16 17:37	1
Cadmium	<0.000500		0.000500		mg/L		10/10/16 07:29	10/13/16 17:37	1
Calcium	**127**		0.200		mg/L		10/10/16 07:29	10/13/16 17:37	1
Chromium	<0.00500		0.00500		mg/L		10/10/16 07:29	10/13/16 17:37	1
Cobalt	<0.000500		0.000500		mg/L		10/10/16 07:29	10/13/16 17:37	1
Iron	<0.100		0.100		mg/L		10/10/16 07:29	10/13/16 17:37	1
Lead	<0.000500		0.000500		mg/L		10/10/16 07:29	10/13/16 17:37	1
Molybdenum	**0.00421**		0.00200		mg/L		10/10/16 07:29	10/13/16 17:37	1
Selenium	<0.00500		0.00500		mg/L		10/10/16 07:29	10/13/16 17:37	1
Silver	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 17:37	1
Thallium	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 17:37	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		10/10/16 09:55	10/10/16 16:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**542**		30.0		mg/L			10/08/16 12:38	1

Client Sample ID: MW11
Date Collected: 10/03/16 10:12
Date Received: 10/07/16 09:15

Lab Sample ID: 310-91145-3
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			10/10/16 14:01	5
Fluoride	<0.500		0.500		mg/L			10/10/16 14:01	5
Sulfate	**122**		5.00		mg/L			10/10/16 14:01	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		10/11/16 10:00	10/12/16 17:10	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 17:40	1
Arsenic	<0.00200		0.00200		mg/L		10/10/16 07:29	10/13/16 17:40	1
Barium	**0.233**		0.00200		mg/L		10/10/16 07:29	10/13/16 17:40	1
Beryllium	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 17:40	1
Boron	**1.35**		0.200		mg/L		10/10/16 07:29	10/13/16 17:40	1
Cadmium	<0.000500		0.000500		mg/L		10/10/16 07:29	10/13/16 17:40	1
Calcium	**107**		0.200		mg/L		10/10/16 07:29	10/13/16 17:40	1
Chromium	<0.00500		0.00500		mg/L		10/10/16 07:29	10/13/16 17:40	1
Cobalt	<0.000500		0.000500		mg/L		10/10/16 07:29	10/13/16 17:40	1
Iron	<0.100		0.100		mg/L		10/10/16 07:29	10/13/16 17:40	1
Lead	<0.000500		0.000500		mg/L		10/10/16 07:29	10/13/16 17:40	1
Molybdenum	**0.00820**		0.00200		mg/L		10/10/16 07:29	10/13/16 17:40	1
Selenium	<0.00500		0.00500		mg/L		10/10/16 07:29	10/13/16 17:40	1
Silver	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 17:40	1
Thallium	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 17:40	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		10/10/16 09:55	10/10/16 16:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**528**		30.0		mg/L			10/08/16 12:38	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-91145-1

Client Sample ID: MW3

Date Collected: 10/03/16 12:04
Date Received: 10/07/16 09:15

Lab Sample ID: 310-91145-4

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10.5**		5.00		mg/L			10/10/16 14:01	5
Fluoride	<0.500		0.500		mg/L			10/10/16 14:01	5
Sulfate	**326**		5.00		mg/L			10/10/16 14:01	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		10/11/16 10:00	10/12/16 17:12	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 17:44	1
Arsenic	**0.00761**		0.00200		mg/L		10/10/16 07:29	10/13/16 17:44	1
Barium	**0.0887**		0.00200		mg/L		10/10/16 07:29	10/13/16 17:44	1
Beryllium	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 17:44	1
Boron	**1.63**		0.200		mg/L		10/10/16 07:29	10/13/16 17:44	1
Cadmium	<0.000500		0.000500		mg/L		10/10/16 07:29	10/13/16 17:44	1
Calcium	**147**		0.200		mg/L		10/10/16 07:29	10/13/16 17:44	1
Chromium	<0.00500		0.00500		mg/L		10/10/16 07:29	10/13/16 17:44	1
Cobalt	**0.00267**		0.000500		mg/L		10/10/16 07:29	10/13/16 17:44	1
Iron	**2.66**		0.100		mg/L		10/10/16 07:29	10/13/16 17:44	1
Lead	<0.000500		0.000500		mg/L		10/10/16 07:29	10/13/16 17:44	1
Molybdenum	<0.00200		0.00200		mg/L		10/10/16 07:29	10/13/16 17:44	1
Selenium	<0.00500		0.00500		mg/L		10/10/16 07:29	10/13/16 17:44	1
Silver	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 17:44	1
Thallium	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 17:44	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		10/10/16 09:55	10/10/16 16:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**794**		30.0		mg/L			10/08/16 12:38	1

Client Sample ID: MW4
Date Collected: 10/03/16 11:26
Date Received: 10/07/16 09:15

Lab Sample ID: 310-91145-5
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			10/10/16 14:01	5
Fluoride	<0.500		0.500		mg/L			10/10/16 14:01	5
Sulfate	**262**		20.0		mg/L			10/11/16 23:26	20

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		10/11/16 10:00	10/12/16 17:14	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 17:50	1
Arsenic	**0.00320**		0.00200		mg/L		10/10/16 07:29	10/13/16 17:50	1
Barium	**0.0900**		0.00200		mg/L		10/10/16 07:29	10/13/16 17:50	1
Beryllium	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 17:50	1
Boron	**1.29**		0.200		mg/L		10/10/16 07:29	10/13/16 17:50	1
Cadmium	<0.000500		0.000500		mg/L		10/10/16 07:29	10/13/16 17:50	1
Calcium	**104**		0.200		mg/L		10/10/16 07:29	10/13/16 17:50	1
Chromium	<0.00500		0.00500		mg/L		10/10/16 07:29	10/13/16 17:50	1
Cobalt	<0.000500		0.000500		mg/L		10/10/16 07:29	10/13/16 17:50	1
Iron	<0.100		0.100		mg/L		10/10/16 07:29	10/13/16 17:50	1
Lead	<0.000500		0.000500		mg/L		10/10/16 07:29	10/13/16 17:50	1
Molybdenum	**0.0297**		0.00200		mg/L		10/10/16 07:29	10/13/16 17:50	1
Selenium	<0.00500		0.00500		mg/L		10/10/16 07:29	10/13/16 17:50	1
Silver	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 17:50	1
Thallium	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 17:50	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		10/10/16 09:55	10/10/16 16:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**546**		30.0		mg/L			10/08/16 12:38	1

Client Sample ID: MW9
Date Collected: 10/03/16 12:58
Date Received: 10/07/16 09:15

Lab Sample ID: 310-91145-6
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			10/10/16 14:01	5
Fluoride	**0.578**		0.500		mg/L			10/10/16 14:01	5
Sulfate	**244**		20.0		mg/L			10/11/16 23:55	20

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500	^	0.0500		mg/L		10/11/16 10:00	10/13/16 22:25	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 17:53	1
Arsenic	**0.00605**		0.00200		mg/L		10/10/16 07:29	10/13/16 17:53	1
Barium	**0.0847**		0.00200		mg/L		10/10/16 07:29	10/13/16 17:53	1
Beryllium	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 17:53	1
Boron	**3.57**		0.200		mg/L		10/10/16 07:29	10/13/16 17:53	1
Cadmium	<0.000500		0.000500		mg/L		10/10/16 07:29	10/13/16 17:53	1
Calcium	**149**		0.200		mg/L		10/10/16 07:29	10/13/16 17:53	1
Chromium	<0.00500		0.00500		mg/L		10/10/16 07:29	10/13/16 17:53	1
Cobalt	**0.000683**		0.000500		mg/L		10/10/16 07:29	10/13/16 17:53	1
Iron	**1.14**		0.100		mg/L		10/10/16 07:29	10/13/16 17:53	1
Lead	<0.000500		0.000500		mg/L		10/10/16 07:29	10/13/16 17:53	1
Molybdenum	**0.0435**		0.00200		mg/L		10/10/16 07:29	10/13/16 17:53	1
Selenium	**0.0388**		0.00500		mg/L		10/10/16 07:29	10/13/16 17:53	1
Silver	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 17:53	1
Thallium	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 17:53	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		10/10/16 09:55	10/10/16 16:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**740**		30.0		mg/L			10/08/16 12:38	1

Client Sample ID: MW2

Date Collected: 10/03/16 10:48
Date Received: 10/07/16 09:15

Lab Sample ID: 310-91145-7

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			10/10/16 14:01	5
Fluoride	<0.500		0.500		mg/L			10/10/16 14:01	5
Sulfate	**39.8**		5.00		mg/L			10/10/16 14:01	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500	^	0.0500		mg/L		10/11/16 10:00	10/13/16 22:27	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 17:56	1
Arsenic	<0.00200		0.00200		mg/L		10/10/16 07:29	10/13/16 17:56	1
Barium	**0.104**		0.00200		mg/L		10/10/16 07:29	10/13/16 17:56	1
Beryllium	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 17:56	1
Boron	**0.327**		0.200		mg/L		10/10/16 07:29	10/13/16 17:56	1
Cadmium	<0.000500		0.000500		mg/L		10/10/16 07:29	10/13/16 17:56	1
Calcium	**103**		0.200		mg/L		10/10/16 07:29	10/13/16 17:56	1
Chromium	<0.00500		0.00500		mg/L		10/10/16 07:29	10/13/16 17:56	1
Cobalt	<0.000500		0.000500		mg/L		10/10/16 07:29	10/13/16 17:56	1
Iron	<0.100		0.100		mg/L		10/10/16 07:29	10/13/16 17:56	1
Lead	<0.000500		0.000500		mg/L		10/10/16 07:29	10/13/16 17:56	1
Molybdenum	**0.120**		0.00200		mg/L		10/10/16 07:29	10/13/16 17:56	1
Selenium	<0.00500		0.00500		mg/L		10/10/16 07:29	10/13/16 17:56	1
Silver	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 17:56	1
Thallium	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 17:56	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		10/10/16 09:55	10/10/16 16:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**370**		30.0		mg/L			10/08/16 12:38	1

Client Sample ID: DUP

Date Collected: 10/03/16 12:06
Date Received: 10/07/16 09:15

Lab Sample ID: 310-91145-8

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**11.9**		5.00		mg/L			10/10/16 14:01	5
Fluoride	**0.625**		0.500		mg/L			10/10/16 14:01	5
Sulfate	**311**		20.0		mg/L			10/12/16 00:22	20

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500	^	0.0500		mg/L		10/10/16 15:17	10/13/16 22:33	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 18:09	1
Arsenic	**0.00821**		0.00200		mg/L		10/10/16 07:29	10/13/16 18:09	1
Barium	**0.0911**		0.00200		mg/L		10/10/16 07:29	10/13/16 18:09	1
Beryllium	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 18:09	1
Boron	**1.67**		0.200		mg/L		10/10/16 07:29	10/13/16 18:09	1
Cadmium	<0.000500		0.000500		mg/L		10/10/16 07:29	10/13/16 18:09	1
Calcium	**151**		0.200		mg/L		10/10/16 07:29	10/13/16 18:09	1
Chromium	<0.00500		0.00500		mg/L		10/10/16 07:29	10/13/16 18:09	1
Cobalt	**0.00273**		0.000500		mg/L		10/10/16 07:29	10/13/16 18:09	1
Iron	**2.74**		0.100		mg/L		10/10/16 07:29	10/13/16 18:09	1
Lead	<0.000500		0.000500		mg/L		10/10/16 07:29	10/13/16 18:09	1
Molybdenum	<0.00200		0.00200		mg/L		10/10/16 07:29	10/13/16 18:09	1
Selenium	<0.00500		0.00500		mg/L		10/10/16 07:29	10/13/16 18:09	1
Silver	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 18:09	1
Thallium	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 18:09	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		10/10/16 09:55	10/10/16 16:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**814**		30.0		mg/L			10/08/16 12:38	1

Definitions/Glossary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-91145-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

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
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
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)

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-144289/31
Matrix: Water
Analysis Batch: 144289

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			10/10/16 14:01	1
Fluoride	<0.100		0.100		mg/L			10/10/16 14:01	1
Sulfate	<1.00		1.00		mg/L			10/10/16 14:01	1

Lab Sample ID: LCS 310-144289/32
Matrix: Water
Analysis Batch: 144289

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	7.50	8.050		mg/L		107	90 - 110
Fluoride	1.50	1.593		mg/L		106	90 - 110
Sulfate	7.50	6.877		mg/L		92	90 - 110

Lab Sample ID: 310-91145-1 MS
Matrix: Ground Water
Analysis Batch: 144289

Client Sample ID: MW13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.7		25.0	36.77		mg/L		104	80 - 120
Fluoride	<0.500		5.00	5.337		mg/L		97	80 - 120
Sulfate	29.7		25.0	54.74		mg/L		100	80 - 120

Lab Sample ID: 310-91145-1 MSD
Matrix: Ground Water
Analysis Batch: 144289

Client Sample ID: MW13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10.7		25.0	37.01		mg/L		105	80 - 120	1	15
Fluoride	<0.500		5.00	5.246		mg/L		95	80 - 120	2	15
Sulfate	29.7		25.0	55.13		mg/L		102	80 - 120	1	15

Lab Sample ID: MB 310-144464/3
Matrix: Water
Analysis Batch: 144464

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			10/11/16 15:50	1
Fluoride	<0.100		0.100		mg/L			10/11/16 15:50	1
Sulfate	<1.00		1.00		mg/L			10/11/16 15:50	1

Lab Sample ID: LCS 310-144464/4
Matrix: Water
Analysis Batch: 144464

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	7.50	7.583		mg/L		101	90 - 110
Fluoride	1.50	1.816	*	mg/L		121	90 - 110
Sulfate	7.50	7.743		mg/L		103	90 - 110

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 310-144161/1-A
Matrix: Water
Analysis Batch: 144573

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 144161

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		10/11/16 10:00	10/12/16 16:56	1

Lab Sample ID: LCS 310-144161/2-A
Matrix: Water
Analysis Batch: 144573

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 144161

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	2.00	1.847		mg/L		92	80 - 120

Lab Sample ID: 310-91145-1 MS
Matrix: Ground Water
Analysis Batch: 144573

Client Sample ID: MW13
Prep Type: Total/NA
Prep Batch: 144161

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	<0.0500		2.00	1.861		mg/L		92	75 - 125

Lab Sample ID: 310-91145-1 MSD
Matrix: Ground Water
Analysis Batch: 144573

Client Sample ID: MW13
Prep Type: Total/NA
Prep Batch: 144161

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lithium	<0.0500		2.00	1.867		mg/L		92	75 - 125	0	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 310-144050/1-A
Matrix: Water
Analysis Batch: 144741

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 144050

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 16:47	1
Arsenic	<0.00200		0.00200		mg/L		10/10/16 07:29	10/13/16 16:47	1
Barium	<0.00200		0.00200		mg/L		10/10/16 07:29	10/13/16 16:47	1
Beryllium	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 16:47	1
Boron	<0.200		0.200		mg/L		10/10/16 07:29	10/13/16 16:47	1
Cadmium	<0.000500		0.000500		mg/L		10/10/16 07:29	10/13/16 16:47	1
Calcium	<0.200		0.200		mg/L		10/10/16 07:29	10/13/16 16:47	1
Chromium	<0.00500		0.00500		mg/L		10/10/16 07:29	10/13/16 16:47	1
Cobalt	<0.000500		0.000500		mg/L		10/10/16 07:29	10/13/16 16:47	1
Iron	<0.100		0.100		mg/L		10/10/16 07:29	10/13/16 16:47	1
Lead	<0.000500		0.000500		mg/L		10/10/16 07:29	10/13/16 16:47	1
Molybdenum	<0.00200		0.00200		mg/L		10/10/16 07:29	10/13/16 16:47	1
Selenium	<0.00500		0.00500		mg/L		10/10/16 07:29	10/13/16 16:47	1
Silver	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 16:47	1
Thallium	<0.00100		0.00100		mg/L		10/10/16 07:29	10/13/16 16:47	1

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

Lab Sample ID: LCS 310-144050/2-A
Matrix: Water
Analysis Batch: 144741

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 144050

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0200	0.02020		mg/L		101	80 - 120
Arsenic	0.0400	0.04278		mg/L		107	80 - 120
Barium	0.0400	0.04295		mg/L		107	80 - 120
Beryllium	0.0200	0.02132		mg/L		107	80 - 120
Boron	0.880	0.8842		mg/L		100	80 - 120
Cadmium	0.0200	0.02103		mg/L		105	80 - 120
Calcium	2.00	2.139		mg/L		107	80 - 120
Chromium	0.0400	0.04164		mg/L		104	80 - 120
Cobalt	0.0200	0.02131		mg/L		107	80 - 120
Iron	2.00	2.241		mg/L		112	80 - 120
Lead	0.0200	0.02140		mg/L		107	80 - 120
Molybdenum	0.0400	0.04211		mg/L		105	80 - 120
Selenium	0.0400	0.03996		mg/L		100	80 - 120
Silver	0.0200	0.02153		mg/L		108	80 - 120
Thallium	0.0160	0.01644		mg/L		103	80 - 120

Lab Sample ID: 310-91145-4 DU
Matrix: Ground Water
Analysis Batch: 144741

Client Sample ID: MW3
Prep Type: Total/NA
Prep Batch: 144050

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	<0.00100		<0.00100		mg/L		NC	20
Arsenic	0.00761		0.007673		mg/L		0.9	20
Barium	0.0887		0.09008		mg/L		2	20
Beryllium	<0.00100		<0.00100		mg/L		NC	20
Boron	1.63		1.677		mg/L		3	20
Cadmium	<0.000500		<0.000500		mg/L		NC	20
Calcium	147		149.2		mg/L		1	20
Chromium	<0.00500		<0.00500		mg/L		NC	20
Cobalt	0.00267		0.002763		mg/L		3	20
Iron	2.66		2.706		mg/L		2	20
Lead	<0.000500		<0.000500		mg/L		NC	20
Molybdenum	<0.00200		<0.00200		mg/L		NC	20
Selenium	<0.00500		<0.00500		mg/L		NC	20
Silver	<0.00100		<0.00100		mg/L		NC	20
Thallium	<0.00100		<0.00100		mg/L		NC	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-144097/1-A
Matrix: Water
Analysis Batch: 144185

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 144097

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		10/10/16 09:55	10/10/16 16:13	1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 310-144097/2-A
Matrix: Water
Analysis Batch: 144185

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 144097

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00167	0.001552		mg/L		93	80 - 120

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

Lab Sample ID: MB 310-144006/1
Matrix: Water
Analysis Batch: 144006

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	<30.0		30.0		mg/L			10/08/16 12:38	1

Lab Sample ID: LCS 310-144006/2
Matrix: Water
Analysis Batch: 144006

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	1002		mg/L		100	90 - 110

Lab Sample ID: 310-91145-1 DU
Matrix: Ground Water
Analysis Batch: 144006

Client Sample ID: MW13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	388		402.0		mg/L		4	20

HPLC/IC

Analysis Batch: 144289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-91145-1	MW13	Total/NA	Ground Water	9056A	
310-91145-2	MW4NC2	Total/NA	Ground Water	9056A	
310-91145-3	MW11	Total/NA	Ground Water	9056A	
310-91145-4	MW3	Total/NA	Ground Water	9056A	
310-91145-5	MW4	Total/NA	Ground Water	9056A	
310-91145-6	MW9	Total/NA	Ground Water	9056A	
310-91145-7	MW2	Total/NA	Ground Water	9056A	
310-91145-8	DUP	Total/NA	Ground Water	9056A	
MB 310-144289/31	Method Blank	Total/NA	Water	9056A	
LCS 310-144289/32	Lab Control Sample	Total/NA	Water	9056A	
310-91145-1 MS	MW13	Total/NA	Ground Water	9056A	
310-91145-1 MSD	MW13	Total/NA	Ground Water	9056A	

Analysis Batch: 144464

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-91145-5	MW4	Total/NA	Ground Water	9056A	
310-91145-6	MW9	Total/NA	Ground Water	9056A	
310-91145-8	DUP	Total/NA	Ground Water	9056A	
MB 310-144464/3	Method Blank	Total/NA	Water	9056A	
LCS 310-144464/4	Lab Control Sample	Total/NA	Water	9056A	

Metals

Prep Batch: 144050

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-91145-1	MW13	Total/NA	Ground Water	3010A	
310-91145-2	MW4NC2	Total/NA	Ground Water	3010A	
310-91145-3	MW11	Total/NA	Ground Water	3010A	
310-91145-4	MW3	Total/NA	Ground Water	3010A	
310-91145-5	MW4	Total/NA	Ground Water	3010A	
310-91145-6	MW9	Total/NA	Ground Water	3010A	
310-91145-7	MW2	Total/NA	Ground Water	3010A	
310-91145-8	DUP	Total/NA	Ground Water	3010A	
MB 310-144050/1-A	Method Blank	Total/NA	Water	3010A	
LCS 310-144050/2-A	Lab Control Sample	Total/NA	Water	3010A	
310-91145-4 DU	MW3	Total/NA	Ground Water	3010A	

Prep Batch: 144097

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-91145-1	MW13	Total/NA	Ground Water	7470A	
310-91145-2	MW4NC2	Total/NA	Ground Water	7470A	
310-91145-3	MW11	Total/NA	Ground Water	7470A	
310-91145-4	MW3	Total/NA	Ground Water	7470A	
310-91145-5	MW4	Total/NA	Ground Water	7470A	
310-91145-6	MW9	Total/NA	Ground Water	7470A	
310-91145-7	MW2	Total/NA	Ground Water	7470A	
310-91145-8	DUP	Total/NA	Ground Water	7470A	
MB 310-144097/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-144097/2-A	Lab Control Sample	Total/NA	Water	7470A	

Metals (Continued)

Prep Batch: 144161

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-91145-1	MW13	Total/NA	Ground Water	3010A	
310-91145-2	MW4NC2	Total/NA	Ground Water	3010A	
310-91145-3	MW11	Total/NA	Ground Water	3010A	
310-91145-4	MW3	Total/NA	Ground Water	3010A	
310-91145-5	MW4	Total/NA	Ground Water	3010A	
310-91145-6	MW9	Total/NA	Ground Water	3010A	
310-91145-7	MW2	Total/NA	Ground Water	3010A	
310-91145-8	DUP	Total/NA	Ground Water	3010A	
MB 310-144161/1-A	Method Blank	Total/NA	Water	3010A	
LCS 310-144161/2-A	Lab Control Sample	Total/NA	Water	3010A	
310-91145-1 MS	MW13	Total/NA	Ground Water	3010A	
310-91145-1 MSD	MW13	Total/NA	Ground Water	3010A	

Analysis Batch: 144185

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-91145-1	MW13	Total/NA	Ground Water	7470A	144097
310-91145-2	MW4NC2	Total/NA	Ground Water	7470A	144097
310-91145-3	MW11	Total/NA	Ground Water	7470A	144097
310-91145-4	MW3	Total/NA	Ground Water	7470A	144097
310-91145-5	MW4	Total/NA	Ground Water	7470A	144097
310-91145-6	MW9	Total/NA	Ground Water	7470A	144097
310-91145-7	MW2	Total/NA	Ground Water	7470A	144097
310-91145-8	DUP	Total/NA	Ground Water	7470A	144097
MB 310-144097/1-A	Method Blank	Total/NA	Water	7470A	144097
LCS 310-144097/2-A	Lab Control Sample	Total/NA	Water	7470A	144097

Analysis Batch: 144573

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-91145-1	MW13	Total/NA	Ground Water	6010C	144161
310-91145-2	MW4NC2	Total/NA	Ground Water	6010C	144161
310-91145-3	MW11	Total/NA	Ground Water	6010C	144161
310-91145-4	MW3	Total/NA	Ground Water	6010C	144161
310-91145-5	MW4	Total/NA	Ground Water	6010C	144161
MB 310-144161/1-A	Method Blank	Total/NA	Water	6010C	144161
LCS 310-144161/2-A	Lab Control Sample	Total/NA	Water	6010C	144161
310-91145-1 MS	MW13	Total/NA	Ground Water	6010C	144161
310-91145-1 MSD	MW13	Total/NA	Ground Water	6010C	144161

Analysis Batch: 144741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-91145-1	MW13	Total/NA	Ground Water	6020A	144050
310-91145-2	MW4NC2	Total/NA	Ground Water	6020A	144050
310-91145-3	MW11	Total/NA	Ground Water	6020A	144050
310-91145-4	MW3	Total/NA	Ground Water	6020A	144050
310-91145-5	MW4	Total/NA	Ground Water	6020A	144050
310-91145-6	MW9	Total/NA	Ground Water	6020A	144050
310-91145-7	MW2	Total/NA	Ground Water	6020A	144050
310-91145-8	DUP	Total/NA	Ground Water	6020A	144050
MB 310-144050/1-A	Method Blank	Total/NA	Water	6020A	144050
LCS 310-144050/2-A	Lab Control Sample	Total/NA	Water	6020A	144050
310-91145-4 DU	MW3	Total/NA	Ground Water	6020A	144050

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-91145-1

Analysis Batch: 144747

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-91145-6	MW9	Total/NA	Ground Water	6010C	144161
310-91145-7	MW2	Total/NA	Ground Water	6010C	144161
310-91145-8	DUP	Total/NA	Ground Water	6010C	144161

General Chemistry

Analysis Batch: 144006

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-91145-1	MW13	Total/NA	Ground Water	SM 2540C	
310-91145-2	MW4NC2	Total/NA	Ground Water	SM 2540C	
310-91145-3	MW11	Total/NA	Ground Water	SM 2540C	
310-91145-4	MW3	Total/NA	Ground Water	SM 2540C	
310-91145-5	MW4	Total/NA	Ground Water	SM 2540C	
310-91145-6	MW9	Total/NA	Ground Water	SM 2540C	
310-91145-7	MW2	Total/NA	Ground Water	SM 2540C	
310-91145-8	DUP	Total/NA	Ground Water	SM 2540C	
MB 310-144006/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-144006/2	Lab Control Sample	Total/NA	Water	SM 2540C	
310-91145-1 DU	MW13	Total/NA	Ground Water	SM 2540C	

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-91145-1

Client Sample ID: MW13
Date Collected: 10/03/16 09:01
Date Received: 10/07/16 09:15

Lab Sample ID: 310-91145-1
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	144289	10/10/16 14:01	AJG	TAL CF
Total/NA	Prep	3010A			144161	10/11/16 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	144573	10/12/16 17:00	OAD	TAL CF
Total/NA	Prep	3010A			144050	10/10/16 07:29	JNR	TAL CF
Total/NA	Analysis	6020A		1	144741	10/13/16 17:34	OAD	TAL CF
Total/NA	Prep	7470A			144097	10/10/16 09:55	SAD	TAL CF
Total/NA	Analysis	7470A		1	144185	10/10/16 16:26	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	144006	10/08/16 12:38	SAS	TAL CF

Client Sample ID: MW4NC2
Date Collected: 10/03/16 09:36
Date Received: 10/07/16 09:15

Lab Sample ID: 310-91145-2
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	144289	10/10/16 14:01	AJG	TAL CF
Total/NA	Prep	3010A			144161	10/11/16 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	144573	10/12/16 17:08	OAD	TAL CF
Total/NA	Prep	3010A			144050	10/10/16 07:29	JNR	TAL CF
Total/NA	Analysis	6020A		1	144741	10/13/16 17:37	OAD	TAL CF
Total/NA	Prep	7470A			144097	10/10/16 09:55	SAD	TAL CF
Total/NA	Analysis	7470A		1	144185	10/10/16 16:28	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	144006	10/08/16 12:38	SAS	TAL CF

Client Sample ID: MW11
Date Collected: 10/03/16 10:12
Date Received: 10/07/16 09:15

Lab Sample ID: 310-91145-3
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	144289	10/10/16 14:01	AJG	TAL CF
Total/NA	Prep	3010A			144161	10/11/16 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	144573	10/12/16 17:10	OAD	TAL CF
Total/NA	Prep	3010A			144050	10/10/16 07:29	JNR	TAL CF
Total/NA	Analysis	6020A		1	144741	10/13/16 17:40	OAD	TAL CF
Total/NA	Prep	7470A			144097	10/10/16 09:55	SAD	TAL CF
Total/NA	Analysis	7470A		1	144185	10/10/16 16:29	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	144006	10/08/16 12:38	SAS	TAL CF

Client Sample ID: MW3

Lab Sample ID: 310-91145-4

Date Collected: 10/03/16 12:04

Matrix: Ground Water

Date Received: 10/07/16 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	144289	10/10/16 14:01	AJG	TAL CF
Total/NA	Prep	3010A			144161	10/11/16 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	144573	10/12/16 17:12	OAD	TAL CF
Total/NA	Prep	3010A			144050	10/10/16 07:29	JNR	TAL CF
Total/NA	Analysis	6020A		1	144741	10/13/16 17:44	OAD	TAL CF
Total/NA	Prep	7470A			144097	10/10/16 09:55	SAD	TAL CF
Total/NA	Analysis	7470A		1	144185	10/10/16 16:31	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	144006	10/08/16 12:38	SAS	TAL CF

Client Sample ID: MW4

Lab Sample ID: 310-91145-5

Date Collected: 10/03/16 11:26

Matrix: Ground Water

Date Received: 10/07/16 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		20	144464	10/11/16 23:26	AJG	TAL CF
Total/NA	Analysis	9056A		5	144289	10/10/16 14:01	AJG	TAL CF
Total/NA	Prep	3010A			144161	10/11/16 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	144573	10/12/16 17:14	OAD	TAL CF
Total/NA	Prep	3010A			144050	10/10/16 07:29	JNR	TAL CF
Total/NA	Analysis	6020A		1	144741	10/13/16 17:50	OAD	TAL CF
Total/NA	Prep	7470A			144097	10/10/16 09:55	SAD	TAL CF
Total/NA	Analysis	7470A		1	144185	10/10/16 16:32	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	144006	10/08/16 12:38	SAS	TAL CF

Client Sample ID: MW9

Lab Sample ID: 310-91145-6

Date Collected: 10/03/16 12:58

Matrix: Ground Water

Date Received: 10/07/16 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		20	144464	10/11/16 23:55	AJG	TAL CF
Total/NA	Analysis	9056A		5	144289	10/10/16 14:01	AJG	TAL CF
Total/NA	Prep	3010A			144161	10/11/16 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	144747	10/13/16 22:25	OAD	TAL CF
Total/NA	Prep	3010A			144050	10/10/16 07:29	JNR	TAL CF
Total/NA	Analysis	6020A		1	144741	10/13/16 17:53	OAD	TAL CF
Total/NA	Prep	7470A			144097	10/10/16 09:55	SAD	TAL CF
Total/NA	Analysis	7470A		1	144185	10/10/16 16:34	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	144006	10/08/16 12:38	SAS	TAL CF

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-91145-1

Client Sample ID: MW2

Date Collected: 10/03/16 10:48
Date Received: 10/07/16 09:15

Lab Sample ID: 310-91145-7

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	144289	10/10/16 14:01	AJG	TAL CF
Total/NA	Prep	3010A			144161	10/11/16 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	144747	10/13/16 22:27	OAD	TAL CF
Total/NA	Prep	3010A			144050	10/10/16 07:29	JNR	TAL CF
Total/NA	Analysis	6020A		1	144741	10/13/16 17:56	OAD	TAL CF
Total/NA	Prep	7470A			144097	10/10/16 09:55	SAD	TAL CF
Total/NA	Analysis	7470A		1	144185	10/10/16 16:35	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	144006	10/08/16 12:38	SAS	TAL CF

Client Sample ID: DUP

Date Collected: 10/03/16 12:06
Date Received: 10/07/16 09:15

Lab Sample ID: 310-91145-8

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		20	144464	10/12/16 00:22	AJG	TAL CF
Total/NA	Analysis	9056A		5	144289	10/10/16 14:01	AJG	TAL CF
Total/NA	Prep	3010A			144161	10/10/16 15:17	JNR	TAL CF
Total/NA	Analysis	6010C		1	144747	10/13/16 22:33	OAD	TAL CF
Total/NA	Prep	3010A			144050	10/10/16 07:29	JNR	TAL CF
Total/NA	Analysis	6020A		1	144741	10/13/16 18:09	OAD	TAL CF
Total/NA	Prep	7470A			144097	10/10/16 09:55	SAD	TAL CF
Total/NA	Analysis	7470A		1	144185	10/10/16 16:37	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	144006	10/08/16 12:38	SAS	TAL CF

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401

Certification Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-91145-1

Laboratory: TestAmerica Cedar Falls

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
AIHA-LAP, LLC	IHLAP		101044	11-01-16
Georgia	State Program	4	N/A	09-29-17
Illinois	NELAP	5	200024	11-29-16
Iowa	State Program	7	007	12-01-17
Kansas	NELAP	7	E-10341	01-31-17
Minnesota	NELAP	5	019-999-319	12-31-16
Minnesota (Petrofund)	State Program	1	3349	08-22-17
North Dakota	State Program	8	R-186	09-29-16 *
Oregon	NELAP	10	IA100001	09-29-17

* Certification renewal pending - certification considered valid.

Method Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-91145-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	TAL CF
6010C	Metals (ICP)	SW846	TAL CF
6020A	Metals (ICP/MS)	SW846	TAL CF
7470A	Mercury (CVAA)	SW846	TAL CF
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL 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:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401

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THE LEADER IN ENVIRONMENTAL TESTING

310-91145 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Omaha Public Power District

City/State: Omaha, NE | Project: Nebraska City Unit 1 LF CCR

Receipt Information

Date/Time Received: 10/7/16 915 | Received By: TO

Delivery Type: ☐ UPS ☑ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ TA Courier ☐ TA 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 # 1 of 2
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

Temperature Blank? ☐ Yes ☑ No ID & Bottle Type: 500 ml - MW13

NOTE: If yes, use temp blank for measurement. If no, specify sample ID(s) and bottle type used to take measurement.

Thermometer ID: 2 | Correction Factor (°C): 0.0

Uncorrected Temp (°C): 5.9 | Corrected Temp (°C): 5.9

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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Omaha Public Power District

City/State: Omaha, NE | Project: Nebraska City Unit 1 LF CCR

Receipt Information

Date/Time Received: 10/7/16 915 | Received By: TS

Delivery Type: ☐ UPS ☑ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ TA Courier ☐ TA Field Services ☐ Client Drop-off ☐ Other: _____

Condition of Cooler/Containers

Sample(s) received in Cooler? ☑ Yes ☐ No *If yes:* Cooler ID: T-520

Multiple Coolers? ☑ Yes ☐ No *If yes:* Cooler # 2 of 2

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

Temperature Blank? ☑ Yes ☐ No ID & Bottle Type:

NOTE: If yes, use temp blank for measurement. If no, specify sample ID(s) and bottle type used to take measurement.

Thermometer ID: H | Correction Factor (°C): 0.0

Uncorrected Temp (°C): 5.9 | Corrected Temp (°C): 5.9

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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Phone (319) 277-2401 Fax (319) 277-2425

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Brad Sojka	Lab PM: Hayes, Shawn M	Carrier Tracking No(s):	COC No:
Client Contact: Brad Sojka	Phone: 402-636-2515	E-Mail: shawn.hayes@testamericainc.com		Page:
Company: Omaha Public Power District				Job #:
Address: 444 South 16th Street Mall 9E/EP1	Due Date Requested:			
City: Omaha	TAT Requested (days):			
State, Zip: NE, 68102-2247				
Phone: 402-636-2515(Tel)	PO #:			
Email: bsojka@oppd.com	WO #:			
Project Name: Nebraska City Unit 1 Landfill CCR	TestAmerica Project #: 31007558			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra226, Combined Ra226 and Ra228	6010C Lithium, 6020A CCR List, 7470A Mercury	2540C TDS, 9056A Chloride, Fluoride, Sulfate	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	D	N		
MW13	10/3/16	0901	G	GW			X	X	X		
MW4NC2		0930	G	GW			X	X	X		
MW11		1012	G	GW			X	X	X		
MW3		1204	G	GW			X	X	X		
MW4		1126	G	GW			X	X	X		
MW9		1258	G	GW			X	X	X		
MW2		1048	G	GW			X	X	X		
DUP		1206	G	GW			X	X	X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	10/6/16 0900			10.7.16 915	TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

10/20/2016

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MW13	310-91145-A-1	Plastic 250ml - with Nitric Acid	<2		
MW13	310-91145-B-1	Plastic 1 liter - Nitric Acid	<2		
MW13	310-91145-C-1	Plastic 1 liter - Nitric Acid	<2		
MW4NC2	310-91145-A-2	Plastic 250ml - with Nitric Acid	<2		
MW4NC2	310-91145-B-2	Plastic 1 liter - Nitric Acid	<2		
MW4NC2	310-91145-C-2	Plastic 1 liter - Nitric Acid	<2		
MW11	310-91145-A-3	Plastic 250ml - with Nitric Acid	<2		
MW11	310-91145-B-3	Plastic 1 liter - Nitric Acid	<2		
MW11	310-91145-C-3	Plastic 1 liter - Nitric Acid	<2		
MW3	310-91145-A-4	Plastic 250ml - with Nitric Acid	<2		
MW3	310-91145-B-4	Plastic 1 liter - Nitric Acid	<2		
MW3	310-91145-C-4	Plastic 1 liter - Nitric Acid	<2		
MW4	310-91145-A-5	Plastic 250ml - with Nitric Acid	<2		
MW4	310-91145-B-5	Plastic 1 liter - Nitric Acid	<2		
MW4	310-91145-C-5	Plastic 1 liter - Nitric Acid	<2		
MW9	310-91145-A-6	Plastic 250ml - with Nitric Acid	<2		
MW9	310-91145-B-6	Plastic 1 liter - Nitric Acid	<2		
MW9	310-91145-C-6	Plastic 1 liter - Nitric Acid	<2		
MW2	310-91145-A-7	Plastic 250ml - with Nitric Acid	<2		
MW2	310-91145-B-7	Plastic 1 liter - Nitric Acid	<2		
MW2	310-91145-C-7	Plastic 1 liter - Nitric Acid	<2		
DUP	310-91145-A-8	Plastic 250ml - with Nitric Acid	<2		
DUP	310-91145-B-8	Plastic 1 liter - Nitric Acid	<2		
DUP	310-91145-C-8	Plastic 1 liter - Nitric Acid	<2		

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-91145-1

Login Number: 91145
List Number: 1
Creator: Worthy, Ashley L

List Source: TestAmerica Cedar Falls

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319)277-2401

TestAmerica Job ID: 310-91145-2
Client Project/Site: Nebraska City Unit 1 Landfill
Sampling Event: CCR and Landfill Q2 and Q4

For:
Omaha Public Power District
Attn: Accounts Payable, 4E/EP-5
444 South 16th Street Mall
Omaha, Nebraska 68102-2247

Attn: Brad Sojka

Authorized for release by:
11/9/2016 6:18:53 PM

Shawn Hayes, Project Manager II
(319)277-2401
shawn.hayes@testamericainc.com

Table of Contents

Job ID: 310-91145-2

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-91145-2

Comments
No additional comments.

Receipt
The samples were received on 10/7/2016 9:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.9º C.

RAD
Method(s) 903.0, 9315: Radium-226 Prep Batch 160-274473:
The Laboratory Control Sample (LCS) spike recovery (138%) associated with the following samples is outside the upper QC limit of 137% indicating a potential positive bias for that analyte : MW13 (310-91145-1), MW4NC2 (310-91145-2), MW11 (310-91145-3), MW3 (310-91145-4), MW4 (310-91145-5), MW9 (310-91145-6), MW2 (310-91145-7), DUP (310-91145-8), (LCS 160-274473/2-A), (LCSD 160-274473/3-A) and (MB 160-274473/1-A). This analyte was not observed above the requested limit in the associated samples; therefore the sample data was not adversely affected by this excursion. The data have been qualified and reported.

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

Sample Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-91145-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-91145-1	MW13	Ground Water	10/03/16 09:01	10/07/16 09:15
310-91145-2	MW4NC2	Ground Water	10/03/16 09:36	10/07/16 09:15
310-91145-3	MW11	Ground Water	10/03/16 10:12	10/07/16 09:15
310-91145-4	MW3	Ground Water	10/03/16 12:04	10/07/16 09:15
310-91145-5	MW4	Ground Water	10/03/16 11:26	10/07/16 09:15
310-91145-6	MW9	Ground Water	10/03/16 12:58	10/07/16 09:15
310-91145-7	MW2	Ground Water	10/03/16 10:48	10/07/16 09:15
310-91145-8	DUP	Ground Water	10/03/16 12:06	10/07/16 09:15

Client Sample ID: MW13
Date Collected: 10/03/16 09:01
Date Received: 10/07/16 09:15

Lab Sample ID: 310-91145-1
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.444**	*	0.129	0.135	1.00	0.129	pCi/L	10/13/16 14:09	11/08/16 07:11	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*74.4*		*40 - 110*	*10/13/16 14:09*	*11/08/16 07:11*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.562	U	0.377	0.381	1.00	0.588	pCi/L	10/13/16 15:00	11/04/16 18:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*74.4*		*40 - 110*	*10/13/16 15:00*	*11/04/16 18:35*	*1*
Y Carrier	*86.0*		*40 - 110*	*10/13/16 15:00*	*11/04/16 18:35*	*1*

Method: 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	**1.01**		0.399	0.404	5.00	0.588	pCi/L		11/09/16 17:49	1

Client Sample ID: MW4NC2
Date Collected: 10/03/16 09:36
Date Received: 10/07/16 09:15

Lab Sample ID: 310-91145-2
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.258	*	0.124	0.126	1.00	0.169	pCi/L	10/13/16 14:09	11/08/16 07:11	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*74.4*		*40 - 110*	*10/13/16 14:09*	*11/08/16 07:11*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.936		0.350	0.360	1.00	0.471	pCi/L	10/13/16 15:00	11/04/16 18:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*74.4*		*40 - 110*	*10/13/16 15:00*	*11/04/16 18:35*	*1*
Y Carrier	*85.6*		*40 - 110*	*10/13/16 15:00*	*11/04/16 18:35*	*1*

Method: 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	1.19		0.371	0.382	5.00	0.471	pCi/L		11/09/16 17:49	1

Client Sample ID: MW11
Date Collected: 10/03/16 10:12
Date Received: 10/07/16 09:15

Lab Sample ID: 310-91145-3
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.237	*	0.114	0.116	1.00	0.152	pCi/L	10/13/16 14:09	11/08/16 07:52	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*69.8*		*40 - 110*	*10/13/16 14:09*	*11/08/16 07:52*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.860		0.368	0.377	1.00	0.521	pCi/L	10/13/16 15:00	11/04/16 18:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*69.8*		*40 - 110*	*10/13/16 15:00*	*11/04/16 18:35*	*1*
Y Carrier	*89.7*		*40 - 110*	*10/13/16 15:00*	*11/04/16 18:35*	*1*

Method: 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	1.10		0.386	0.394	5.00	0.521	pCi/L		11/09/16 17:49	1

Client Sample ID: MW3
Date Collected: 10/03/16 12:04
Date Received: 10/07/16 09:15

Lab Sample ID: 310-91145-4
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.114	U *	0.0824	0.0830	1.00	0.121	pCi/L	10/13/16 14:09	11/08/16 07:52	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*79.5*		*40 - 110*	*10/13/16 14:09*	*11/08/16 07:52*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0361	U	0.268	0.268	1.00	0.473	pCi/L	10/13/16 15:00	11/04/16 18:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*79.5*		*40 - 110*	*10/13/16 15:00*	*11/04/16 18:35*	*1*
Y Carrier	*90.8*		*40 - 110*	*10/13/16 15:00*	*11/04/16 18:35*	*1*

Method: 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	0.150	U	0.280	0.280	5.00	0.473	pCi/L		11/09/16 17:49	1

Client Sample ID: MW4
Date Collected: 10/03/16 11:26
Date Received: 10/07/16 09:15

Lab Sample ID: 310-91145-5
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.153	*	0.0929	0.0939	1.00	0.127	pCi/L	10/13/16 14:09	11/08/16 07:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*67.8*		*40 - 110*	*10/13/16 14:09*	*11/08/16 07:53*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.190	U	0.299	0.300	1.00	0.504	pCi/L	10/13/16 15:00	11/04/16 18:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*67.8*		*40 - 110*	*10/13/16 15:00*	*11/04/16 18:35*	*1*
Y Carrier	*92.3*		*40 - 110*	*10/13/16 15:00*	*11/04/16 18:35*	*1*

Method: 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	0.343	U	0.313	0.314	5.00	0.504	pCi/L		11/09/16 17:49	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-91145-2

Client Sample ID: MW9
Date Collected: 10/03/16 12:58
Date Received: 10/07/16 09:15

Lab Sample ID: 310-91145-6
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.143	U *	0.110	0.111	1.00	0.167	pCi/L	10/13/16 14:09	11/08/16 07:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*56.1*		*40 - 110*	*10/13/16 14:09*	*11/08/16 07:53*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0868	U	0.390	0.390	1.00	0.685	pCi/L	10/13/16 15:00	11/04/16 18:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*56.1*		*40 - 110*	*10/13/16 15:00*	*11/04/16 18:35*	*1*
Y Carrier	*87.9*		*40 - 110*	*10/13/16 15:00*	*11/04/16 18:35*	*1*

Method: 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	0.230	U	0.406	0.406	5.00	0.685	pCi/L		11/09/16 17:49	1

Client Sample ID: MW2
Date Collected: 10/03/16 10:48
Date Received: 10/07/16 09:15

Lab Sample ID: 310-91145-7
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.155**	*	0.105	0.106	1.00	0.153	pCi/L	10/13/16 14:09	11/08/16 07:54	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*64.7*		*40 - 110*	*10/13/16 14:09*	*11/08/16 07:54*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.431	U	0.364	0.366	1.00	0.580	pCi/L	10/13/16 15:00	11/04/16 18:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*64.7*		*40 - 110*	*10/13/16 15:00*	*11/04/16 18:35*	*1*
Y Carrier	*86.4*		*40 - 110*	*10/13/16 15:00*	*11/04/16 18:35*	*1*

Method: 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	**0.586**		0.379	0.381	5.00	0.580	pCi/L		11/09/16 17:49	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-91145-2

Client Sample ID: DUP
Date Collected: 10/03/16 12:06
Date Received: 10/07/16 09:15

Lab Sample ID: 310-91145-8
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.102	U *	0.0823	0.0828	1.00	0.125	pCi/L	10/13/16 14:09	11/08/16 08:51	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*73.8*		*40 - 110*	*10/13/16 14:09*	*11/08/16 08:51*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.299	U	0.352	0.353	1.00	0.664	pCi/L	10/13/16 15:00	11/04/16 18:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*73.8*		*40 - 110*	*10/13/16 15:00*	*11/04/16 18:35*	*1*
Y Carrier	*85.6*		*40 - 110*	*10/13/16 15:00*	*11/04/16 18:35*	*1*

Method: 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	-0.197	U	0.361	0.362	5.00	0.664	pCi/L		11/09/16 17:49	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-91145-2

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.
*	LCS or LCSD is outside acceptance limits.

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
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
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)

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-274473/1-A
Matrix: Water
Analysis Batch: 278266

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 274473

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.02505	U	0.0765	0.0766	1.00	0.160	pCi/L	10/13/16 14:09	11/08/16 07:11	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*60.1*		*40 - 110*	*10/13/16 14:09*	*11/08/16 07:11*	*1*

Lab Sample ID: LCS 160-274473/2-A
Matrix: Water
Analysis Batch: 278266

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 274473

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.1	15.33	*	1.53	1.00	0.145	pCi/L	138	68 - 137		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*70.9*		*40 - 110*

Lab Sample ID: LCSD 160-274473/3-A
Matrix: Water
Analysis Batch: 278266

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 274473

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			11.1	14.24		1.44	1.00	0.132	pCi/L	128	68 - 137	0.37	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*69.5*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-274475/1-A
Matrix: Water
Analysis Batch: 277682

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 274475

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1090	U	0.371	0.371	1.00	0.646	pCi/L	10/13/16 15:00	11/04/16 18:34	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*60.1*		*40 - 110*	*10/13/16 15:00*	*11/04/16 18:34*	*1*
Y Carrier	*87.1*		*40 - 110*	*10/13/16 15:00*	*11/04/16 18:34*	*1*

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

Lab Sample ID: LCS 160-274475/2-A
Matrix: Water
Analysis Batch: 277682

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 274475

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			14.3	16.04		1.80	1.00	0.508	pCi/L	112	56 - 140		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*70.9*		*40 - 110*
Y Carrier	*84.9*		*40 - 110*

Lab Sample ID: LCSD 160-274475/3-A
Matrix: Water
Analysis Batch: 277682

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 274475

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			14.3	16.16		1.81	1.00	0.486	pCi/L	113	56 - 140	0.03	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*69.5*		*40 - 110*
Y Carrier	*87.5*		*40 - 110*

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-91145-2

Rad

Prep Batch: 274473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-91145-1	MW13	Total/NA	Ground Water	PrecSep-21	
310-91145-2	MW4NC2	Total/NA	Ground Water	PrecSep-21	
310-91145-3	MW11	Total/NA	Ground Water	PrecSep-21	
310-91145-4	MW3	Total/NA	Ground Water	PrecSep-21	
310-91145-5	MW4	Total/NA	Ground Water	PrecSep-21	
310-91145-6	MW9	Total/NA	Ground Water	PrecSep-21	
310-91145-7	MW2	Total/NA	Ground Water	PrecSep-21	
310-91145-8	DUP	Total/NA	Ground Water	PrecSep-21	
MB 160-274473/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-274473/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-274473/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 274475

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-91145-1	MW13	Total/NA	Ground Water	PrecSep_0	
310-91145-2	MW4NC2	Total/NA	Ground Water	PrecSep_0	
310-91145-3	MW11	Total/NA	Ground Water	PrecSep_0	
310-91145-4	MW3	Total/NA	Ground Water	PrecSep_0	
310-91145-5	MW4	Total/NA	Ground Water	PrecSep_0	
310-91145-6	MW9	Total/NA	Ground Water	PrecSep_0	
310-91145-7	MW2	Total/NA	Ground Water	PrecSep_0	
310-91145-8	DUP	Total/NA	Ground Water	PrecSep_0	
MB 160-274475/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-274475/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-274475/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-91145-2

Client Sample ID: MW13

Lab Sample ID: 310-91145-1

Date Collected: 10/03/16 09:01

Matrix: Ground Water

Date Received: 10/07/16 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			274473	10/13/16 14:09	AS	TAL SL
Total/NA	Analysis	9315		1	278266	11/08/16 07:11	RTM	TAL SL
Total/NA	Prep	PrecSep_0			274475	10/13/16 15:00	AS	TAL SL
Total/NA	Analysis	9320		1	277682	11/04/16 18:35	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	278498	11/09/16 17:49	RTM	TAL SL

Client Sample ID: MW4NC2

Lab Sample ID: 310-91145-2

Date Collected: 10/03/16 09:36

Matrix: Ground Water

Date Received: 10/07/16 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			274473	10/13/16 14:09	AS	TAL SL
Total/NA	Analysis	9315		1	278266	11/08/16 07:11	RTM	TAL SL
Total/NA	Prep	PrecSep_0			274475	10/13/16 15:00	AS	TAL SL
Total/NA	Analysis	9320		1	277682	11/04/16 18:35	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	278498	11/09/16 17:49	RTM	TAL SL

Client Sample ID: MW11

Lab Sample ID: 310-91145-3

Date Collected: 10/03/16 10:12

Matrix: Ground Water

Date Received: 10/07/16 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			274473	10/13/16 14:09	AS	TAL SL
Total/NA	Analysis	9315		1	278291	11/08/16 07:52	RTM	TAL SL
Total/NA	Prep	PrecSep_0			274475	10/13/16 15:00	AS	TAL SL
Total/NA	Analysis	9320		1	277682	11/04/16 18:35	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	278498	11/09/16 17:49	RTM	TAL SL

Client Sample ID: MW3

Lab Sample ID: 310-91145-4

Date Collected: 10/03/16 12:04

Matrix: Ground Water

Date Received: 10/07/16 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			274473	10/13/16 14:09	AS	TAL SL
Total/NA	Analysis	9315		1	278291	11/08/16 07:52	RTM	TAL SL
Total/NA	Prep	PrecSep_0			274475	10/13/16 15:00	AS	TAL SL
Total/NA	Analysis	9320		1	277682	11/04/16 18:35	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	278498	11/09/16 17:49	RTM	TAL SL

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-91145-2

Client Sample ID: MW4

Lab Sample ID: 310-91145-5

Date Collected: 10/03/16 11:26
Matrix: Ground Water
Date Received: 10/07/16 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			274473	10/13/16 14:09	AS	TAL SL
Total/NA	Analysis	9315		1	278291	11/08/16 07:53	RTM	TAL SL
Total/NA	Prep	PrecSep_0			274475	10/13/16 15:00	AS	TAL SL
Total/NA	Analysis	9320		1	277682	11/04/16 18:35	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	278498	11/09/16 17:49	RTM	TAL SL

Client Sample ID: MW9

Lab Sample ID: 310-91145-6

Date Collected: 10/03/16 12:58
Matrix: Ground Water
Date Received: 10/07/16 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			274473	10/13/16 14:09	AS	TAL SL
Total/NA	Analysis	9315		1	278291	11/08/16 07:53	RTM	TAL SL
Total/NA	Prep	PrecSep_0			274475	10/13/16 15:00	AS	TAL SL
Total/NA	Analysis	9320		1	277682	11/04/16 18:35	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	278498	11/09/16 17:49	RTM	TAL SL

Client Sample ID: MW2

Lab Sample ID: 310-91145-7

Date Collected: 10/03/16 10:48
Matrix: Ground Water
Date Received: 10/07/16 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			274473	10/13/16 14:09	AS	TAL SL
Total/NA	Analysis	9315		1	278291	11/08/16 07:54	RTM	TAL SL
Total/NA	Prep	PrecSep_0			274475	10/13/16 15:00	AS	TAL SL
Total/NA	Analysis	9320		1	277682	11/04/16 18:35	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	278498	11/09/16 17:49	RTM	TAL SL

Client Sample ID: DUP

Lab Sample ID: 310-91145-8

Date Collected: 10/03/16 12:06
Matrix: Ground Water
Date Received: 10/07/16 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			274473	10/13/16 14:09	AS	TAL SL
Total/NA	Analysis	9315		1	278294	11/08/16 08:51	RTM	TAL SL
Total/NA	Prep	PrecSep_0			274475	10/13/16 15:00	AS	TAL SL
Total/NA	Analysis	9320		1	277682	11/04/16 18:35	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	278498	11/09/16 17:49	RTM	TAL SL

Laboratory References:

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

Certification Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-91145-2

Laboratory: TestAmerica Cedar Falls

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
AIHA-LAP, LLC	IHLAP		101044	11-01-18
Georgia	State Program	4	N/A	09-29-17
Illinois	NELAP	5	200024	11-29-16
Iowa	State Program	7	007	12-01-17
Kansas	NELAP	7	E-10341	01-31-17
Minnesota	NELAP	5	019-999-319	12-31-16
Minnesota (Petrofund)	State Program	1	3349	08-22-17
North Dakota	State Program	8	R-186	09-29-17
Oregon	NELAP	10	IA100001	09-29-17

Laboratory: TestAmerica St. Louis

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	MO00054	06-30-17
California	State Program	9	2886	03-31-18
Connecticut	State Program	1	PH-0241	03-31-17
Florida	NELAP	4	E87689	06-30-17
Illinois	NELAP	5	003757	11-30-16 *
Iowa	State Program	7	373	12-01-16 *
Kansas	NELAP	7	E-10236	10-31-17
Kentucky (DW)	State Program	4	90125	12-31-16
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-17
Louisiana (DW)	NELAP	6	LA160008	12-31-16 *
Maryland	State Program	3	310	09-30-17
Missouri	State Program	7	780	06-30-17
Nevada	State Program	9	MO000542016-1	07-31-17
New Jersey	NELAP	2	MO002	06-30-17
New York	NELAP	2	11616	03-31-17
North Dakota	State Program	8	R207	06-30-17
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-17
Pennsylvania	NELAP	3	68-00540	02-28-17 *
South Carolina	State Program	4	85002001	06-30-17
Texas	NELAP	6	T104704193-16-10	07-31-17
US Fish & Wildlife	Federal		LE058448-0	10-31-17
USDA	Federal		P330-14-0016	01-09-17
Utah	NELAP	8	MO000542016-8	07-31-17
Virginia	NELAP	3	460230	06-14-17
Washington	State Program	10	C592	08-30-17
West Virginia DEP	State Program	3	381	08-31-17

* Certification renewal pending - certification considered valid.

Method Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-91145-2

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL

Protocol References:

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:

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

310-91145 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Omaha Public Power District

City/State: Omaha, NE | Project: Nebraska City Unit 1 LF CCR

Receipt Information

Date/Time Received: 10/7/16 915 | Received By: TO

Delivery Type: ☐ UPS ☑ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ TA Courier ☐ TA 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 # 1 of 2
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

Temperature Blank? ☐ Yes ☑ No ID & Bottle Type: 500 ml - MW13

NOTE: If yes, use temp blank for measurement. If no, specify sample ID(s) and bottle type used to take measurement.

Thermometer ID: 4 | Correction Factor (°C): 0.0

Uncorrected Temp (°C): 5.9 | Corrected Temp (°C): 5.9

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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Omaha Public Power District

City/State: Omaha, NE | Project: Nebraska City Unit 1 LF CCR

Receipt Information

Date/Time Received: 10/7/16 915 | Received By: TS

Delivery Type: ☐ UPS ☑ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ TA Courier ☐ TA Field Services ☐ Client Drop-off ☐ Other: _____

Condition of Cooler/Containers

Sample(s) received in Cooler? ☑ Yes ☐ No *If yes:* Cooler ID: T-520

Multiple Coolers? ☑ Yes ☐ No *If yes:* Cooler # 2 of 2

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

Temperature Blank? ☑ Yes ☐ No ID & Bottle Type:

NOTE: If yes, use temp blank for measurement. If no, specify sample ID(s) and bottle type used to take measurement.

Thermometer ID: H | Correction Factor (°C): 0.0

Uncorrected Temp (°C): 5.9 | Corrected Temp (°C): 5.9

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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Phone (319) 277-2401 Fax (319) 277-2425

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Brad Sojka	Lab PM: Hayes, Shawn M	Carrier Tracking No(s):	COC No:
Client Contact: Brad Sojka	Phone: 402-636-2515	E-Mail: shawn.hayes@testamericainc.com		Page:
Company: Omaha Public Power District				Job #:
Address: 444 South 16th Street Mall 9E/EP1	Due Date Requested:			
City: Omaha	TAT Requested (days):			
State, Zip: NE, 68102-2247				
Phone: 402-636-2515(Tel)	PO #:			
Email: bsojka@oppd.com	WO #:			
Project Name: Nebraska City Unit 1 Landfill CCR	TestAmerica Project #: 31007558			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra226, Combined Ra226 and Ra228	6010C Lithium, 6020A CCR List, 7470A Mercury	2540C TDS, 9056A Chloride, Fluoride, Sulfate	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	D	N		
MW13	10/3/16	0901	G	GW			X	X	X		
MW4NC2		0930	G	GW			X	X	X		
MW11		1012	G	GW			X	X	X		
MW3		1204	G	GW			X	X	X		
MW4		1126	G	GW			X	X	X		
MW9		1258	G	GW			X	X	X		
MW2		1048	G	GW			X	X	X		
DUP		1206	G	GW			X	X	X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	10/6/16 0900			10.7.16 915	TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MW13	310-91145-A-1	Plastic 250ml - with Nitric Acid	<2		
MW13	310-91145-B-1	Plastic 1 liter - Nitric Acid	<2		
MW13	310-91145-C-1	Plastic 1 liter - Nitric Acid	<2		
MW4NC2	310-91145-A-2	Plastic 250ml - with Nitric Acid	<2		
MW4NC2	310-91145-B-2	Plastic 1 liter - Nitric Acid	<2		
MW4NC2	310-91145-C-2	Plastic 1 liter - Nitric Acid	<2		
MW11	310-91145-A-3	Plastic 250ml - with Nitric Acid	<2		
MW11	310-91145-B-3	Plastic 1 liter - Nitric Acid	<2		
MW11	310-91145-C-3	Plastic 1 liter - Nitric Acid	<2		
MW3	310-91145-A-4	Plastic 250ml - with Nitric Acid	<2		
MW3	310-91145-B-4	Plastic 1 liter - Nitric Acid	<2		
MW3	310-91145-C-4	Plastic 1 liter - Nitric Acid	<2		
MW4	310-91145-A-5	Plastic 250ml - with Nitric Acid	<2		
MW4	310-91145-B-5	Plastic 1 liter - Nitric Acid	<2		
MW4	310-91145-C-5	Plastic 1 liter - Nitric Acid	<2		
MW9	310-91145-A-6	Plastic 250ml - with Nitric Acid	<2		
MW9	310-91145-B-6	Plastic 1 liter - Nitric Acid	<2		
MW9	310-91145-C-6	Plastic 1 liter - Nitric Acid	<2		
MW2	310-91145-A-7	Plastic 250ml - with Nitric Acid	<2		
MW2	310-91145-B-7	Plastic 1 liter - Nitric Acid	<2		
MW2	310-91145-C-7	Plastic 1 liter - Nitric Acid	<2		
DUP	310-91145-A-8	Plastic 250ml - with Nitric Acid	<2		
DUP	310-91145-B-8	Plastic 1 liter - Nitric Acid	<2		
DUP	310-91145-C-8	Plastic 1 liter - Nitric Acid	<2		

TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Phone (319) 277-2401 Fax (319) 277-2425

Chain of Custody Record

310-91145 Chain of Custody

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Hayes, Shawn M	C No: 0-7618.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: shawn.hayes@testamericainc.com	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.			Job #: 310-91145-2
Address: 13715 Rider Trail North,	Due Date Requested: 11/4/2016		
City: Earth City	TAT Requested (days):		
State, Zip: MO, 63045			
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:		
Email:	WO #:		
Project Name: Nebraska City Unit 1 Landfill	Project #: 31007558		
Site: 310 OPPD Nebraska City Unit 1	SSOW#:		

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Ra226Ra228_GFPC	9320_Ra228/PrecSep_0 Standard Target List	9315_Ra226/PrecSep_21 Standard Target List	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW13 (310-91145-1)	10/3/16	09:01 Central		Water			X	X	X	2	
MW4NC2 (310-91145-2)	10/3/16	09:36 Central		Water			X	X	X	2	
MW11 (310-91145-3)	10/3/16	10:12 Central		Water			X	X	X	2	
MW3 (310-91145-4)	10/3/16	12:04 Central		Water			X	X	X	2	
MW4 (310-91145-5)	10/3/16	11:26 Central		Water			X	X	X	2	
MW9 (310-91145-6)	10/3/16	12:58 Central		Water			X	X	X	2	
MW2 (310-91145-7)	10/3/16	10:48 Central		Water			X	X	X	2	
DUP (310-91145-8)	10/3/16	12:06 Central		Water			X	X	X	2	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time: 10/10/16 1509	Company	Received by:	Date/Time: 10-11-16 0910	Company TA STL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-91145-2

Login Number: 91145

List Source: TestAmerica Cedar Falls

List Number: 1

Creator: Worthy, Ashley L

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-91145-2

Login Number: 91145
List Number: 2
Creator: Clarke, Jill C

List Source: TestAmerica St. Louis
List Creation: 10/11/16 12:46 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
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.	False	Water present in cooler; indicates evidence of melted ice.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	19.0
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?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Tracer/Carrier Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-91145-2

Method: 9315 - Radium-226 (GFPC)

Matrix: Ground Water — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(40-110)
310-91145-1	MW13	74.4
310-91145-2	MW4NC2	74.4
310-91145-3	MW11	69.8
310-91145-4	MW3	79.5
310-91145-5	MW4	67.8
310-91145-6	MW9	56.1
310-91145-7	MW2	64.7
310-91145-8	DUP	73.8

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9315 - Radium-226 (GFPC)

Matrix: Water — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(40-110)
LCS 160-274473/2-A	Lab Control Sample	70.9
LCSD 160-274473/3-A	Lab Control Sample Dup	69.5
MB 160-274473/1-A	Method Blank	60.1

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Ground Water — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
310-91145-1	MW13	74.4	86.0
310-91145-2	MW4NC2	74.4	85.6
310-91145-3	MW11	69.8	89.7
310-91145-4	MW3	79.5	90.8
310-91145-5	MW4	67.8	92.3
310-91145-6	MW9	56.1	87.9
310-91145-7	MW2	64.7	86.4
310-91145-8	DUP	73.8	85.6

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Tracer/Carrier Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-91145-2

Method: 9320 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)									
		Ba	Y								
Lab Sample ID	Client Sample ID	(40-110)	(40-110)								
LCS 160-274475/2-A	Lab Control Sample	70.9	84.9								
LCSD 160-274475/3-A	Lab Control Sample Dup	69.5	87.5								
MB 160-274475/1-A	Method Blank	60.1	87.1								

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319)277-2401

TestAmerica Job ID: 310-94459-1
Client Project/Site: Nebraska City Unit 1 Landfill
Sampling Event: CCR and Landfill Q2 and Q4

For:
Omaha Public Power District
Attn: Accounts Payable, 4E/EP-5
444 South 16th Street Mall
Omaha, Nebraska 68102-2247

Attn: Brad Sojka

Authorized for release by:
12/7/2016 12:05:39 PM

Shawn Hayes, Project Manager II
(319)277-2401
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Table of Contents

Job ID: 310-94459-1

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-94459-1

Comments
No additional comments.

Receipt
The samples were received on 11/22/2016 9:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 0.2º C and 0.3º C.

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

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

Sample Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-94459-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-94459-1	MW13	Ground Water	11/18/16 08:57	11/22/16 09:45
310-94459-2	MW4NC2	Ground Water	11/18/16 09:10	11/22/16 09:45
310-94459-3	MW11	Ground Water	11/18/16 09:38	11/22/16 09:45
310-94459-4	MW3	Ground Water	11/18/16 11:49	11/22/16 09:45
310-94459-5	MW4	Ground Water	11/18/16 10:57	11/22/16 09:45
310-94459-6	MW9	Ground Water	11/18/16 11:18	11/22/16 09:45
310-94459-7	MW2	Ground Water	11/18/16 10:22	11/22/16 09:45
310-94459-8	DUP	Ground Water	11/18/16 11:20	11/22/16 09:45

Detection Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-94459-1

Client Sample ID: MW13 — Lab Sample ID: 310-94459-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.65		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.647		0.500		mg/L	5		9056A	Total/NA
Sulfate	34.4		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.00580		0.00200		mg/L	1		6020A	Total/NA
Barium	0.333		0.00200		mg/L	1		6020A	Total/NA
Calcium	86.2		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000916		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00235		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	410		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW4NC2 — Lab Sample ID: 310-94459-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	1.10		0.500		mg/L	5		9056A	Total/NA
Sulfate	33.6		5.00		mg/L	5		9056A	Total/NA
Barium	0.283		0.00200		mg/L	1		6020A	Total/NA
Calcium	132		0.200		mg/L	1		6020A	Total/NA
Lead	0.00127		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00288		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	574		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW11 — Lab Sample ID: 310-94459-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.952		0.500		mg/L	5		9056A	Total/NA
Sulfate	119		5.00		mg/L	5		9056A	Total/NA
Barium	0.251		0.00200		mg/L	1		6020A	Total/NA
Boron	1.38		0.200		mg/L	1		6020A	Total/NA
Calcium	115		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.00659		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	512		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW3 — Lab Sample ID: 310-94459-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.00		5.00		mg/L	5		9056A	Total/NA
Fluoride	3.91		0.500		mg/L	5		9056A	Total/NA
Sulfate	149		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.0310		0.00200		mg/L	1		6020A	Total/NA
Barium	0.101		0.00200		mg/L	1		6020A	Total/NA
Boron	1.66		0.200		mg/L	1		6020A	Total/NA
Calcium	156		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.00334		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	732		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW4 — Lab Sample ID: 310-94459-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.876		0.500		mg/L	5		9056A	Total/NA
Sulfate	310		20.0		mg/L	20		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-94459-1

Client Sample ID: MW4 (Continued) — Lab Sample ID: 310-94459-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00254		0.00200		mg/L	1		6020A	Total/NA
Barium	0.115		0.00200		mg/L	1		6020A	Total/NA
Boron	1.40		0.200		mg/L	1		6020A	Total/NA
Calcium	124		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.0199		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	712		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW9 — Lab Sample ID: 310-94459-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.31		5.00		mg/L	5		9056A	Total/NA
Fluoride	3.40		0.500		mg/L	5		9056A	Total/NA
Sulfate	270		20.0		mg/L	20		9056A	Total/NA
Arsenic	0.00828		0.00200		mg/L	1		6020A	Total/NA
Barium	0.106		0.00200		mg/L	1		6020A	Total/NA
Boron	4.44		1.00		mg/L	5		6020A	Total/NA
Calcium	181		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000648		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.0222		0.00200		mg/L	1		6020A	Total/NA
Selenium	0.0162		0.00500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	944		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW2 — Lab Sample ID: 310-94459-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	1.82		0.500		mg/L	5		9056A	Total/NA
Sulfate	59.5		5.00		mg/L	5		9056A	Total/NA
Barium	0.126		0.00200		mg/L	1		6020A	Total/NA
Boron	0.333		0.200		mg/L	1		6020A	Total/NA
Calcium	121		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.0950		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	516		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP — Lab Sample ID: 310-94459-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	1.02		0.500		mg/L	5		9056A	Total/NA
Sulfate	281		20.0		mg/L	20		9056A	Total/NA
Arsenic	0.00651		0.00200		mg/L	1		6020A	Total/NA
Barium	0.106		0.00200		mg/L	1		6020A	Total/NA
Boron	4.22		1.00		mg/L	5		6020A	Total/NA
Calcium	179		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000527		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.0223		0.00200		mg/L	1		6020A	Total/NA
Selenium	0.0166		0.00500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	886		30.0		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-94459-1

Client Sample ID: MW13
Date Collected: 11/18/16 08:57
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94459-1
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9.65**		5.00		mg/L			11/26/16 05:07	5
Fluoride	**0.647**		0.500		mg/L			11/26/16 05:07	5
Sulfate	**34.4**		5.00		mg/L			11/26/16 05:07	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		11/25/16 10:00	11/29/16 17:05	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:31	1
Arsenic	**0.00580**		0.00200		mg/L		11/23/16 10:00	12/01/16 18:31	1
Barium	**0.333**		0.00200		mg/L		11/23/16 10:00	12/01/16 18:31	1
Beryllium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:31	1
Boron	<0.200		0.200		mg/L		11/23/16 10:00	12/02/16 14:14	1
Cadmium	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:31	1
Calcium	**86.2**		0.200		mg/L		11/23/16 10:00	12/01/16 18:31	1
Chromium	<0.00500		0.00500		mg/L		11/23/16 10:00	12/01/16 18:31	1
Cobalt	**0.000916**		0.000500		mg/L		11/23/16 10:00	12/01/16 18:31	1
Lead	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:31	1
Molybdenum	**0.00235**		0.00200		mg/L		11/23/16 10:00	12/01/16 18:31	1
Selenium	<0.00500		0.00500		mg/L		11/23/16 10:00	12/01/16 18:31	1
Thallium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:31	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		11/29/16 08:53	11/30/16 15:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**410**		30.0		mg/L			11/23/16 08:04	1

Client Sample ID: MW4NC2

Date Collected: 11/18/16 09:10
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94459-2

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			11/26/16 05:37	5
Fluoride	**1.10**		0.500		mg/L			11/26/16 05:37	5
Sulfate	**33.6**		5.00		mg/L			11/26/16 05:37	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		11/25/16 10:00	11/29/16 17:07	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:47	1
Arsenic	<0.00200		0.00200		mg/L		11/23/16 10:00	12/01/16 18:47	1
Barium	**0.283**		0.00200		mg/L		11/23/16 10:00	12/01/16 18:47	1
Beryllium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:47	1
Boron	<0.200		0.200		mg/L		11/23/16 10:00	12/02/16 14:20	1
Cadmium	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:47	1
Calcium	**132**		0.200		mg/L		11/23/16 10:00	12/01/16 18:47	1
Chromium	<0.00500		0.00500		mg/L		11/23/16 10:00	12/01/16 18:47	1
Cobalt	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:47	1
Lead	**0.00127**		0.000500		mg/L		11/23/16 10:00	12/01/16 18:47	1
Molybdenum	**0.00288**		0.00200		mg/L		11/23/16 10:00	12/01/16 18:47	1
Selenium	<0.00500		0.00500		mg/L		11/23/16 10:00	12/01/16 18:47	1
Thallium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:47	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		11/29/16 08:53	11/30/16 15:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**574**		30.0		mg/L			11/23/16 08:04	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-94459-1

Client Sample ID: MW11
Date Collected: 11/18/16 09:38
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94459-3
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			11/26/16 06:08	5
Fluoride	**0.952**		0.500		mg/L			11/26/16 06:08	5
Sulfate	**119**		5.00		mg/L			11/26/16 06:08	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		11/25/16 10:00	11/29/16 17:13	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:50	1
Arsenic	<0.00200		0.00200		mg/L		11/23/16 10:00	12/01/16 18:50	1
Barium	**0.251**		0.00200		mg/L		11/23/16 10:00	12/01/16 18:50	1
Beryllium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:50	1
Boron	**1.38**		0.200		mg/L		11/23/16 10:00	12/02/16 14:23	1
Cadmium	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:50	1
Calcium	**115**		0.200		mg/L		11/23/16 10:00	12/01/16 18:50	1
Chromium	<0.00500		0.00500		mg/L		11/23/16 10:00	12/01/16 18:50	1
Cobalt	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:50	1
Lead	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:50	1
Molybdenum	**0.00659**		0.00200		mg/L		11/23/16 10:00	12/01/16 18:50	1
Selenium	<0.00500		0.00500		mg/L		11/23/16 10:00	12/01/16 18:50	1
Thallium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:50	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		11/29/16 08:53	11/30/16 15:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**512**		30.0		mg/L			11/23/16 08:04	1

Client Sample ID: MW3

Date Collected: 11/18/16 11:49
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94459-4

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9.00**		5.00		mg/L			11/26/16 06:39	5
Fluoride	**3.91**		0.500		mg/L			11/26/16 06:39	5
Sulfate	**149**		5.00		mg/L			11/26/16 06:39	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		11/25/16 10:00	11/29/16 17:16	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:53	1
Arsenic	**0.0310**		0.00200		mg/L		11/23/16 10:00	12/01/16 18:53	1
Barium	**0.101**		0.00200		mg/L		11/23/16 10:00	12/01/16 18:53	1
Beryllium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:53	1
Boron	**1.66**		0.200		mg/L		11/23/16 10:00	12/02/16 14:27	1
Cadmium	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:53	1
Calcium	**156**		0.200		mg/L		11/23/16 10:00	12/01/16 18:53	1
Chromium	<0.00500		0.00500		mg/L		11/23/16 10:00	12/01/16 18:53	1
Cobalt	**0.00334**		0.000500		mg/L		11/23/16 10:00	12/01/16 18:53	1
Lead	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:53	1
Molybdenum	<0.00200		0.00200		mg/L		11/23/16 10:00	12/01/16 18:53	1
Selenium	<0.00500		0.00500		mg/L		11/23/16 10:00	12/01/16 18:53	1
Thallium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:53	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		11/29/16 08:53	11/30/16 15:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**732**		30.0		mg/L			11/23/16 08:04	1

Client Sample ID: MW4
Date Collected: 11/18/16 10:57
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94459-5
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			11/26/16 08:11	5
Fluoride	**0.876**		0.500		mg/L			11/26/16 08:11	5
Sulfate	**310**		20.0		mg/L			11/26/16 15:51	20

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		11/25/16 10:00	11/25/16 20:00	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:56	1
Arsenic	**0.00254**		0.00200		mg/L		11/23/16 10:00	12/01/16 18:56	1
Barium	**0.115**		0.00200		mg/L		11/23/16 10:00	12/01/16 18:56	1
Beryllium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:56	1
Boron	**1.40**		0.200		mg/L		11/23/16 10:00	12/02/16 14:30	1
Cadmium	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:56	1
Calcium	**124**		0.200		mg/L		11/23/16 10:00	12/01/16 18:56	1
Chromium	<0.00500		0.00500		mg/L		11/23/16 10:00	12/01/16 18:56	1
Cobalt	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:56	1
Lead	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:56	1
Molybdenum	**0.0199**		0.00200		mg/L		11/23/16 10:00	12/01/16 18:56	1
Selenium	<0.00500		0.00500		mg/L		11/23/16 10:00	12/01/16 18:56	1
Thallium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:56	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		11/29/16 08:53	11/30/16 15:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**712**		30.0		mg/L			11/23/16 08:04	1

Client Sample ID: MW9

Date Collected: 11/18/16 11:18
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94459-6

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6.31**		5.00		mg/L			11/26/16 08:41	5
Fluoride	**3.40**		0.500		mg/L			11/26/16 08:41	5
Sulfate	**270**		20.0		mg/L			11/26/16 16:22	20

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		11/25/16 10:00	11/25/16 20:02	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:59	1
Arsenic	**0.00828**		0.00200		mg/L		11/23/16 10:00	12/01/16 18:59	1
Barium	**0.106**		0.00200		mg/L		11/23/16 10:00	12/01/16 18:59	1
Beryllium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:59	1
Boron	**4.44**		1.00		mg/L		11/23/16 10:00	12/02/16 14:42	5
Cadmium	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:59	1
Calcium	**181**		0.200		mg/L		11/23/16 10:00	12/01/16 18:59	1
Chromium	<0.00500		0.00500		mg/L		11/23/16 10:00	12/01/16 18:59	1
Cobalt	**0.000648**		0.000500		mg/L		11/23/16 10:00	12/01/16 18:59	1
Lead	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:59	1
Molybdenum	**0.0222**		0.00200		mg/L		11/23/16 10:00	12/01/16 18:59	1
Selenium	**0.0162**		0.00500		mg/L		11/23/16 10:00	12/01/16 18:59	1
Thallium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:59	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		11/29/16 08:53	11/30/16 15:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**944**		30.0		mg/L			11/23/16 08:04	1

Client Sample ID: MW2

Date Collected: 11/18/16 10:22
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94459-7

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			11/26/16 09:12	5
Fluoride	**1.82**		0.500		mg/L			11/26/16 09:12	5
Sulfate	**59.5**		5.00		mg/L			11/26/16 09:12	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		11/25/16 10:00	11/25/16 20:04	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 19:03	1
Arsenic	<0.00200		0.00200		mg/L		11/23/16 10:00	12/01/16 19:03	1
Barium	**0.126**		0.00200		mg/L		11/23/16 10:00	12/01/16 19:03	1
Beryllium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 19:03	1
Boron	**0.333**		0.200		mg/L		11/23/16 10:00	12/02/16 14:45	1
Cadmium	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 19:03	1
Calcium	**121**		0.200		mg/L		11/23/16 10:00	12/01/16 19:03	1
Chromium	<0.00500		0.00500		mg/L		11/23/16 10:00	12/01/16 19:03	1
Cobalt	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 19:03	1
Lead	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 19:03	1
Molybdenum	**0.0950**		0.00200		mg/L		11/23/16 10:00	12/01/16 19:03	1
Selenium	<0.00500		0.00500		mg/L		11/23/16 10:00	12/01/16 19:03	1
Thallium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 19:03	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		11/29/16 08:53	11/30/16 15:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**516**		30.0		mg/L			11/23/16 08:04	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-94459-1

Client Sample ID: DUP
Date Collected: 11/18/16 11:20
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94459-8
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			11/26/16 09:43	5
Fluoride	**1.02**		0.500		mg/L			11/26/16 09:43	5
Sulfate	**281**		20.0		mg/L			11/26/16 16:52	20

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		11/25/16 10:00	11/25/16 20:06	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 19:06	1
Arsenic	**0.00651**		0.00200		mg/L		11/23/16 10:00	12/01/16 19:06	1
Barium	**0.106**		0.00200		mg/L		11/23/16 10:00	12/01/16 19:06	1
Beryllium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 19:06	1
Boron	**4.22**		1.00		mg/L		11/23/16 10:00	12/02/16 14:49	5
Cadmium	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 19:06	1
Calcium	**179**		0.200		mg/L		11/23/16 10:00	12/01/16 19:06	1
Chromium	<0.00500		0.00500		mg/L		11/23/16 10:00	12/01/16 19:06	1
Cobalt	**0.000527**		0.000500		mg/L		11/23/16 10:00	12/01/16 19:06	1
Lead	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 19:06	1
Molybdenum	**0.0223**		0.00200		mg/L		11/23/16 10:00	12/01/16 19:06	1
Selenium	**0.0166**		0.00500		mg/L		11/23/16 10:00	12/01/16 19:06	1
Thallium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 19:06	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		11/29/16 08:53	11/30/16 15:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**886**		30.0		mg/L			11/23/16 08:04	1

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
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
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)

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-149801/3
Matrix: Water
Analysis Batch: 149801

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			11/25/16 21:57	1
Fluoride	<0.100		0.100		mg/L			11/25/16 21:57	1
Sulfate	<1.00		1.00		mg/L			11/25/16 21:57	1

Lab Sample ID: LCS 310-149801/4
Matrix: Water
Analysis Batch: 149801

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	7.50	7.090		mg/L		95	90 - 110
Fluoride	1.50	1.554		mg/L		104	90 - 110
Sulfate	7.50	7.052		mg/L		94	90 - 110

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 310-149594/1-A
Matrix: Water
Analysis Batch: 149756

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 149594

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		11/25/16 10:00	11/25/16 19:03	1

Lab Sample ID: LCS 310-149594/2-A
Matrix: Water
Analysis Batch: 149756

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 149594

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	2.00	1.851		mg/L		93	80 - 120

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 310-149432/1-A
Matrix: Water
Analysis Batch: 150329

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 149432

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 17:38	1
Arsenic	<0.00200		0.00200		mg/L		11/23/16 10:00	12/01/16 17:38	1
Barium	<0.00200		0.00200		mg/L		11/23/16 10:00	12/01/16 17:38	1
Beryllium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 17:38	1
Cadmium	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 17:38	1
Calcium	<0.200		0.200		mg/L		11/23/16 10:00	12/01/16 17:38	1
Chromium	<0.00500		0.00500		mg/L		11/23/16 10:00	12/01/16 17:38	1
Cobalt	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 17:38	1
Lead	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 17:38	1
Molybdenum	<0.00200		0.00200		mg/L		11/23/16 10:00	12/01/16 17:38	1
Selenium	<0.00500		0.00500		mg/L		11/23/16 10:00	12/01/16 17:38	1
Thallium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 17:38	1

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

Lab Sample ID: MB 310-149432/1-A
Matrix: Water
Analysis Batch: 150413

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 149432

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.200		0.200		mg/L		11/23/16 10:00	12/02/16 13:20	1

Lab Sample ID: LCS 310-149432/2-A
Matrix: Water
Analysis Batch: 150329

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 149432

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0200	0.02019		mg/L		101	80 - 120
Arsenic	0.0400	0.04327		mg/L		108	80 - 120
Barium	0.0400	0.04161		mg/L		104	80 - 120
Beryllium	0.0200	0.02007		mg/L		100	80 - 120
Cadmium	0.0200	0.02029		mg/L		101	80 - 120
Calcium	2.00	2.120		mg/L		106	80 - 120
Chromium	0.0400	0.04170		mg/L		104	80 - 120
Cobalt	0.0200	0.02009		mg/L		100	80 - 120
Lead	0.0200	0.02124		mg/L		106	80 - 120
Molybdenum	0.0400	0.04202		mg/L		105	80 - 120
Selenium	0.0400	0.03991		mg/L		100	80 - 120
Thallium	0.0160	0.01688		mg/L		105	80 - 120

Lab Sample ID: LCS 310-149432/2-A
Matrix: Water
Analysis Batch: 150413

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 149432

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.880	0.9183		mg/L		104	80 - 120

Lab Sample ID: 310-94459-1 DU
Matrix: Ground Water
Analysis Batch: 150329

Client Sample ID: MW13
Prep Type: Total/NA
Prep Batch: 149432

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	<0.00100		<0.00100		mg/L		NC	20
Arsenic	0.00580		0.006188		mg/L		6	20
Barium	0.333		0.3540		mg/L		6	20
Beryllium	<0.00100		<0.00100		mg/L		NC	20
Cadmium	<0.000500		<0.000500		mg/L		NC	20
Calcium	86.2		92.38		mg/L		7	20
Chromium	<0.00500		<0.00500		mg/L		NC	20
Cobalt	0.000916		0.0009700		mg/L		6	20
Lead	<0.000500		0.0005260		mg/L		NC	20
Molybdenum	0.00235		0.002525		mg/L		7	20
Selenium	<0.00500		<0.00500		mg/L		NC	20
Thallium	<0.00100		<0.00100		mg/L		NC	20

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

Lab Sample ID: 310-94459-1 DU
Matrix: Ground Water
Analysis Batch: 150413

Client Sample ID: MW13
Prep Type: Total/NA
Prep Batch: 149432

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Boron	<0.200		<0.200		mg/L		NC	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-149875/1-A
Matrix: Water
Analysis Batch: 150125

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 149875

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		11/29/16 08:53	11/30/16 15:03	1

Lab Sample ID: LCS 310-149875/2-A
Matrix: Water
Analysis Batch: 150125

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 149875

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00167	0.001580		mg/L		95	80 - 120

Lab Sample ID: 310-94459-1 MS
Matrix: Ground Water
Analysis Batch: 150125

Client Sample ID: MW13
Prep Type: Total/NA
Prep Batch: 149875

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.000200		0.00167	0.001721		mg/L		103	80 - 120

Lab Sample ID: 310-94459-1 MSD
Matrix: Ground Water
Analysis Batch: 150125

Client Sample ID: MW13
Prep Type: Total/NA
Prep Batch: 149875

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000200		0.00167	0.001771		mg/L		106	80 - 120	3	20

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

Lab Sample ID: MB 310-149492/1
Matrix: Water
Analysis Batch: 149492

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	<30.0		30.0		mg/L			11/23/16 08:04	1

Lab Sample ID: LCS 310-149492/2
Matrix: Water
Analysis Batch: 149492

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	1020		mg/L		102	90 - 110

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

Lab Sample ID: 310-94459-3 DU
Matrix: Ground Water
Analysis Batch: 149492

Client Sample ID: MW11
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	512			564.0		mg/L				10	20

HPLC/IC

Analysis Batch: 149801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94459-1	MW13	Total/NA	Ground Water	9056A	
310-94459-2	MW4NC2	Total/NA	Ground Water	9056A	
310-94459-3	MW11	Total/NA	Ground Water	9056A	
310-94459-4	MW3	Total/NA	Ground Water	9056A	
310-94459-5	MW4	Total/NA	Ground Water	9056A	
310-94459-5	MW4	Total/NA	Ground Water	9056A	
310-94459-6	MW9	Total/NA	Ground Water	9056A	
310-94459-6	MW9	Total/NA	Ground Water	9056A	
310-94459-7	MW2	Total/NA	Ground Water	9056A	
310-94459-8	DUP	Total/NA	Ground Water	9056A	
310-94459-8	DUP	Total/NA	Ground Water	9056A	
MB 310-149801/3	Method Blank	Total/NA	Water	9056A	
LCS 310-149801/4	Lab Control Sample	Total/NA	Water	9056A	

Metals

Prep Batch: 149432

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94459-1	MW13	Total/NA	Ground Water	3010A	
310-94459-2	MW4NC2	Total/NA	Ground Water	3010A	
310-94459-3	MW11	Total/NA	Ground Water	3010A	
310-94459-4	MW3	Total/NA	Ground Water	3010A	
310-94459-5	MW4	Total/NA	Ground Water	3010A	
310-94459-6	MW9	Total/NA	Ground Water	3010A	
310-94459-7	MW2	Total/NA	Ground Water	3010A	
310-94459-8	DUP	Total/NA	Ground Water	3010A	
MB 310-149432/1-A	Method Blank	Total/NA	Water	3010A	
LCS 310-149432/2-A	Lab Control Sample	Total/NA	Water	3010A	
310-94459-1 DU	MW13	Total/NA	Ground Water	3010A	

Prep Batch: 149594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94459-1	MW13	Total/NA	Ground Water	3010A	
310-94459-2	MW4NC2	Total/NA	Ground Water	3010A	
310-94459-3	MW11	Total/NA	Ground Water	3010A	
310-94459-4	MW3	Total/NA	Ground Water	3010A	
310-94459-5	MW4	Total/NA	Ground Water	3010A	
310-94459-6	MW9	Total/NA	Ground Water	3010A	
310-94459-7	MW2	Total/NA	Ground Water	3010A	
310-94459-8	DUP	Total/NA	Ground Water	3010A	
MB 310-149594/1-A	Method Blank	Total/NA	Water	3010A	
LCS 310-149594/2-A	Lab Control Sample	Total/NA	Water	3010A	

Analysis Batch: 149756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94459-5	MW4	Total/NA	Ground Water	6010C	149594
310-94459-6	MW9	Total/NA	Ground Water	6010C	149594
310-94459-7	MW2	Total/NA	Ground Water	6010C	149594
310-94459-8	DUP	Total/NA	Ground Water	6010C	149594
MB 310-149594/1-A	Method Blank	Total/NA	Water	6010C	149594

Metals (Continued)

Analysis Batch: 149756 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 310-149594/2-A	Lab Control Sample	Total/NA	Water	6010C	149594

Prep Batch: 149875

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94459-1	MW13	Total/NA	Ground Water	7470A	
310-94459-2	MW4NC2	Total/NA	Ground Water	7470A	
310-94459-3	MW11	Total/NA	Ground Water	7470A	
310-94459-4	MW3	Total/NA	Ground Water	7470A	
310-94459-5	MW4	Total/NA	Ground Water	7470A	
310-94459-6	MW9	Total/NA	Ground Water	7470A	
310-94459-7	MW2	Total/NA	Ground Water	7470A	
310-94459-8	DUP	Total/NA	Ground Water	7470A	
MB 310-149875/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-149875/2-A	Lab Control Sample	Total/NA	Water	7470A	
310-94459-1 MS	MW13	Total/NA	Ground Water	7470A	
310-94459-1 MSD	MW13	Total/NA	Ground Water	7470A	

Analysis Batch: 150005

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94459-1	MW13	Total/NA	Ground Water	6010C	149594
310-94459-2	MW4NC2	Total/NA	Ground Water	6010C	149594
310-94459-3	MW11	Total/NA	Ground Water	6010C	149594
310-94459-4	MW3	Total/NA	Ground Water	6010C	149594

Analysis Batch: 150125

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94459-1	MW13	Total/NA	Ground Water	7470A	149875
310-94459-2	MW4NC2	Total/NA	Ground Water	7470A	149875
310-94459-3	MW11	Total/NA	Ground Water	7470A	149875
310-94459-4	MW3	Total/NA	Ground Water	7470A	149875
310-94459-5	MW4	Total/NA	Ground Water	7470A	149875
310-94459-6	MW9	Total/NA	Ground Water	7470A	149875
310-94459-7	MW2	Total/NA	Ground Water	7470A	149875
310-94459-8	DUP	Total/NA	Ground Water	7470A	149875
MB 310-149875/1-A	Method Blank	Total/NA	Water	7470A	149875
LCS 310-149875/2-A	Lab Control Sample	Total/NA	Water	7470A	149875
310-94459-1 MS	MW13	Total/NA	Ground Water	7470A	149875
310-94459-1 MSD	MW13	Total/NA	Ground Water	7470A	149875

Analysis Batch: 150329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94459-1	MW13	Total/NA	Ground Water	6020A	149432
310-94459-2	MW4NC2	Total/NA	Ground Water	6020A	149432
310-94459-3	MW11	Total/NA	Ground Water	6020A	149432
310-94459-4	MW3	Total/NA	Ground Water	6020A	149432
310-94459-5	MW4	Total/NA	Ground Water	6020A	149432
310-94459-6	MW9	Total/NA	Ground Water	6020A	149432
310-94459-7	MW2	Total/NA	Ground Water	6020A	149432
310-94459-8	DUP	Total/NA	Ground Water	6020A	149432
MB 310-149432/1-A	Method Blank	Total/NA	Water	6020A	149432
LCS 310-149432/2-A	Lab Control Sample	Total/NA	Water	6020A	149432

Metals (Continued)

Analysis Batch: 150329 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94459-1 DU	MW13	Total/NA	Ground Water	6020A	149432

Analysis Batch: 150413

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94459-1	MW13	Total/NA	Ground Water	6020A	149432
310-94459-2	MW4NC2	Total/NA	Ground Water	6020A	149432
310-94459-3	MW11	Total/NA	Ground Water	6020A	149432
310-94459-4	MW3	Total/NA	Ground Water	6020A	149432
310-94459-5	MW4	Total/NA	Ground Water	6020A	149432
310-94459-6	MW9	Total/NA	Ground Water	6020A	149432
310-94459-7	MW2	Total/NA	Ground Water	6020A	149432
310-94459-8	DUP	Total/NA	Ground Water	6020A	149432
MB 310-149432/1-A	Method Blank	Total/NA	Water	6020A	149432
LCS 310-149432/2-A	Lab Control Sample	Total/NA	Water	6020A	149432
310-94459-1 DU	MW13	Total/NA	Ground Water	6020A	149432

General Chemistry

Analysis Batch: 149492

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94459-1	MW13	Total/NA	Ground Water	SM 2540C	
310-94459-2	MW4NC2	Total/NA	Ground Water	SM 2540C	
310-94459-3	MW11	Total/NA	Ground Water	SM 2540C	
310-94459-4	MW3	Total/NA	Ground Water	SM 2540C	
310-94459-5	MW4	Total/NA	Ground Water	SM 2540C	
310-94459-6	MW9	Total/NA	Ground Water	SM 2540C	
310-94459-7	MW2	Total/NA	Ground Water	SM 2540C	
310-94459-8	DUP	Total/NA	Ground Water	SM 2540C	
MB 310-149492/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-149492/2	Lab Control Sample	Total/NA	Water	SM 2540C	
310-94459-3 DU	MW11	Total/NA	Ground Water	SM 2540C	

Client Sample ID: MW13

Lab Sample ID: 310-94459-1

Date Collected: 11/18/16 08:57

Matrix: Ground Water

Date Received: 11/22/16 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	149801	11/26/16 05:07	AJG	TAL CF
Total/NA	Prep	3010A			149594	11/25/16 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	150005	11/29/16 17:05	OAD	TAL CF
Total/NA	Prep	3010A			149432	11/23/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	150329	12/01/16 18:31	OAD	TAL CF
Total/NA	Prep	3010A			149432	11/23/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	150413	12/02/16 14:14	OAD	TAL CF
Total/NA	Prep	7470A			149875	11/29/16 08:53	SAD	TAL CF
Total/NA	Analysis	7470A		1	150125	11/30/16 15:06	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	149492	11/23/16 08:04	SAS	TAL CF

Client Sample ID: MW4NC2

Lab Sample ID: 310-94459-2

Date Collected: 11/18/16 09:10

Matrix: Ground Water

Date Received: 11/22/16 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	149801	11/26/16 05:37	AJG	TAL CF
Total/NA	Prep	3010A			149594	11/25/16 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	150005	11/29/16 17:07	OAD	TAL CF
Total/NA	Prep	3010A			149432	11/23/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	150329	12/01/16 18:47	OAD	TAL CF
Total/NA	Prep	3010A			149432	11/23/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	150413	12/02/16 14:20	OAD	TAL CF
Total/NA	Prep	7470A			149875	11/29/16 08:53	SAD	TAL CF
Total/NA	Analysis	7470A		1	150125	11/30/16 15:10	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	149492	11/23/16 08:04	SAS	TAL CF

Client Sample ID: MW11

Lab Sample ID: 310-94459-3

Date Collected: 11/18/16 09:38

Matrix: Ground Water

Date Received: 11/22/16 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	149801	11/26/16 06:08	AJG	TAL CF
Total/NA	Prep	3010A			149594	11/25/16 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	150005	11/29/16 17:13	OAD	TAL CF
Total/NA	Prep	3010A			149432	11/23/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	150329	12/01/16 18:50	OAD	TAL CF
Total/NA	Prep	3010A			149432	11/23/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	150413	12/02/16 14:23	OAD	TAL CF
Total/NA	Prep	7470A			149875	11/29/16 08:53	SAD	TAL CF
Total/NA	Analysis	7470A		1	150125	11/30/16 15:12	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	149492	11/23/16 08:04	SAS	TAL CF

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-94459-1

Client Sample ID: MW3

Date Collected: 11/18/16 11:49
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94459-4

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	149801	11/26/16 06:39	AJG	TAL CF
Total/NA	Prep	3010A			149594	11/25/16 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	150005	11/29/16 17:16	OAD	TAL CF
Total/NA	Prep	3010A			149432	11/23/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	150329	12/01/16 18:53	OAD	TAL CF
Total/NA	Prep	3010A			149432	11/23/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	150413	12/02/16 14:27	OAD	TAL CF
Total/NA	Prep	7470A			149875	11/29/16 08:53	SAD	TAL CF
Total/NA	Analysis	7470A		1	150125	11/30/16 15:14	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	149492	11/23/16 08:04	SAS	TAL CF

Client Sample ID: MW4

Date Collected: 11/18/16 10:57
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94459-5

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	149801	11/26/16 08:11	AJG	TAL CF
Total/NA	Analysis	9056A		20	149801	11/26/16 15:51	AJG	TAL CF
Total/NA	Prep	3010A			149594	11/25/16 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	149756	11/25/16 20:00	AMS	TAL CF
Total/NA	Prep	3010A			149432	11/23/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	150329	12/01/16 18:56	OAD	TAL CF
Total/NA	Prep	3010A			149432	11/23/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	150413	12/02/16 14:30	OAD	TAL CF
Total/NA	Prep	7470A			149875	11/29/16 08:53	SAD	TAL CF
Total/NA	Analysis	7470A		1	150125	11/30/16 15:18	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	149492	11/23/16 08:04	SAS	TAL CF

Client Sample ID: MW9

Date Collected: 11/18/16 11:18
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94459-6

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	149801	11/26/16 08:41	AJG	TAL CF
Total/NA	Analysis	9056A		20	149801	11/26/16 16:22	AJG	TAL CF
Total/NA	Prep	3010A			149594	11/25/16 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	149756	11/25/16 20:02	AMS	TAL CF
Total/NA	Prep	3010A			149432	11/23/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	150329	12/01/16 18:59	OAD	TAL CF
Total/NA	Prep	3010A			149432	11/23/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		5	150413	12/02/16 14:42	OAD	TAL CF
Total/NA	Prep	7470A			149875	11/29/16 08:53	SAD	TAL CF
Total/NA	Analysis	7470A		1	150125	11/30/16 15:20	SAD	TAL CF

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-94459-1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	149492	11/23/16 08:04	SAS	TAL CF

Client Sample ID: MW2

Date Collected: 11/18/16 10:22
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94459-7
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	149801	11/26/16 09:12	AJG	TAL CF
Total/NA	Prep	3010A			149594	11/25/16 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	149756	11/25/16 20:04	AMS	TAL CF
Total/NA	Prep	3010A			149432	11/23/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	150329	12/01/16 19:03	OAD	TAL CF
Total/NA	Prep	3010A			149432	11/23/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	150413	12/02/16 14:45	OAD	TAL CF
Total/NA	Prep	7470A			149875	11/29/16 08:53	SAD	TAL CF
Total/NA	Analysis	7470A		1	150125	11/30/16 15:22	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	149492	11/23/16 08:04	SAS	TAL CF

Client Sample ID: DUP

Date Collected: 11/18/16 11:20
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94459-8
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	149801	11/26/16 09:43	AJG	TAL CF
Total/NA	Analysis	9056A		20	149801	11/26/16 16:52	AJG	TAL CF
Total/NA	Prep	3010A			149594	11/25/16 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	149756	11/25/16 20:06	AMS	TAL CF
Total/NA	Prep	3010A			149432	11/23/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	150329	12/01/16 19:06	OAD	TAL CF
Total/NA	Prep	3010A			149432	11/23/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		5	150413	12/02/16 14:49	OAD	TAL CF
Total/NA	Prep	7470A			149875	11/29/16 08:53	SAD	TAL CF
Total/NA	Analysis	7470A		1	150125	11/30/16 15:23	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	149492	11/23/16 08:04	SAS	TAL CF

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401

Certification Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-94459-1

Laboratory: TestAmerica Cedar Falls

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
AIHA-LAP, LLC	IHLAP		101044	11-01-18
Georgia	State Program	4	N/A	09-29-17
Illinois	NELAP	5	200024	11-29-17
Iowa	State Program	7	007	12-01-17
Kansas	NELAP	7	E-10341	01-31-18
Minnesota	NELAP	5	019-999-319	12-31-16 *
Minnesota (Petrofund)	State Program	1	3349	08-22-17
North Dakota	State Program	8	R-186	09-29-17
Oregon	NELAP	10	IA100001	09-29-17

* Certification renewal pending - certification considered valid.

Method Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-94459-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	TAL CF
6010C	Metals (ICP)	SW846	TAL CF
6020A	Metals (ICP/MS)	SW846	TAL CF
7470A	Mercury (CVAA)	SW846	TAL CF
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL 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:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

310-94459 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: OPPD

City/State: Omaha, NE

Project: Nebraska City Unit 1 Landfill

Receipt Information

Date/Time Received: 11/22/16 945

Received By: TD

Delivery Type: ☐ UPS ☑ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ TA Courier ☐ TA Field Services ☐ Client Drop-off ☐ Other:

Condition of Cooler/Containers

Sample(s) received in Cooler? ☒ Yes ☐ No *If yes:* Cooler ID: NA.2

Multiple Coolers? ☑ Yes ☐ No *If yes:* Cooler # 1 of 2

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

Temperature Blank? ☑ Yes ☐ No ID & Bottle Type:

NOTE: If yes, use temp blank for measurement. If no, specify sample ID(s) and bottle type used to take measurement.

Thermometer ID: 4

Correction Factor (°C): 0.0

Uncorrected Temp (°C): 0.3

Corrected Temp (°C): 0.3

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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Place COC scanning label here
TA-Omaha

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: OPPD

City/State: Omaha, NE | Project: Nebraska City Unit 1 Combustion

Receipt Information

Date/Time Received: 11/22/16 945 | Received By: TD

Delivery Type: ☐ UPS ☑ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ TA Courier ☐ TA Field Services ☐ Client Drop-off ☐ Other: _____

Condition of Cooler/Containers

Sample(s) received in Cooler? ☒ Yes ☐ No *If yes:* Cooler ID: M-7

Multiple Coolers? ☑ Yes ☐ No *If yes:* Cooler # 2 of 2

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

Temperature Blank? ☑ Yes ☐ No ID & Bottle Type:

NOTE: If yes, use temp blank for measurement. If no, specify sample ID(s) and bottle type used to take measurement.

Thermometer ID: H | Correction Factor (°C): 0.0

Uncorrected Temp (°C): 0.2 | Corrected Temp (°C): 0.2

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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Phone (319) 277-2401 Fax (319) 277-2425

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Brad Sojka	Lab PM: Hayes, Shawn M	Carrier Tracking No(s):	COC No:
Client Contact: Brad Sojka	Phone:	E-Mail: shawn.hayes@testamericainc.com		Page:
Company: Omaha Public Power District		**Analysis Requested**		Job #:

Address: 444 South 16th Street Mall 9E/EP1	Due Date Requested:	
City: Omaha	TAT Requested (days):	
State, Zip: NE, 68102-2247		
Phone: 402-636-2515(Tel)	PO #:	
Email: bsojka@oppd.com	WO #:	
Project Name: Nebraska City Unit 1 Landfill CCR	TestAmerica Project #: 31007558	
Site:	SSOW#:	

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Combined Ra226 and Ra228	6010C Lithium, 6020A CCR List, 7470A Mercury	2540C TDS, 9056A Chloride, Fluoride, Sulfate	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	D	N		
MW13	11/18/16	0857	G	GW			X	X	X		
MW4NC2		0910	G	GW			X	X	X		
MW11		0938	G	GW			X	X	X		
MW3		1149	G	GW			X	X	X		
MW4		1057	G	GW			X	X	X		
MW9		1118	G	GW			X	X	X		
MW2		1022	G	GW			X	X	X		
DUP		1120	G	GW			X	X	X		

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown* ☐ *Radiological*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	11/21/16 0900			11-22-16 945	TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-94459-1

Login Number: 94459
List Number: 1
Creator: Patrick, Kathryn A

List Source: TestAmerica Cedar Falls

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319)277-2401

TestAmerica Job ID: 310-94459-2
Client Project/Site: Nebraska City Unit 1 Landfill
Sampling Event: CCR and Landfill Q2 and Q4

For:
Omaha Public Power District
Attn: Accounts Payable, 4E/EP-5
444 South 16th Street Mall
Omaha, Nebraska 68102-2247

Attn: Brad Sojka

Authorized for release by:
1/5/2017 5:48:04 PM

Shawn Hayes, Project Manager II
(319)277-2401
shawn.hayes@testamericainc.com

Table of Contents

Case Narrative

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-94459-2

Job ID: 310-94459-2

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-94459-2

Comments
No additional comments.

Receipt
The samples were received on 11/22/2016 9:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 0.2º C and 0.3º C.

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

Sample Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-94459-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-94459-1	MW13	Ground Water	11/18/16 08:57	11/22/16 09:45
310-94459-2	MW4NC2	Ground Water	11/18/16 09:10	11/22/16 09:45
310-94459-3	MW11	Ground Water	11/18/16 09:38	11/22/16 09:45
310-94459-4	MW3	Ground Water	11/18/16 11:49	11/22/16 09:45
310-94459-5	MW4	Ground Water	11/18/16 10:57	11/22/16 09:45
310-94459-6	MW9	Ground Water	11/18/16 11:18	11/22/16 09:45
310-94459-7	MW2	Ground Water	11/18/16 10:22	11/22/16 09:45
310-94459-8	DUP	Ground Water	11/18/16 11:20	11/22/16 09:45

Client Sample ID: MW13

Date Collected: 11/18/16 08:57
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94459-1

Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.208	U	0.210	0.210	1.00	0.328	pCi/L	12/01/16 09:39	01/05/17 07:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.2*		*40 - 110*	*12/01/16 09:39*	*01/05/17 07:10*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.537**		0.267	0.272	1.00	0.392	pCi/L	12/01/16 11:48	01/04/17 18:08	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.2*		*40 - 110*	*12/01/16 11:48*	*01/04/17 18:08*	*1*
Y Carrier	*90.5*		*40 - 110*	*12/01/16 11:48*	*01/04/17 18:08*	*1*

Method: 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	**0.745**		0.340	0.344	5.00	0.392	pCi/L		01/05/17 16:11	1

Client Sample ID: MW4NC2
Date Collected: 11/18/16 09:10
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94459-2
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.303	U	0.246	0.247	1.00	0.360	pCi/L	12/01/16 09:39	01/05/17 07:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*80.3*		*40 - 110*	*12/01/16 09:39*	*01/05/17 07:10*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.681**		0.313	0.319	1.00	0.452	pCi/L	12/01/16 11:48	01/04/17 18:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*80.3*		*40 - 110*	*12/01/16 11:48*	*01/04/17 18:09*	*1*
Y Carrier	*87.1*		*40 - 110*	*12/01/16 11:48*	*01/04/17 18:09*	*1*

Method: 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	**0.984**		0.398	0.403	5.00	0.452	pCi/L		01/05/17 16:11	1

Client Sample ID: MW11
Date Collected: 11/18/16 09:38
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94459-3
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.513		0.291	0.295	1.00	0.374	pCi/L	12/01/16 09:39	01/05/17 07:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*76.1*		*40 - 110*	*12/01/16 09:39*	*01/05/17 07:10*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.612		0.301	0.307	1.00	0.435	pCi/L	12/01/16 11:48	01/04/17 18:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*76.1*		*40 - 110*	*12/01/16 11:48*	*01/04/17 18:09*	*1*
Y Carrier	*85.6*		*40 - 110*	*12/01/16 11:48*	*01/04/17 18:09*	*1*

Method: 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	1.13		0.419	0.425	5.00	0.435	pCi/L		01/05/17 16:11	1

Client Sample ID: MW3
Date Collected: 11/18/16 11:49
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94459-4
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.447**		0.246	0.249	1.00	0.294	pCi/L	12/01/16 09:39	01/05/17 07:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*83.8*		*40 - 110*	*12/01/16 09:39*	*01/05/17 07:10*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.289	U	0.258	0.259	1.00	0.413	pCi/L	12/01/16 11:48	01/04/17 18:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*83.8*		*40 - 110*	*12/01/16 11:48*	*01/04/17 18:09*	*1*
Y Carrier	*86.7*		*40 - 110*	*12/01/16 11:48*	*01/04/17 18:09*	*1*

Method: 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	**0.736**		0.356	0.360	5.00	0.413	pCi/L		01/05/17 16:11	1

Client Sample ID: MW4

Date Collected: 11/18/16 10:57
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94459-5

Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.371	U	0.321	0.323	1.00	0.481	pCi/L	12/01/16 09:39	01/05/17 07:06	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*53.0*		*40 - 110*	*12/01/16 09:39*	*01/05/17 07:06*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.188	U	0.333	0.334	1.00	0.640	pCi/L	12/01/16 11:48	01/04/17 18:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*53.0*		*40 - 110*	*12/01/16 11:48*	*01/04/17 18:09*	*1*
Y Carrier	*87.1*		*40 - 110*	*12/01/16 11:48*	*01/04/17 18:09*	*1*

Method: 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	0.182	U	0.463	0.464	5.00	0.640	pCi/L		01/05/17 16:11	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-94459-2

Client Sample ID: MW9
Date Collected: 11/18/16 11:18
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94459-6
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.614		0.323	0.328	1.00	0.402	pCi/L	12/01/16 09:39	01/05/17 07:06	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*71.2*		*40 - 110*	*12/01/16 09:39*	*01/05/17 07:06*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.512		0.307	0.311	1.00	0.465	pCi/L	12/01/16 11:48	01/04/17 18:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*71.2*		*40 - 110*	*12/01/16 11:48*	*01/04/17 18:09*	*1*
Y Carrier	*91.6*		*40 - 110*	*12/01/16 11:48*	*01/04/17 18:09*	*1*

Method: 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	1.13		0.446	0.452	5.00	0.465	pCi/L		01/05/17 16:11	1

Client Sample ID: MW2
Date Collected: 11/18/16 10:22
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94459-7
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.236	U	0.243	0.244	1.00	0.382	pCi/L	12/01/16 09:39	01/05/17 07:06	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*72.4*		*40 - 110*	*12/01/16 09:39*	*01/05/17 07:06*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.178	U	0.331	0.332	1.00	0.563	pCi/L	12/01/16 11:48	01/04/17 18:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*72.4*		*40 - 110*	*12/01/16 11:48*	*01/04/17 18:09*	*1*
Y Carrier	*80.0*		*40 - 110*	*12/01/16 11:48*	*01/04/17 18:09*	*1*

Method: 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	0.415	U	0.411	0.412	5.00	0.563	pCi/L		01/05/17 16:11	1

Client Sample ID: DUP
Date Collected: 11/18/16 11:20
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94459-8
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.135	U	0.219	0.219	1.00	0.380	pCi/L	12/01/16 09:39	01/05/17 07:07	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*82.9*		*40 - 110*	*12/01/16 09:39*	*01/05/17 07:07*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0982	U	0.241	0.241	1.00	0.414	pCi/L	12/01/16 11:48	01/04/17 18:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*82.9*		*40 - 110*	*12/01/16 11:48*	*01/04/17 18:09*	*1*
Y Carrier	*93.8*		*40 - 110*	*12/01/16 11:48*	*01/04/17 18:09*	*1*

Method: 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	0.233	U	0.325	0.326	5.00	0.414	pCi/L		01/05/17 16:11	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-94459-2

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
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
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)

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-281858/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 286428 — **Prep Batch: 281858**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.002701	U	0.179	0.179	1.00	0.377	pCi/L	12/01/16 09:39	01/04/17 23:35	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*81.2*		*40 - 110*	*12/01/16 09:39*	*01/04/17 23:35*	*1*

Lab Sample ID: LCS 160-281858/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 286428 — **Prep Batch: 281858**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.1	13.11		1.68	1.00	0.340	pCi/L	118	68 - 137		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*82.6*		*40 - 110*

Lab Sample ID: LCSD 160-281858/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 286428 — **Prep Batch: 281858**

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			11.1	10.55		1.42	1.00	0.399	pCi/L	95	68 - 137	0.82	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*78.3*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-281909/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 286427 — **Prep Batch: 281909**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.03133	U	0.248	0.248	1.00	0.450	pCi/L	12/01/16 11:48	01/04/17 18:06	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*81.2*		*40 - 110*	*12/01/16 11:48*	*01/04/17 18:06*	*1*
Y Carrier	*89.3*		*40 - 110*	*12/01/16 11:48*	*01/04/17 18:06*	*1*

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

Lab Sample ID: LCS 160-281909/2-A
Matrix: Water
Analysis Batch: 286427

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 281909

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			14.0	14.34		1.59	1.00	0.435	pCi/L	102	56 - 140		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*82.6*		*40 - 110*
Y Carrier	*86.7*		*40 - 110*

Lab Sample ID: LCSD 160-281909/3-A
Matrix: Water
Analysis Batch: 286427

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 281909

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			14.0	15.90		1.74	1.00	0.395	pCi/L	113	56 - 140	0.47	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*78.3*		*40 - 110*
Y Carrier	*86.4*		*40 - 110*

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-94459-2

Rad

Prep Batch: 281858

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94459-1	MW13	Total/NA	Ground Water	PrecSep-21	
310-94459-2	MW4NC2	Total/NA	Ground Water	PrecSep-21	
310-94459-3	MW11	Total/NA	Ground Water	PrecSep-21	
310-94459-4	MW3	Total/NA	Ground Water	PrecSep-21	
310-94459-5	MW4	Total/NA	Ground Water	PrecSep-21	
310-94459-6	MW9	Total/NA	Ground Water	PrecSep-21	
310-94459-7	MW2	Total/NA	Ground Water	PrecSep-21	
310-94459-8	DUP	Total/NA	Ground Water	PrecSep-21	
MB 160-281858/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-281858/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-281858/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 281909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94459-1	MW13	Total/NA	Ground Water	PrecSep_0	
310-94459-2	MW4NC2	Total/NA	Ground Water	PrecSep_0	
310-94459-3	MW11	Total/NA	Ground Water	PrecSep_0	
310-94459-4	MW3	Total/NA	Ground Water	PrecSep_0	
310-94459-5	MW4	Total/NA	Ground Water	PrecSep_0	
310-94459-6	MW9	Total/NA	Ground Water	PrecSep_0	
310-94459-7	MW2	Total/NA	Ground Water	PrecSep_0	
310-94459-8	DUP	Total/NA	Ground Water	PrecSep_0	
MB 160-281909/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-281909/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-281909/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-94459-2

Client Sample ID: MW13

Lab Sample ID: 310-94459-1

Date Collected: 11/18/16 08:57

Matrix: Ground Water

Date Received: 11/22/16 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			281858	12/01/16 09:39	AS	TAL SL
Total/NA	Analysis	9315		1	286611	01/05/17 07:10	RTM	TAL SL
Total/NA	Prep	PrecSep_0			281909	12/01/16 11:48	AS	TAL SL
Total/NA	Analysis	9320		1	286427	01/04/17 18:08	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	286664	01/05/17 16:11	RTM	TAL SL

Client Sample ID: MW4NC2

Lab Sample ID: 310-94459-2

Date Collected: 11/18/16 09:10

Matrix: Ground Water

Date Received: 11/22/16 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			281858	12/01/16 09:39	AS	TAL SL
Total/NA	Analysis	9315		1	286611	01/05/17 07:10	RTM	TAL SL
Total/NA	Prep	PrecSep_0			281909	12/01/16 11:48	AS	TAL SL
Total/NA	Analysis	9320		1	286427	01/04/17 18:09	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	286664	01/05/17 16:11	RTM	TAL SL

Client Sample ID: MW11

Lab Sample ID: 310-94459-3

Date Collected: 11/18/16 09:38

Matrix: Ground Water

Date Received: 11/22/16 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			281858	12/01/16 09:39	AS	TAL SL
Total/NA	Analysis	9315		1	286611	01/05/17 07:10	RTM	TAL SL
Total/NA	Prep	PrecSep_0			281909	12/01/16 11:48	AS	TAL SL
Total/NA	Analysis	9320		1	286427	01/04/17 18:09	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	286664	01/05/17 16:11	RTM	TAL SL

Client Sample ID: MW3

Lab Sample ID: 310-94459-4

Date Collected: 11/18/16 11:49

Matrix: Ground Water

Date Received: 11/22/16 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			281858	12/01/16 09:39	AS	TAL SL
Total/NA	Analysis	9315		1	286611	01/05/17 07:10	RTM	TAL SL
Total/NA	Prep	PrecSep_0			281909	12/01/16 11:48	AS	TAL SL
Total/NA	Analysis	9320		1	286427	01/04/17 18:09	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	286664	01/05/17 16:11	RTM	TAL SL

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-94459-2

Client Sample ID: MW4

Lab Sample ID: 310-94459-5

Date Collected: 11/18/16 10:57
Matrix: Ground Water
Date Received: 11/22/16 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			281858	12/01/16 09:39	AS	TAL SL
Total/NA	Analysis	9315		1	286610	01/05/17 07:06	RTM	TAL SL
Total/NA	Prep	PrecSep_0			281909	12/01/16 11:48	AS	TAL SL
Total/NA	Analysis	9320		1	286427	01/04/17 18:09	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	286664	01/05/17 16:11	RTM	TAL SL

Client Sample ID: MW9

Lab Sample ID: 310-94459-6

Date Collected: 11/18/16 11:18
Matrix: Ground Water
Date Received: 11/22/16 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			281858	12/01/16 09:39	AS	TAL SL
Total/NA	Analysis	9315		1	286610	01/05/17 07:06	RTM	TAL SL
Total/NA	Prep	PrecSep_0			281909	12/01/16 11:48	AS	TAL SL
Total/NA	Analysis	9320		1	286427	01/04/17 18:09	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	286664	01/05/17 16:11	RTM	TAL SL

Client Sample ID: MW2

Lab Sample ID: 310-94459-7

Date Collected: 11/18/16 10:22
Matrix: Ground Water
Date Received: 11/22/16 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			281858	12/01/16 09:39	AS	TAL SL
Total/NA	Analysis	9315		1	286610	01/05/17 07:06	RTM	TAL SL
Total/NA	Prep	PrecSep_0			281909	12/01/16 11:48	AS	TAL SL
Total/NA	Analysis	9320		1	286428	01/04/17 18:09	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	286664	01/05/17 16:11	RTM	TAL SL

Client Sample ID: DUP

Lab Sample ID: 310-94459-8

Date Collected: 11/18/16 11:20
Matrix: Ground Water
Date Received: 11/22/16 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			281858	12/01/16 09:39	AS	TAL SL
Total/NA	Analysis	9315		1	286610	01/05/17 07:07	RTM	TAL SL
Total/NA	Prep	PrecSep_0			281909	12/01/16 11:48	AS	TAL SL
Total/NA	Analysis	9320		1	286428	01/04/17 18:09	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	286664	01/05/17 16:11	RTM	TAL SL

Laboratory References:

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

Certification Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-94459-2

Laboratory: TestAmerica Cedar Falls

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
AIHA-LAP, LLC	IHLAP		101044	11-01-18
Georgia	State Program	4	N/A	09-29-17
Illinois	NELAP	5	200024	11-29-17
Iowa	State Program	7	007	12-01-17
Kansas	NELAP	7	E-10341	01-31-18
Minnesota	NELAP	5	019-999-319	12-31-17
Minnesota (Petrofund)	State Program	1	3349	08-22-17
North Dakota	State Program	8	R-186	09-29-17
Oregon	NELAP	10	IA100001	09-29-17

Laboratory: TestAmerica St. Louis

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	MO00054	06-30-17
California	State Program	9	2886	03-31-18
Connecticut	State Program	1	PH-0241	03-31-17
Florida	NELAP	4	E87689	06-30-17
Illinois	NELAP	5	200023	11-30-17
Iowa	State Program	7	373	12-01-16 *
Kansas	NELAP	7	E-10236	10-31-17
Kentucky (DW)	State Program	4	90125	12-31-16 *
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-17
Louisiana (DW)	NELAP	6	LA170011	12-31-17
Maryland	State Program	3	310	09-30-17
Missouri	State Program	7	780	06-30-17
Nevada	State Program	9	MO000542017-1	07-31-17
New Jersey	NELAP	2	MO002	06-30-17
New York	NELAP	2	11616	03-31-17 *
North Dakota	State Program	8	R207	06-30-17
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-17
Pennsylvania	NELAP	3	68-00540	02-28-17 *
South Carolina	State Program	4	85002001	06-30-17
Texas	NELAP	6	T104704193-16-10	07-31-17
US Fish & Wildlife	Federal		LE058448-0	10-31-17
USDA	Federal		P330-14-0016	01-09-17 *
Utah	NELAP	8	MO000542016-8	07-31-17
Virginia	NELAP	3	460230	06-14-17
Washington	State Program	10	C592	08-30-17
West Virginia DEP	State Program	3	381	08-31-17

* Certification renewal pending - certification considered valid.

Method Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-94459-2

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL

Protocol References:

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:

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

310-94459 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: OPPD

City/State: Omaha, NE

Project: Nebraska City Unit 1 Landfill

Receipt Information

Date/Time Received: 1/22/16 945

Received By: TD

Delivery Type: ☐ UPS ☑ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ TA Courier ☐ TA Field Services ☐ Client Drop-off ☐ Other: _____

Condition of Cooler/Containers

Sample(s) received in Cooler? ☑ Yes ☐ No *If yes:* Cooler ID: NA.2

Multiple Coolers? ☑ Yes ☐ No *If yes:* Cooler # 1 of 2

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

Temperature Blank? ☑ Yes ☐ No ID & Bottle Type:

NOTE: If yes, use temp blank for measurement. If no, specify sample ID(s) and bottle type used to take measurement.

Thermometer ID: H

Correction Factor (°C): 0.0

Uncorrected Temp (°C): 0.3

Corrected Temp (°C): 0.3

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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Place COC scanning label here
TA-Om

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: OPPD

City/State: Omaha, NE | Project: Nebraska City Unit 1 Landfill

Receipt Information

Date/Time Received: 11/22/16 945 | Received By: TD

Delivery Type: ☐ UPS ☑ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ TA Courier ☐ TA Field Services ☐ Client Drop-off ☐ Other:_____

Condition of Cooler/Containers

Sample(s) received in Cooler?	☒ Yes	☐ No	*If yes:* Cooler ID: M-7
Multiple Coolers?	☑ Yes	☐ No	*If yes:* Cooler # 2 of 2
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

Temperature Blank? ☑ Yes ☐ No ID & Bottle Type:

NOTE: If yes, use temp blank for measurement. If no, specify sample ID(s) and bottle type used to take measurement.

Thermometer ID: H | Correction Factor (°C): 0.0

Uncorrected Temp (°C): 0.2 | Corrected Temp (°C): 0.2

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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Phone (319) 277-2401 Fax (319) 277-2425

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Brad Sojka	Lab PM: Hayes, Shawn M	Carrier Tracking No(s):	COC No:
Client Contact: Brad Sojka	Phone:	E-Mail: shawn.hayes@testamericainc.com		Page:
Company: Omaha Public Power District				Job #:

Address: 444 South 16th Street Mall 9E/EP1	Due Date Requested:
City: Omaha	TAT Requested (days):
State, Zip: NE, 68102-2247	
Phone: 402-636-2515(Tel)	PO #:
Email: bsojka@oppd.com	WO #:
Project Name: Nebraska City Unit 1 Landfill CCR	TestAmerica Project #: 31007558
Site:	SSOW#:

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Combined Ra226 and Ra228	6010C Lithium, 6020A CCR List, 7470A Mercury	2540C TDS, 9056A Chloride, Fluoride, Sulfate	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	D	N		
MW13	11/18/16	0857	G	GW			X	X	X		
MW4NC2		0910	G	GW			X	X	X		
MW11		0938	G	GW			X	X	X		
MW3		1149	G	GW			X	X	X		
MW4		1057	G	GW			X	X	X		
MW9		1118	G	GW			X	X	X		
MW2		1022	G	GW			X	X	X		
DUP		1120	G	GW			X	X	X		

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown* ☐ *Radiological*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 11/21/16 0900	Company	Received by:	Date/Time: 11-22-16 945	Company TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MW13	310-94459-A-1	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW13	310-94459-B-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-94459-C-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4NC2	310-94459-A-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW4NC2	310-94459-B-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4NC2	310-94459-C-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW11	310-94459-A-3	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW11	310-94459-B-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW11	310-94459-C-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW3	310-94459-A-4	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW3	310-94459-B-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW3	310-94459-C-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4	310-94459-A-5	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW4	310-94459-B-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4	310-94459-C-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-94459-A-6	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW9	310-94459-B-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-94459-C-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-94459-A-7	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW2	310-94459-B-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-94459-C-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP	310-94459-A-8	Plastic 250ml - with Nitric Acid	<2	_____	_____
DUP	310-94459-B-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP	310-94459-C-8	Plastic 1 liter - Nitric Acid	<2	_____	_____

TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Phone (319) 277-2401 Fax (319) 277-2425

Chain of Custody Record

310-94459 Chain of Custody

TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Hayes, Shawn M	COC No: 10-7974.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: shawn.hayes@testamericainc.com	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):	Job #: 310-94459-2
Address: 13715 Rider Trail North, ,	Due Date Requested: 12/21/2016		
City: Earth City	TAT Requested (days):		
State, Zip: MO, 63045			
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:		
Email:	WO #:		
Project Name: Nebraska City Unit 1 Landfill	Project #: 31007558		
Site: 310 OPPD Nebraska City Unit 1	SSOW#:		

Analysis Requested

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Ra226Ra228_GFPC	9315_Ra226/PrecSep_21 Standard Target List	9320_Ra228/PrecSep_0 Standard Target List	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW13 (310-94459-1)	11/18/16	08:57 Central		Water			X	X	X	2	
MW4NC2 (310-94459-2)	11/18/16	09:10 Central		Water			X	X	X	2	
MW11 (310-94459-3)	11/18/16	09:38 Central		Water			X	X	X	2	
MW3 (310-94459-4)	11/18/16	11:49 Central		Water			X	X	X	2	
MW4 (310-94459-5)	11/18/16	10:57 Central		Water			X	X	X	2	
MW9 (310-94459-6)	11/18/16	11:18 Central		Water			X	X	X	2	
MW2 (310-94459-7)	11/18/16	10:22 Central		Water			X	X	X	2	
DUP (310-94459-8)	11/18/16	11:20 Central		Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 11/23/16 1523	Company	Received by:	Date/Time: 11-23-16 0940	Company TAS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-94459-2

Login Number: 94459

List Source: TestAmerica Cedar Falls

List Number: 1

Creator: Patrick, Kathryn A

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-94459-2

Login Number: 94459
List Number: 2
Creator: Clarke, Jill C

List Source: TestAmerica St. Louis
List Creation: 11/23/16 11:32 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= 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.	N/A	
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	19.5, 19.5, 19.5
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?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Tracer/Carrier Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-94459-2

Method: 9315 - Radium-226 (GFPC)

Matrix: Ground Water — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(40-110)
310-94459-1	MW13	87.2
310-94459-2	MW4NC2	80.3
310-94459-3	MW11	76.1
310-94459-4	MW3	83.8
310-94459-5	MW4	53.0
310-94459-6	MW9	71.2
310-94459-7	MW2	72.4
310-94459-8	DUP	82.9

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9315 - Radium-226 (GFPC)

Matrix: Water — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(40-110)
LCS 160-281858/2-A	Lab Control Sample	82.6
LCSD 160-281858/3-A	Lab Control Sample Dup	78.3
MB 160-281858/1-A	Method Blank	81.2

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Ground Water — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
310-94459-1	MW13	87.2	90.5
310-94459-2	MW4NC2	80.3	87.1
310-94459-3	MW11	76.1	85.6
310-94459-4	MW3	83.8	86.7
310-94459-5	MW4	53.0	87.1
310-94459-6	MW9	71.2	91.6
310-94459-7	MW2	72.4	80.0
310-94459-8	DUP	82.9	93.8

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Tracer/Carrier Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill

TestAmerica Job ID: 310-94459-2

Method: 9320 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)									
		Ba	Y								
Lab Sample ID	Client Sample ID	(40-110)	(40-110)								
LCS 160-281909/2-A	Lab Control Sample	82.6	86.7								
LCSD 160-281909/3-A	Lab Control Sample Dup	78.3	86.4								
MB 160-281909/1-A	Method Blank	81.2	89.3								

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319)277-2401

TestAmerica Job ID: 310-99713-1
Client Project/Site: Nebraska City Unit 1 Landfill CCR
Sampling Event: CCR Parameters Q1 and Q3

For:
Omaha Public Power District
Attn: Accounts Payable, 4E/EP-5
444 South 16th Street Mall
Omaha, Nebraska 68102-2247

Attn: Brad Sojka

Authorized for release by:
3/7/2017 12:11:22 PM

Shawn Hayes, Senior Project Manager
(319)277-2401
shawn.hayes@testamericainc.com

Table of Contents

Case Narrative

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-99713-1

Job ID: 310-99713-1

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-99713-1

Comments
No additional comments.

Receipt
The samples were received on 2/17/2017 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were -0.6º C and 0.9º C.

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

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

Sample Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-99713-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-99713-1	MW13	Ground Water	02/14/17 09:14	02/17/17 10:00
310-99713-2	MW4NC2	Ground Water	02/14/17 09:42	02/17/17 10:00
310-99713-3	MW11	Ground Water	02/14/17 12:54	02/17/17 10:00
310-99713-4	MW3	Ground Water	02/14/17 12:04	02/17/17 10:00
310-99713-5	MW4	Ground Water	02/14/17 10:44	02/17/17 10:00
310-99713-6	MW9	Ground Water	02/14/17 11:34	02/17/17 10:00
310-99713-7	MW2	Ground Water	02/14/17 10:20	02/17/17 10:00
310-99713-8	DUP	Ground Water	02/14/17 10:46	02/17/17 10:00

Detection Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-99713-1

Client Sample ID: MW13 — Lab Sample ID: 310-99713-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	20.7		5.00		mg/L	5		9056A	Total/NA
Fluoride	3.64		0.500		mg/L	5		9056A	Total/NA
Sulfate	39.9		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.00304		0.00200		mg/L	1		6020A	Total/NA
Barium	0.349		0.00200		mg/L	1		6020A	Total/NA
Calcium	106		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000925		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00228		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	472		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW4NC2 — Lab Sample ID: 310-99713-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	39.3		5.00		mg/L	5		9056A	Total/NA
Barium	0.300		0.00200		mg/L	1		6020A	Total/NA
Calcium	148		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.00129		0.000500		mg/L	1		6020A	Total/NA
Lead	0.00320		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00280		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	544		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW11 — Lab Sample ID: 310-99713-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.57		5.00		mg/L	5		9056A	Total/NA
Fluoride	2.09		0.500		mg/L	5		9056A	Total/NA
Sulfate	113		5.00		mg/L	5		9056A	Total/NA
Barium	0.246		0.00200		mg/L	1		6020A	Total/NA
Boron	1.25		0.200		mg/L	1		6020A	Total/NA
Calcium	118		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.00471		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	532		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW3 — Lab Sample ID: 310-99713-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	11.0		5.00		mg/L	5		9056A	Total/NA
Fluoride	2.97		0.500		mg/L	5		9056A	Total/NA
Sulfate	286		10.0		mg/L	10		9056A	Total/NA
Arsenic	0.0248		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0920		0.00200		mg/L	1		6020A	Total/NA
Boron	1.66		0.200		mg/L	1		6020A	Total/NA
Calcium	170		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.00268		0.000500		mg/L	1		6020A	Total/NA
Lead	0.000553		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	852		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW4 — Lab Sample ID: 310-99713-5

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-99713-1

Client Sample ID: MW4 (Continued) — Lab Sample ID: 310-99713-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	295		10.0		mg/L	10		9056A	Total/NA
Arsenic	0.00433		0.00200		mg/L	1		6020A	Total/NA
Barium	0.119		0.00200		mg/L	1		6020A	Total/NA
Boron	1.59		0.200		mg/L	1		6020A	Total/NA
Calcium	139		0.200		mg/L	1		6020A	Total/NA
Lead	0.000520		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.0139		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	760		150		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW9 — Lab Sample ID: 310-99713-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.95		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.78		0.500		mg/L	5		9056A	Total/NA
Sulfate	247		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.0122		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0836		0.00200		mg/L	1		6020A	Total/NA
Boron	2.50		0.200		mg/L	1		6020A	Total/NA
Calcium	139		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.00147		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.0169		0.00200		mg/L	1		6020A	Total/NA
Selenium	0.0138		0.00500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	770		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW2 — Lab Sample ID: 310-99713-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	99.1		5.00		mg/L	5		9056A	Total/NA
Barium	0.123		0.00200		mg/L	1		6020A	Total/NA
Boron	0.427		0.200		mg/L	1		6020A	Total/NA
Calcium	122		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.0654		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	580		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP — Lab Sample ID: 310-99713-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	292		10.0		mg/L	10		9056A	Total/NA
Arsenic	0.00384		0.00200		mg/L	1		6020A	Total/NA
Barium	0.107		0.00200		mg/L	1		6020A	Total/NA
Boron	1.39		0.200		mg/L	1		6020A	Total/NA
Calcium	123		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.0124		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	552		30.0		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW13

Date Collected: 02/14/17 09:14
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99713-1

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**20.7**		5.00		mg/L			02/20/17 21:16	5
Fluoride	**3.64**		0.500		mg/L			02/20/17 21:16	5
Sulfate	**39.9**		5.00		mg/L			02/20/17 21:16	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		02/20/17 10:00	02/22/17 16:29	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 17:59	1
Arsenic	**0.00304**		0.00200		mg/L		02/20/17 10:00	02/23/17 17:59	1
Barium	**0.349**		0.00200		mg/L		02/20/17 10:00	02/23/17 17:59	1
Beryllium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 17:59	1
Boron	<0.200		0.200		mg/L		02/20/17 10:00	02/24/17 15:57	1
Cadmium	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 17:59	1
Calcium	**106**		0.200		mg/L		02/20/17 10:00	02/23/17 17:59	1
Chromium	<0.00500		0.00500		mg/L		02/20/17 10:00	02/23/17 17:59	1
Cobalt	**0.000925**		0.000500		mg/L		02/20/17 10:00	02/23/17 17:59	1
Lead	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 17:59	1
Molybdenum	**0.00228**		0.00200		mg/L		02/20/17 10:00	02/23/17 17:59	1
Selenium	<0.00500		0.00500		mg/L		02/20/17 10:00	02/23/17 17:59	1
Thallium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 17:59	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		02/21/17 08:43	02/22/17 10:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**472**		30.0		mg/L			02/17/17 12:37	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-99713-1

Client Sample ID: MW4NC2
Date Collected: 02/14/17 09:42
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99713-2
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			02/20/17 21:48	5
Fluoride	<0.500		0.500		mg/L			02/20/17 21:48	5
Sulfate	**39.3**		5.00		mg/L			02/20/17 21:48	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		02/20/17 10:00	02/22/17 16:32	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 18:02	1
Arsenic	<0.00200		0.00200		mg/L		02/20/17 10:00	02/23/17 18:02	1
Barium	**0.300**		0.00200		mg/L		02/20/17 10:00	02/23/17 18:02	1
Beryllium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 18:02	1
Boron	<0.200		0.200		mg/L		02/20/17 10:00	02/24/17 16:00	1
Cadmium	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 18:02	1
Calcium	**148**		0.200		mg/L		02/20/17 10:00	02/23/17 18:02	1
Chromium	<0.00500		0.00500		mg/L		02/20/17 10:00	02/23/17 18:02	1
Cobalt	**0.00129**		0.000500		mg/L		02/20/17 10:00	02/23/17 18:02	1
Lead	**0.00320**		0.000500		mg/L		02/20/17 10:00	02/23/17 18:02	1
Molybdenum	**0.00280**		0.00200		mg/L		02/20/17 10:00	02/23/17 18:02	1
Selenium	<0.00500		0.00500		mg/L		02/20/17 10:00	02/23/17 18:02	1
Thallium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 18:02	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		02/21/17 08:43	02/22/17 10:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**544**		30.0		mg/L			02/17/17 12:37	1

Client Sample ID: MW11

Date Collected: 02/14/17 12:54
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99713-3

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8.57**		5.00		mg/L			02/20/17 22:19	5
Fluoride	**2.09**		0.500		mg/L			02/20/17 22:19	5
Sulfate	**113**		5.00		mg/L			02/20/17 22:19	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		02/20/17 10:00	02/22/17 16:36	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 18:05	1
Arsenic	<0.00200		0.00200		mg/L		02/20/17 10:00	02/23/17 18:05	1
Barium	**0.246**		0.00200		mg/L		02/20/17 10:00	02/23/17 18:05	1
Beryllium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 18:05	1
Boron	**1.25**		0.200		mg/L		02/20/17 10:00	02/24/17 16:03	1
Cadmium	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 18:05	1
Calcium	**118**		0.200		mg/L		02/20/17 10:00	02/23/17 18:05	1
Chromium	<0.00500		0.00500		mg/L		02/20/17 10:00	02/23/17 18:05	1
Cobalt	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 18:05	1
Lead	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 18:05	1
Molybdenum	**0.00471**		0.00200		mg/L		02/20/17 10:00	02/23/17 18:05	1
Selenium	<0.00500		0.00500		mg/L		02/20/17 10:00	02/23/17 18:05	1
Thallium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 18:05	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		02/21/17 08:43	02/22/17 10:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**532**		30.0		mg/L			02/17/17 12:37	1

Client Sample ID: MW3
Date Collected: 02/14/17 12:04
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99713-4
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**11.0**		5.00		mg/L			02/20/17 22:51	5
Fluoride	**2.97**		0.500		mg/L			02/20/17 22:51	5
Sulfate	**286**		10.0		mg/L			02/21/17 06:43	10

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		02/20/17 10:00	02/22/17 16:38	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 18:11	1
Arsenic	**0.0248**		0.00200		mg/L		02/20/17 10:00	02/23/17 18:11	1
Barium	**0.0920**		0.00200		mg/L		02/20/17 10:00	02/23/17 18:11	1
Beryllium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 18:11	1
Boron	**1.66**		0.200		mg/L		02/20/17 10:00	02/24/17 16:09	1
Cadmium	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 18:11	1
Calcium	**170**		0.200		mg/L		02/20/17 10:00	02/23/17 18:11	1
Chromium	<0.00500		0.00500		mg/L		02/20/17 10:00	02/23/17 18:11	1
Cobalt	**0.00268**		0.000500		mg/L		02/20/17 10:00	02/23/17 18:11	1
Lead	**0.000553**		0.000500		mg/L		02/20/17 10:00	02/23/17 18:11	1
Molybdenum	<0.00200		0.00200		mg/L		02/20/17 10:00	02/23/17 18:11	1
Selenium	<0.00500		0.00500		mg/L		02/20/17 10:00	02/23/17 18:11	1
Thallium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 18:11	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		02/21/17 08:43	02/22/17 10:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**852**		30.0		mg/L			02/17/17 12:37	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-99713-1

Client Sample ID: MW4
Date Collected: 02/14/17 10:44
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99713-5
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			03/02/17 11:04	5
Fluoride	<0.500		0.500		mg/L			03/02/17 11:04	5
Sulfate	**295**		10.0		mg/L			02/21/17 07:14	10

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		02/20/17 10:00	02/22/17 16:42	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 18:18	1
Arsenic	**0.00433**		0.00200		mg/L		02/20/17 10:00	02/23/17 18:18	1
Barium	**0.119**		0.00200		mg/L		02/20/17 10:00	02/23/17 18:18	1
Beryllium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 18:18	1
Boron	**1.59**		0.200		mg/L		02/20/17 10:00	02/24/17 16:16	1
Cadmium	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 18:18	1
Calcium	**139**		0.200		mg/L		02/20/17 10:00	02/23/17 18:18	1
Chromium	<0.00500		0.00500		mg/L		02/20/17 10:00	02/23/17 18:18	1
Cobalt	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 18:18	1
Lead	**0.000520**		0.000500		mg/L		02/20/17 10:00	02/23/17 18:18	1
Molybdenum	**0.0139**		0.00200		mg/L		02/20/17 10:00	02/23/17 18:18	1
Selenium	<0.00500		0.00500		mg/L		02/20/17 10:00	02/23/17 18:18	1
Thallium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 18:18	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		02/21/17 08:43	02/22/17 10:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**760**		150		mg/L			02/21/17 10:33	1

Client Sample ID: MW9

Date Collected: 02/14/17 11:34
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99713-6

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5.95**		5.00		mg/L			02/20/17 23:53	5
Fluoride	**1.78**		0.500		mg/L			02/20/17 23:53	5
Sulfate	**247**		5.00		mg/L			02/20/17 23:53	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		02/20/17 10:00	02/22/17 16:40	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 18:15	1
Arsenic	**0.0122**		0.00200		mg/L		02/20/17 10:00	02/23/17 18:15	1
Barium	**0.0836**		0.00200		mg/L		02/20/17 10:00	02/23/17 18:15	1
Beryllium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 18:15	1
Boron	**2.50**		0.200		mg/L		02/20/17 10:00	02/24/17 16:12	1
Cadmium	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 18:15	1
Calcium	**139**		0.200		mg/L		02/20/17 10:00	02/23/17 18:15	1
Chromium	<0.00500		0.00500		mg/L		02/20/17 10:00	02/23/17 18:15	1
Cobalt	**0.00147**		0.000500		mg/L		02/20/17 10:00	02/23/17 18:15	1
Lead	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 18:15	1
Molybdenum	**0.0169**		0.00200		mg/L		02/20/17 10:00	02/23/17 18:15	1
Selenium	**0.0138**		0.00500		mg/L		02/20/17 10:00	02/23/17 18:15	1
Thallium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 18:15	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		02/21/17 08:43	02/22/17 10:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**770**		30.0		mg/L			02/17/17 12:37	1

Client Sample ID: MW2

Date Collected: 02/14/17 10:20
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99713-7

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			02/21/17 01:28	5
Fluoride	<0.500		0.500		mg/L			02/21/17 01:28	5
Sulfate	**99.1**		5.00		mg/L			02/21/17 01:28	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		02/20/17 10:00	02/22/17 16:48	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 18:30	1
Arsenic	<0.00200		0.00200		mg/L		02/20/17 10:00	02/23/17 18:30	1
Barium	**0.123**		0.00200		mg/L		02/20/17 10:00	02/23/17 18:30	1
Beryllium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 18:30	1
Boron	**0.427**		0.200		mg/L		02/20/17 10:00	02/23/17 18:30	1
Cadmium	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 18:30	1
Calcium	**122**		0.200		mg/L		02/20/17 10:00	02/23/17 18:30	1
Chromium	<0.00500		0.00500		mg/L		02/20/17 10:00	02/23/17 18:30	1
Cobalt	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 18:30	1
Lead	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 18:30	1
Molybdenum	**0.0654**		0.00200		mg/L		02/20/17 10:00	02/23/17 18:30	1
Selenium	<0.00500		0.00500		mg/L		02/20/17 10:00	02/23/17 18:30	1
Thallium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 18:30	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		02/21/17 08:43	02/22/17 10:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**580**		30.0		mg/L			02/17/17 12:37	1

Client Sample ID: DUP
Date Collected: 02/14/17 10:46
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99713-8
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			02/21/17 01:59	5
Fluoride	<0.500		0.500		mg/L			02/21/17 01:59	5
Sulfate	**292**		10.0		mg/L			02/21/17 08:17	10

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		02/20/17 10:00	02/22/17 16:51	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 18:34	1
Arsenic	**0.00384**		0.00200		mg/L		02/20/17 10:00	02/23/17 18:34	1
Barium	**0.107**		0.00200		mg/L		02/20/17 10:00	02/23/17 18:34	1
Beryllium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 18:34	1
Boron	**1.39**		0.200		mg/L		02/20/17 10:00	02/23/17 18:34	1
Cadmium	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 18:34	1
Calcium	**123**		0.200		mg/L		02/20/17 10:00	02/23/17 18:34	1
Chromium	<0.00500		0.00500		mg/L		02/20/17 10:00	02/23/17 18:34	1
Cobalt	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 18:34	1
Lead	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 18:34	1
Molybdenum	**0.0124**		0.00200		mg/L		02/20/17 10:00	02/23/17 18:34	1
Selenium	<0.00500		0.00500		mg/L		02/20/17 10:00	02/23/17 18:34	1
Thallium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 18:34	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		02/21/17 08:43	02/22/17 10:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**552**		30.0		mg/L			02/17/17 12:37	1

Definitions/Glossary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-99713-1

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.

General Chemistry

Qualifier	Qualifier Description
F3	Duplicate RPD exceeds the control 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
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
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)

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-157764/3
Matrix: Water
Analysis Batch: 157764

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			02/20/17 12:52	1
Fluoride	<0.100		0.100		mg/L			02/20/17 12:52	1
Sulfate	<1.00		1.00		mg/L			02/20/17 12:52	1

Lab Sample ID: LCS 310-157764/4
Matrix: Water
Analysis Batch: 157764

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	7.50	6.927		mg/L		92	90 - 110
Fluoride	1.50	1.407		mg/L		94	90 - 110
Sulfate	7.50	7.337		mg/L		98	90 - 110

Lab Sample ID: 310-99713-8 MS
Matrix: Ground Water
Analysis Batch: 157764

Client Sample ID: DUP
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	<5.00		25.0	27.25		mg/L		95	80 - 120
Fluoride	<0.500		5.00	5.005		mg/L		93	80 - 120

Lab Sample ID: 310-99713-8 MS
Matrix: Ground Water
Analysis Batch: 157764

Client Sample ID: DUP
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	292		50.0	334.5	4	mg/L		85	80 - 120

Lab Sample ID: 310-99713-8 MSD
Matrix: Ground Water
Analysis Batch: 157764

Client Sample ID: DUP
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	<5.00		25.0	27.27		mg/L		95	80 - 120	0	15
Fluoride	<0.500		5.00	5.011		mg/L		93	80 - 120	0	15

Lab Sample ID: 310-99713-8 MSD
Matrix: Ground Water
Analysis Batch: 157764

Client Sample ID: DUP
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	292		50.0	331.6	4	mg/L		79	80 - 120	1	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 310-157479/1-A
Matrix: Water
Analysis Batch: 157957

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 157479

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		02/20/17 10:00	02/22/17 15:46	1

Lab Sample ID: LCS 310-157479/2-A
Matrix: Water
Analysis Batch: 157957

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 157479

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	2.00	1.982		mg/L		99	80 - 120

Lab Sample ID: 310-99713-2 DU
Matrix: Ground Water
Analysis Batch: 157957

Client Sample ID: MW4NC2
Prep Type: Total/NA
Prep Batch: 157479

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Lithium	<0.0500		<0.0500		mg/L		NC	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 310-157477/1-A
Matrix: Water
Analysis Batch: 158061

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 157477

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 17:08	1
Arsenic	<0.00200		0.00200		mg/L		02/20/17 10:00	02/23/17 17:08	1
Barium	<0.00200		0.00200		mg/L		02/20/17 10:00	02/23/17 17:08	1
Beryllium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 17:08	1
Cadmium	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 17:08	1
Calcium	<0.200		0.200		mg/L		02/20/17 10:00	02/23/17 17:08	1
Chromium	<0.00500		0.00500		mg/L		02/20/17 10:00	02/23/17 17:08	1
Cobalt	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 17:08	1
Lead	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 17:08	1
Molybdenum	<0.00200		0.00200		mg/L		02/20/17 10:00	02/23/17 17:08	1
Selenium	<0.00500		0.00500		mg/L		02/20/17 10:00	02/23/17 17:08	1
Thallium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 17:08	1

Lab Sample ID: MB 310-157477/1-A
Matrix: Water
Analysis Batch: 158198

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 157477

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.200		0.200		mg/L		02/20/17 10:00	02/24/17 15:10	1

Lab Sample ID: LCS 310-157477/2-A
Matrix: Water
Analysis Batch: 158061

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 157477

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0200	0.02338		mg/L		117	80 - 120

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

Lab Sample ID: LCS 310-157477/2-A
Matrix: Water
Analysis Batch: 158061

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 157477

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	0.0400	0.04742		mg/L		119	80 - 120
Beryllium	0.0200	0.02137		mg/L		107	80 - 120
Cadmium	0.0200	0.02383		mg/L		119	80 - 120
Chromium	0.0400	0.04622		mg/L		116	80 - 120
Cobalt	0.0200	0.02328		mg/L		116	80 - 120
Lead	0.0200	0.02257		mg/L		113	80 - 120
Molybdenum	0.0400	0.04439		mg/L		111	80 - 120
Selenium	0.0400	0.04295		mg/L		107	80 - 120

Lab Sample ID: LCS 310-157477/2-A
Matrix: Water
Analysis Batch: 158198

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 157477

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0400	0.04651		mg/L		116	80 - 120
Boron	0.880	0.8943		mg/L		102	80 - 120
Calcium	2.00	2.233		mg/L		112	80 - 120
Thallium	0.0160	0.01808		mg/L		113	80 - 120

Lab Sample ID: 310-99713-3 DU
Matrix: Ground Water
Analysis Batch: 158061

Client Sample ID: MW11
Prep Type: Total/NA
Prep Batch: 157477

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	<0.00100		<0.00100		mg/L		NC	20
Arsenic	<0.00200		<0.00200		mg/L		NC	20
Barium	0.246		0.2395		mg/L		3	20
Beryllium	<0.00100		<0.00100		mg/L		NC	20
Cadmium	<0.000500		<0.000500		mg/L		NC	20
Calcium	118		115.4		mg/L		2	20
Chromium	<0.00500		<0.00500		mg/L		NC	20
Cobalt	<0.000500		<0.000500		mg/L		NC	20
Lead	<0.000500		<0.000500		mg/L		NC	20
Molybdenum	0.00471		0.004552		mg/L		3	20
Selenium	<0.00500		<0.00500		mg/L		NC	20
Thallium	<0.00100		<0.00100		mg/L		NC	20

Lab Sample ID: 310-99713-3 DU
Matrix: Ground Water
Analysis Batch: 158198

Client Sample ID: MW11
Prep Type: Total/NA
Prep Batch: 157477

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Boron	1.25		1.243		mg/L		0.7	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-157729/1-A
Matrix: Water
Analysis Batch: 157886

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 157729

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		02/21/17 08:43	02/22/17 09:49	1

Lab Sample ID: LCS 310-157729/2-A
Matrix: Water
Analysis Batch: 157886

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 157729

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00167	0.001566		mg/L		94	80 - 120

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

Lab Sample ID: MB 310-157472/1
Matrix: Water
Analysis Batch: 157472

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	<30.0		30.0		mg/L			02/17/17 12:37	1

Lab Sample ID: LCS 310-157472/2
Matrix: Water
Analysis Batch: 157472

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	1044		mg/L		104	90 - 110

Lab Sample ID: MB 310-157756/1
Matrix: Water
Analysis Batch: 157756

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	<30.0		30.0		mg/L			02/21/17 10:33	1

Lab Sample ID: LCS 310-157756/2
Matrix: Water
Analysis Batch: 157756

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	982.0		mg/L		98	90 - 110

Lab Sample ID: 310-99713-5 DU
Matrix: Ground Water
Analysis Batch: 157756

Client Sample ID: MW4
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	760		1100	F3	mg/L		37	24

HPLC/IC

Analysis Batch: 157764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99713-1	MW13	Total/NA	Ground Water	9056A	
310-99713-2	MW4NC2	Total/NA	Ground Water	9056A	
310-99713-3	MW11	Total/NA	Ground Water	9056A	
310-99713-4	MW3	Total/NA	Ground Water	9056A	
310-99713-4	MW3	Total/NA	Ground Water	9056A	
310-99713-5	MW4	Total/NA	Ground Water	9056A	
310-99713-5	MW4	Total/NA	Ground Water	9056A	
310-99713-6	MW9	Total/NA	Ground Water	9056A	
310-99713-7	MW2	Total/NA	Ground Water	9056A	
310-99713-8	DUP	Total/NA	Ground Water	9056A	
310-99713-8	DUP	Total/NA	Ground Water	9056A	
MB 310-157764/3	Method Blank	Total/NA	Water	9056A	
LCS 310-157764/4	Lab Control Sample	Total/NA	Water	9056A	
310-99713-8 MS	DUP	Total/NA	Ground Water	9056A	
310-99713-8 MS	DUP	Total/NA	Ground Water	9056A	
310-99713-8 MSD	DUP	Total/NA	Ground Water	9056A	
310-99713-8 MSD	DUP	Total/NA	Ground Water	9056A	

Metals

Prep Batch: 157477

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99713-1	MW13	Total/NA	Ground Water	3010A	
310-99713-2	MW4NC2	Total/NA	Ground Water	3010A	
310-99713-3	MW11	Total/NA	Ground Water	3010A	
310-99713-4	MW3	Total/NA	Ground Water	3010A	
310-99713-5	MW4	Total/NA	Ground Water	3010A	
310-99713-6	MW9	Total/NA	Ground Water	3010A	
310-99713-7	MW2	Total/NA	Ground Water	3010A	
310-99713-8	DUP	Total/NA	Ground Water	3010A	
MB 310-157477/1-A	Method Blank	Total/NA	Water	3010A	
LCS 310-157477/2-A	Lab Control Sample	Total/NA	Water	3010A	
310-99713-3 DU	MW11	Total/NA	Ground Water	3010A	

Prep Batch: 157479

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99713-1	MW13	Total/NA	Ground Water	3010A	
310-99713-2	MW4NC2	Total/NA	Ground Water	3010A	
310-99713-3	MW11	Total/NA	Ground Water	3010A	
310-99713-4	MW3	Total/NA	Ground Water	3010A	
310-99713-5	MW4	Total/NA	Ground Water	3010A	
310-99713-6	MW9	Total/NA	Ground Water	3010A	
310-99713-7	MW2	Total/NA	Ground Water	3010A	
310-99713-8	DUP	Total/NA	Ground Water	3010A	
MB 310-157479/1-A	Method Blank	Total/NA	Water	3010A	
LCS 310-157479/2-A	Lab Control Sample	Total/NA	Water	3010A	
310-99713-2 DU	MW4NC2	Total/NA	Ground Water	3010A	

Metals (Continued)

Prep Batch: 157729

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99713-1	MW13	Total/NA	Ground Water	7470A	
310-99713-2	MW4NC2	Total/NA	Ground Water	7470A	
310-99713-3	MW11	Total/NA	Ground Water	7470A	
310-99713-4	MW3	Total/NA	Ground Water	7470A	
310-99713-5	MW4	Total/NA	Ground Water	7470A	
310-99713-6	MW9	Total/NA	Ground Water	7470A	
310-99713-7	MW2	Total/NA	Ground Water	7470A	
310-99713-8	DUP	Total/NA	Ground Water	7470A	
MB 310-157729/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-157729/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 157886

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99713-1	MW13	Total/NA	Ground Water	7470A	157729
310-99713-2	MW4NC2	Total/NA	Ground Water	7470A	157729
310-99713-3	MW11	Total/NA	Ground Water	7470A	157729
310-99713-4	MW3	Total/NA	Ground Water	7470A	157729
310-99713-5	MW4	Total/NA	Ground Water	7470A	157729
310-99713-6	MW9	Total/NA	Ground Water	7470A	157729
310-99713-7	MW2	Total/NA	Ground Water	7470A	157729
310-99713-8	DUP	Total/NA	Ground Water	7470A	157729
MB 310-157729/1-A	Method Blank	Total/NA	Water	7470A	157729
LCS 310-157729/2-A	Lab Control Sample	Total/NA	Water	7470A	157729

Analysis Batch: 157957

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99713-1	MW13	Total/NA	Ground Water	6010C	157479
310-99713-2	MW4NC2	Total/NA	Ground Water	6010C	157479
310-99713-3	MW11	Total/NA	Ground Water	6010C	157479
310-99713-4	MW3	Total/NA	Ground Water	6010C	157479
310-99713-5	MW4	Total/NA	Ground Water	6010C	157479
310-99713-6	MW9	Total/NA	Ground Water	6010C	157479
310-99713-7	MW2	Total/NA	Ground Water	6010C	157479
310-99713-8	DUP	Total/NA	Ground Water	6010C	157479
MB 310-157479/1-A	Method Blank	Total/NA	Water	6010C	157479
LCS 310-157479/2-A	Lab Control Sample	Total/NA	Water	6010C	157479
310-99713-2 DU	MW4NC2	Total/NA	Ground Water	6010C	157479

Analysis Batch: 158061

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99713-1	MW13	Total/NA	Ground Water	6020A	157477
310-99713-2	MW4NC2	Total/NA	Ground Water	6020A	157477
310-99713-3	MW11	Total/NA	Ground Water	6020A	157477
310-99713-4	MW3	Total/NA	Ground Water	6020A	157477
310-99713-5	MW4	Total/NA	Ground Water	6020A	157477
310-99713-6	MW9	Total/NA	Ground Water	6020A	157477
310-99713-7	MW2	Total/NA	Ground Water	6020A	157477
310-99713-8	DUP	Total/NA	Ground Water	6020A	157477
MB 310-157477/1-A	Method Blank	Total/NA	Water	6020A	157477
LCS 310-157477/2-A	Lab Control Sample	Total/NA	Water	6020A	157477
310-99713-3 DU	MW11	Total/NA	Ground Water	6020A	157477

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-99713-1

Analysis Batch: 158198

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99713-1	MW13	Total/NA	Ground Water	6020A	157477
310-99713-2	MW4NC2	Total/NA	Ground Water	6020A	157477
310-99713-3	MW11	Total/NA	Ground Water	6020A	157477
310-99713-4	MW3	Total/NA	Ground Water	6020A	157477
310-99713-5	MW4	Total/NA	Ground Water	6020A	157477
310-99713-6	MW9	Total/NA	Ground Water	6020A	157477
MB 310-157477/1-A	Method Blank	Total/NA	Water	6020A	157477
LCS 310-157477/2-A	Lab Control Sample	Total/NA	Water	6020A	157477
310-99713-3 DU	MW11	Total/NA	Ground Water	6020A	157477

General Chemistry

Analysis Batch: 157472

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99713-1	MW13	Total/NA	Ground Water	SM 2540C	
310-99713-2	MW4NC2	Total/NA	Ground Water	SM 2540C	
310-99713-3	MW11	Total/NA	Ground Water	SM 2540C	
310-99713-4	MW3	Total/NA	Ground Water	SM 2540C	
310-99713-6	MW9	Total/NA	Ground Water	SM 2540C	
310-99713-7	MW2	Total/NA	Ground Water	SM 2540C	
310-99713-8	DUP	Total/NA	Ground Water	SM 2540C	
MB 310-157472/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-157472/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 157756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99713-5	MW4	Total/NA	Ground Water	SM 2540C	
MB 310-157756/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-157756/2	Lab Control Sample	Total/NA	Water	SM 2540C	
310-99713-5 DU	MW4	Total/NA	Ground Water	SM 2540C	

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-99713-1

Client Sample ID: MW13

Date Collected: 02/14/17 09:14
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99713-1

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	157764	02/20/17 21:16	AJG	TAL CF
Total/NA	Prep	3010A			157479	02/20/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	157957	02/22/17 16:29	OAD	TAL CF
Total/NA	Prep	3010A			157477	02/20/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	158061	02/23/17 17:59	OAD	TAL CF
Total/NA	Prep	3010A			157477	02/20/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	158198	02/24/17 15:57	OAD	TAL CF
Total/NA	Prep	7470A			157729	02/21/17 08:43	SAD	TAL CF
Total/NA	Analysis	7470A		1	157886	02/22/17 10:11	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	157472	02/17/17 12:37	SAS	TAL CF

Client Sample ID: MW4NC2

Date Collected: 02/14/17 09:42
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99713-2

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	157764	02/20/17 21:48	AJG	TAL CF
Total/NA	Prep	3010A			157479	02/20/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	157957	02/22/17 16:32	OAD	TAL CF
Total/NA	Prep	3010A			157477	02/20/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	158061	02/23/17 18:02	OAD	TAL CF
Total/NA	Prep	3010A			157477	02/20/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	158198	02/24/17 16:00	OAD	TAL CF
Total/NA	Prep	7470A			157729	02/21/17 08:43	SAD	TAL CF
Total/NA	Analysis	7470A		1	157886	02/22/17 10:13	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	157472	02/17/17 12:37	SAS	TAL CF

Client Sample ID: MW11

Date Collected: 02/14/17 12:54
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99713-3

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	157764	02/20/17 22:19	AJG	TAL CF
Total/NA	Prep	3010A			157479	02/20/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	157957	02/22/17 16:36	OAD	TAL CF
Total/NA	Prep	3010A			157477	02/20/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	158061	02/23/17 18:05	OAD	TAL CF
Total/NA	Prep	3010A			157477	02/20/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	158198	02/24/17 16:03	OAD	TAL CF
Total/NA	Prep	7470A			157729	02/21/17 08:43	SAD	TAL CF
Total/NA	Analysis	7470A		1	157886	02/22/17 10:17	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	157472	02/17/17 12:37	SAS	TAL CF

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-99713-1

Client Sample ID: MW3

Date Collected: 02/14/17 12:04
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99713-4

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	157764	02/20/17 22:51	AJG	TAL CF
Total/NA	Analysis	9056A		10	157764	02/21/17 06:43	AJG	TAL CF
Total/NA	Prep	3010A			157479	02/20/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	157957	02/22/17 16:38	OAD	TAL CF
Total/NA	Prep	3010A			157477	02/20/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	158061	02/23/17 18:11	OAD	TAL CF
Total/NA	Prep	3010A			157477	02/20/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	158198	02/24/17 16:09	OAD	TAL CF
Total/NA	Prep	7470A			157729	02/21/17 08:43	SAD	TAL CF
Total/NA	Analysis	7470A		1	157886	02/22/17 10:19	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	157472	02/17/17 12:37	SAS	TAL CF

Client Sample ID: MW4

Date Collected: 02/14/17 10:44
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99713-5

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		10	157764	02/21/17 07:14	AJG	TAL CF
Total/NA	Analysis	9056A		5	157764	03/02/17 11:04	AJG	TAL CF
Total/NA	Prep	3010A			157479	02/20/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	157957	02/22/17 16:42	OAD	TAL CF
Total/NA	Prep	3010A			157477	02/20/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	158061	02/23/17 18:18	OAD	TAL CF
Total/NA	Prep	3010A			157477	02/20/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	158198	02/24/17 16:16	OAD	TAL CF
Total/NA	Prep	7470A			157729	02/21/17 08:43	SAD	TAL CF
Total/NA	Analysis	7470A		1	157886	02/22/17 10:21	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	157756	02/21/17 10:33	MDK	TAL CF

Client Sample ID: MW9

Date Collected: 02/14/17 11:34
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99713-6

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	157764	02/20/17 23:53	AJG	TAL CF
Total/NA	Prep	3010A			157479	02/20/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	157957	02/22/17 16:40	OAD	TAL CF
Total/NA	Prep	3010A			157477	02/20/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	158061	02/23/17 18:15	OAD	TAL CF
Total/NA	Prep	3010A			157477	02/20/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	158198	02/24/17 16:12	OAD	TAL CF
Total/NA	Prep	7470A			157729	02/21/17 08:43	SAD	TAL CF
Total/NA	Analysis	7470A		1	157886	02/22/17 10:22	SAD	TAL CF

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-99713-1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	157472	02/17/17 12:37	SAS	TAL CF

Client Sample ID: MW2

Date Collected: 02/14/17 10:20
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99713-7
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	157764	02/21/17 01:28	AJG	TAL CF
Total/NA	Prep	3010A			157479	02/20/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	157957	02/22/17 16:48	OAD	TAL CF
Total/NA	Prep	3010A			157477	02/20/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	158061	02/23/17 18:30	OAD	TAL CF
Total/NA	Prep	7470A			157729	02/21/17 08:43	SAD	TAL CF
Total/NA	Analysis	7470A		1	157886	02/22/17 10:24	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	157472	02/17/17 12:37	SAS	TAL CF

Client Sample ID: DUP

Date Collected: 02/14/17 10:46
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99713-8
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	157764	02/21/17 01:59	AJG	TAL CF
Total/NA	Analysis	9056A		10	157764	02/21/17 08:17	AJG	TAL CF
Total/NA	Prep	3010A			157479	02/20/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	157957	02/22/17 16:51	OAD	TAL CF
Total/NA	Prep	3010A			157477	02/20/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	158061	02/23/17 18:34	OAD	TAL CF
Total/NA	Prep	7470A			157729	02/21/17 08:43	SAD	TAL CF
Total/NA	Analysis	7470A		1	157886	02/22/17 10:25	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	157472	02/17/17 12:37	SAS	TAL CF

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401

Certification Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-99713-1

Laboratory: TestAmerica Cedar Falls

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
AIHA-LAP, LLC	IHLAP		101044	11-01-18
Georgia	State Program	4	N/A	09-29-17
Illinois	NELAP	5	200024	11-29-17
Iowa	State Program	7	007	12-01-17
Kansas	NELAP	7	E-10341	01-31-18
Minnesota	NELAP	5	019-999-319	12-31-17
Minnesota (Petrofund)	State Program	1	3349	08-22-17
North Dakota	State Program	8	R-186	09-29-17
Oregon	NELAP	10	IA100001	09-29-17

Method Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-99713-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	TAL CF
6010C	Metals (ICP)	SW846	TAL CF
6020A	Metals (ICP/MS)	SW846	TAL CF
7470A	Mercury (CVAA)	SW846	TAL CF
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL 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:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

310-99713 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: OPPD

City/State: Omaha, NE | Project: Nebraska City Unit 1 CF

Receipt Information

Date/Time Received: 2/7/17 1000 | Received By: TP

Delivery Type: ☐ UPS ☑ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ TA Courier ☐ TA Field Services ☐ Client Drop-off ☐ Other: _____

Condition of Cooler/Containers

Sample(s) received in Cooler?	☑ Yes	☐ No	*If yes:* Cooler ID: AA-31
Multiple Coolers?	☑ Yes	☐ No	*If yes:* Cooler # 1 of 2
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

Temperature Blank? ☑ Yes ☐ No ID & Bottle Type:

NOTE: If yes, use temp blank for measurement. If no, specify sample ID(s) and bottle type used to take measurement.

Thermometer ID: H | Correction Factor (°C): 0.0

Uncorrected Temp (°C): −0.6 | Corrected Temp (°C): −0.6

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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: OPPD

City/State: Omaha, NE | Project: Nebraska CCR Units 1 & 2

Receipt Information

Date/Time Received: 2/17/17 1000 | Received By: TO

Delivery Type: ☐ UPS ☑ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ TA Courier ☐ TA Field Services ☐ Client Drop-off ☐ Other: _____

Condition of Cooler/Containers

Sample(s) received in Cooler? ☑ Yes ☐ No *If yes:* Cooler ID: AA-89

Multiple Coolers? ☑ Yes ☐ No *If yes:* Cooler # 2 of 2

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

Temperature Blank? ☑ Yes ☐ No ID & Bottle Type:

NOTE: If yes, use temp blank for measurement. If no, specify sample ID(s) and bottle type used to take measurement.

Thermometer ID: H | Correction Factor (°C): 0.0

Uncorrected Temp (°C): 0.9 | Corrected Temp (°C): 0.9

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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

SO# 21460

TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Phone (319) 277-2401 Fax (319) 277-2425

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Brad Sojka	Lab PM: Hayes, Shawn M	Carrier Tracking No(s):	COC No:
Client Contact: Brad Sojka	Phone: 402-636-2515	E-Mail: shawn.hayes@testamericainc.com		Page:
Company: Omaha Public Power District				Job #:
Address: 444 South 16th Street Mail 9E/EP1	Due Date Requested:	Analysis Requested		Preservation Codes:
City: Omaha	TAT Requested (days):			A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
State, Zip: NE, 68102-2247				
Phone: 402-636-2515(Tel)	PO #:			Other:
Email: bsojka@oppd.com	WO #:			
Project Name: Nebraska City Unit 1 Landfill CCR	TestAmerica Project #: 31007558			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Combined Ra226 and Ra228	6010C Lithium, 6020A CCR List, 7470A Mercury	2540C TDS, 9056A Chloride, Fluoride, Sulfate	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	D	N		
MW13	2/14/17	0914	G	GW	N	N	X	X	X		
MW4NC2		0942	G	GW			X	X	X		
MW11		1254	G	GW			X	X	X		
MW3		1204	G	GW			X	X	X		
MW4		1044	G	GW			X	X	X		
MW9		1134	G	GW			X	X	X		
MW2		1020	G	GW			X	X	X		
DUP	↓	1046	G	GW	↓	↓	X	X	X		

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	2/16/17 1000		Angie Mullaney	2/17/17 10:00	TestAmerica
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: △ Yes △ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

3/7/2017

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MW13	310-99713-A-1	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW13	310-99713-B-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-99713-C-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4NC2	310-99713-A-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW4NC2	310-99713-B-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4NC2	310-99713-C-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW11	310-99713-A-3	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW11	310-99713-B-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW11	310-99713-C-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW3	310-99713-A-4	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW3	310-99713-B-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW3	310-99713-C-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4	310-99713-A-5	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW4	310-99713-B-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4	310-99713-C-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-99713-A-6	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW9	310-99713-B-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-99713-C-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-99713-A-7	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW2	310-99713-B-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-99713-C-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP	310-99713-A-8	Plastic 250ml - with Nitric Acid	<2	_____	_____
DUP	310-99713-B-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP	310-99713-C-8	Plastic 1 liter - Nitric Acid	<2	_____	_____

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-99713-1

Login Number: 99713
List Number: 1
Creator: Muehling, Angela C

List Source: TestAmerica Cedar Falls

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

TestAmerica

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319)277-2401

TestAmerica Job ID: 310-99713-2
Client Project/Site: Nebraska City Unit 1 Landfill CCR
Sampling Event: CCR Parameters Q1 and Q3

For:
Omaha Public Power District
Attn: Accounts Payable, 4E/EP-5
444 South 16th Street Mall
Omaha, Nebraska 68102-2247

Attn: Brad Sojka

Authorized for release by:
3/15/2017 5:24:49 PM

Shawn Hayes, Senior Project Manager
(319)277-2401
shawn.hayes@testamericainc.com

Table of Contents

Case Narrative

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-99713-2

Job ID: 310-99713-2

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-99713-2

Comments
No additional comments.

Receipt
The samples were received on 2/17/2017 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were -0.6º C and 0.9º C.

RAD
Method(s) PrecSep_0: Radium 228; Prep Batch 293659 - The following sample was reduced to 500 mL due to high amounts of sediment: DUP (310-99713-8)

Method(s) PrecSep-21: Radium 226; Prep Batch 293560 - The following sample was reduced to 500 mL due to high amounts of sediment: DUP (310-99713-8)

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

Sample Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-99713-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-99713-1	MW13	Ground Water	02/14/17 09:14	02/17/17 10:00
310-99713-2	MW4NC2	Ground Water	02/14/17 09:42	02/17/17 10:00
310-99713-3	MW11	Ground Water	02/14/17 12:54	02/17/17 10:00
310-99713-4	MW3	Ground Water	02/14/17 12:04	02/17/17 10:00
310-99713-5	MW4	Ground Water	02/14/17 10:44	02/17/17 10:00
310-99713-6	MW9	Ground Water	02/14/17 11:34	02/17/17 10:00
310-99713-7	MW2	Ground Water	02/14/17 10:20	02/17/17 10:00
310-99713-8	DUP	Ground Water	02/14/17 10:46	02/17/17 10:00

Client Sample ID: MW13
Date Collected: 02/14/17 09:14
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99713-1
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.246**		0.123	0.125	1.00	0.156	pCi/L	02/21/17 09:02	03/15/17 05:02	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.1*		*40 - 110*	*02/21/17 09:02*	*03/15/17 05:02*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.286	U	0.220	0.221	1.00	0.345	pCi/L	02/21/17 09:43	03/10/17 14:29	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.1*		*40 - 110*	*02/21/17 09:43*	*03/10/17 14:29*	*1*
Y Carrier	*84.1*		*40 - 110*	*02/21/17 09:43*	*03/10/17 14:29*	*1*

Method: 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	**0.532**		0.252	0.254	5.00	0.345	pCi/L		03/15/17 16:45	1

Client Sample ID: MW4NC2
Date Collected: 02/14/17 09:42
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99713-2
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.219		0.110	0.112	1.00	0.129	pCi/L	02/21/17 09:02	03/15/17 05:02	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.1*		*40 - 110*	*02/21/17 09:02*	*03/15/17 05:02*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.675		0.263	0.270	1.00	0.370	pCi/L	02/21/17 09:43	03/10/17 14:29	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.1*		*40 - 110*	*02/21/17 09:43*	*03/10/17 14:29*	*1*
Y Carrier	*86.7*		*40 - 110*	*02/21/17 09:43*	*03/10/17 14:29*	*1*

Method: 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	0.894		0.285	0.292	5.00	0.370	pCi/L		03/15/17 16:45	1

Client Sample ID: MW11

Date Collected: 02/14/17 12:54
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99713-3

Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.123	U	0.108	0.109	1.00	0.165	pCi/L	02/21/17 09:02	03/15/17 05:02	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.2*		*40 - 110*	*02/21/17 09:02*	*03/15/17 05:02*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.102	U	0.207	0.208	1.00	0.356	pCi/L	02/21/17 09:43	03/10/17 14:29	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.2*		*40 - 110*	*02/21/17 09:43*	*03/10/17 14:29*	*1*
Y Carrier	*83.4*		*40 - 110*	*02/21/17 09:43*	*03/10/17 14:29*	*1*

Method: 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	0.225	U	0.234	0.234	5.00	0.356	pCi/L		03/15/17 16:45	1

Client Sample ID: MW3
Date Collected: 02/14/17 12:04
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99713-4
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.237		0.144	0.145	1.00	0.198	pCi/L	02/21/17 09:02	03/15/17 05:08	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.0*		*40 - 110*	*02/21/17 09:02*	*03/15/17 05:08*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.199	U	0.292	0.292	1.00	0.489	pCi/L	02/21/17 09:43	03/10/17 14:29	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.0*		*40 - 110*	*02/21/17 09:43*	*03/10/17 14:29*	*1*
Y Carrier	*83.0*		*40 - 110*	*02/21/17 09:43*	*03/10/17 14:29*	*1*

Method: 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	0.436	U	0.325	0.326	5.00	0.489	pCi/L		03/15/17 16:45	1

Client Sample ID: MW4
Date Collected: 02/14/17 10:44
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99713-5
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0531	U	0.100	0.100	1.00	0.178	pCi/L	02/21/17 09:02	03/15/17 05:08	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*86.1*		*40 - 110*	*02/21/17 09:02*	*03/15/17 05:08*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.354	U	0.304	0.306	1.00	0.597	pCi/L	02/21/17 09:43	03/10/17 14:29	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*86.1*		*40 - 110*	*02/21/17 09:43*	*03/10/17 14:29*	*1*
Y Carrier	*87.1*		*40 - 110*	*02/21/17 09:43*	*03/10/17 14:29*	*1*

Method: 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	-0.301	U	0.320	0.322	5.00	0.597	pCi/L		03/15/17 16:45	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-99713-2

Client Sample ID: MW9
Date Collected: 02/14/17 11:34
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99713-6
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.154		0.104	0.105	1.00	0.147	pCi/L	02/21/17 09:02	03/15/17 05:08	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.0*		*40 - 110*	*02/21/17 09:02*	*03/15/17 05:08*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.271	U	0.230	0.232	1.00	0.367	pCi/L	02/21/17 09:43	03/10/17 14:29	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.0*		*40 - 110*	*02/21/17 09:43*	*03/10/17 14:29*	*1*
Y Carrier	*80.7*		*40 - 110*	*02/21/17 09:43*	*03/10/17 14:29*	*1*

Method: 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	0.425		0.253	0.254	5.00	0.367	pCi/L		03/15/17 16:45	1

Client Sample ID: MW2
Date Collected: 02/14/17 10:20
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99713-7
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.185		0.110	0.111	1.00	0.150	pCi/L	02/21/17 09:02	03/15/17 05:08	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.6*		*40 - 110*	*02/21/17 09:02*	*03/15/17 05:08*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0693	U	0.267	0.267	1.00	0.463	pCi/L	02/21/17 09:43	03/10/17 14:29	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.6*		*40 - 110*	*02/21/17 09:43*	*03/10/17 14:29*	*1*
Y Carrier	*82.2*		*40 - 110*	*02/21/17 09:43*	*03/10/17 14:29*	*1*

Method: 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	0.254	U	0.289	0.289	5.00	0.463	pCi/L		03/15/17 16:45	1

Client Sample ID: DUP
Date Collected: 02/14/17 10:46
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99713-8
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.176	U	0.175	0.176	1.00	0.274	pCi/L	02/21/17 09:02	03/15/17 05:08	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.9*		*40 - 110*	*02/21/17 09:02*	*03/15/17 05:08*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.617	U	0.433	0.437	1.00	0.671	pCi/L	02/21/17 09:43	03/10/17 14:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.9*		*40 - 110*	*02/21/17 09:43*	*03/10/17 14:43*	*1*
Y Carrier	*90.1*		*40 - 110*	*02/21/17 09:43*	*03/10/17 14:43*	*1*

Method: 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	**0.793**		0.467	0.471	5.00	0.671	pCi/L		03/15/17 16:45	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-99713-2

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
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
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)

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-293560/1-A
Matrix: Water
Analysis Batch: 297725

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 293560

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.03149	U	0.0767	0.0768	1.00	0.141	pCi/L	02/21/17 09:02	03/15/17 05:00	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.6*		*40 - 110*	*02/21/17 09:02*	*03/15/17 05:00*	*1*

Lab Sample ID: LCS 160-293560/2-A
Matrix: Water
Analysis Batch: 297725

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 293560

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.4	11.75		1.25	1.00	0.137	pCi/L	103	68 - 137		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*98.8*		*40 - 110*

Lab Sample ID: LCSD 160-293560/3-A
Matrix: Water
Analysis Batch: 297725

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 293560

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			11.4	11.31		1.22	1.00	0.159	pCi/L	99	68 - 137	0.18	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*100*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-293659/1-A
Matrix: Water
Analysis Batch: 296973

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 293659

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.05724	U	0.198	0.198	1.00	0.365	pCi/L	02/21/17 09:43	03/10/17 14:28	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.6*		*40 - 110*	*02/21/17 09:43*	*03/10/17 14:28*	*1*
Y Carrier	*84.1*		*40 - 110*	*02/21/17 09:43*	*03/10/17 14:28*	*1*

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

Lab Sample ID: LCS 160-293659/2-A
Matrix: Water
Analysis Batch: 296973

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 293659

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			13.7	14.08		1.50	1.00	0.329	pCi/L	102	56 - 140		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*98.8*		*40 - 110*
Y Carrier	*89.0*		*40 - 110*

Lab Sample ID: LCSD 160-293659/3-A
Matrix: Water
Analysis Batch: 296973

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 293659

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			13.7	14.75		1.56	1.00	0.385	pCi/L	107	56 - 140	0.22	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*100*		*40 - 110*
Y Carrier	*86.4*		*40 - 110*

Rad

Prep Batch: 293560

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99713-1	MW13	Total/NA	Ground Water	PrecSep-21	
310-99713-2	MW4NC2	Total/NA	Ground Water	PrecSep-21	
310-99713-3	MW11	Total/NA	Ground Water	PrecSep-21	
310-99713-4	MW3	Total/NA	Ground Water	PrecSep-21	
310-99713-5	MW4	Total/NA	Ground Water	PrecSep-21	
310-99713-6	MW9	Total/NA	Ground Water	PrecSep-21	
310-99713-7	MW2	Total/NA	Ground Water	PrecSep-21	
310-99713-8	DUP	Total/NA	Ground Water	PrecSep-21	
MB 160-293560/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-293560/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-293560/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 293659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99713-1	MW13	Total/NA	Ground Water	PrecSep_0	
310-99713-2	MW4NC2	Total/NA	Ground Water	PrecSep_0	
310-99713-3	MW11	Total/NA	Ground Water	PrecSep_0	
310-99713-4	MW3	Total/NA	Ground Water	PrecSep_0	
310-99713-5	MW4	Total/NA	Ground Water	PrecSep_0	
310-99713-6	MW9	Total/NA	Ground Water	PrecSep_0	
310-99713-7	MW2	Total/NA	Ground Water	PrecSep_0	
310-99713-8	DUP	Total/NA	Ground Water	PrecSep_0	
MB 160-293659/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-293659/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-293659/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-99713-2

Client Sample ID: MW13

Lab Sample ID: 310-99713-1

Date Collected: 02/14/17 09:14

Matrix: Ground Water

Date Received: 02/17/17 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			293560	02/21/17 09:02	MBC	TAL SL
Total/NA	Analysis	9315		1	297725	03/15/17 05:02	MLK	TAL SL
Total/NA	Prep	PrecSep_0			293659	02/21/17 09:43	MBC	TAL SL
Total/NA	Analysis	9320		1	296973	03/10/17 14:29	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	297932	03/15/17 16:45	RTM	TAL SL

Client Sample ID: MW4NC2

Lab Sample ID: 310-99713-2

Date Collected: 02/14/17 09:42

Matrix: Ground Water

Date Received: 02/17/17 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			293560	02/21/17 09:02	MBC	TAL SL
Total/NA	Analysis	9315		1	297725	03/15/17 05:02	MLK	TAL SL
Total/NA	Prep	PrecSep_0			293659	02/21/17 09:43	MBC	TAL SL
Total/NA	Analysis	9320		1	296973	03/10/17 14:29	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	297932	03/15/17 16:45	RTM	TAL SL

Client Sample ID: MW11

Lab Sample ID: 310-99713-3

Date Collected: 02/14/17 12:54

Matrix: Ground Water

Date Received: 02/17/17 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			293560	02/21/17 09:02	MBC	TAL SL
Total/NA	Analysis	9315		1	297725	03/15/17 05:02	MLK	TAL SL
Total/NA	Prep	PrecSep_0			293659	02/21/17 09:43	MBC	TAL SL
Total/NA	Analysis	9320		1	296973	03/10/17 14:29	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	297932	03/15/17 16:45	RTM	TAL SL

Client Sample ID: MW3

Lab Sample ID: 310-99713-4

Date Collected: 02/14/17 12:04

Matrix: Ground Water

Date Received: 02/17/17 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			293560	02/21/17 09:02	MBC	TAL SL
Total/NA	Analysis	9315		1	297882	03/15/17 05:08	RTM	TAL SL
Total/NA	Prep	PrecSep_0			293659	02/21/17 09:43	MBC	TAL SL
Total/NA	Analysis	9320		1	296973	03/10/17 14:29	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	297932	03/15/17 16:45	RTM	TAL SL

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-99713-2

Client Sample ID: MW4

Lab Sample ID: 310-99713-5

Date Collected: 02/14/17 10:44
Matrix: Ground Water
Date Received: 02/17/17 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			293560	02/21/17 09:02	MBC	TAL SL
Total/NA	Analysis	9315		1	297882	03/15/17 05:08	RTM	TAL SL
Total/NA	Prep	PrecSep_0			293659	02/21/17 09:43	MBC	TAL SL
Total/NA	Analysis	9320		1	296973	03/10/17 14:29	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	297932	03/15/17 16:45	RTM	TAL SL

Client Sample ID: MW9

Lab Sample ID: 310-99713-6

Date Collected: 02/14/17 11:34
Matrix: Ground Water
Date Received: 02/17/17 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			293560	02/21/17 09:02	MBC	TAL SL
Total/NA	Analysis	9315		1	297882	03/15/17 05:08	RTM	TAL SL
Total/NA	Prep	PrecSep_0			293659	02/21/17 09:43	MBC	TAL SL
Total/NA	Analysis	9320		1	296973	03/10/17 14:29	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	297932	03/15/17 16:45	RTM	TAL SL

Client Sample ID: MW2

Lab Sample ID: 310-99713-7

Date Collected: 02/14/17 10:20
Matrix: Ground Water
Date Received: 02/17/17 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			293560	02/21/17 09:02	MBC	TAL SL
Total/NA	Analysis	9315		1	297882	03/15/17 05:08	RTM	TAL SL
Total/NA	Prep	PrecSep_0			293659	02/21/17 09:43	MBC	TAL SL
Total/NA	Analysis	9320		1	296973	03/10/17 14:29	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	297932	03/15/17 16:45	RTM	TAL SL

Client Sample ID: DUP

Lab Sample ID: 310-99713-8

Date Collected: 02/14/17 10:46
Matrix: Ground Water
Date Received: 02/17/17 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			293560	02/21/17 09:02	MBC	TAL SL
Total/NA	Analysis	9315		1	297882	03/15/17 05:08	RTM	TAL SL
Total/NA	Prep	PrecSep_0			293659	02/21/17 09:43	MBC	TAL SL
Total/NA	Analysis	9320		1	296972	03/10/17 14:43	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	297932	03/15/17 16:45	RTM	TAL SL

Laboratory References:

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

Certification Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-99713-2

Laboratory: TestAmerica Cedar Falls

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
AIHA-LAP, LLC	IHLAP		101044	11-01-18
Georgia	State Program	4	N/A	09-29-17
Illinois	NELAP	5	200024	11-29-17
Iowa	State Program	7	007	12-01-17
Kansas	NELAP	7	E-10341	01-31-18
Minnesota	NELAP	5	019-999-319	12-31-17
Minnesota (Petrofund)	State Program	1	3349	08-22-17
North Dakota	State Program	8	R-186	09-29-17
Oregon	NELAP	10	IA100001	09-29-17

Laboratory: TestAmerica St. Louis

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	MO00054	06-30-17
California	State Program	9	2886	03-31-18 *
Connecticut	State Program	1	PH-0241	03-31-17 *
Florida	NELAP	4	E87689	06-30-17
Illinois	NELAP	5	200023	11-30-17
Iowa	State Program	7	373	02-01-18
Kansas	NELAP	7	E-10236	10-31-17
Kentucky (DW)	State Program	4	90125	12-31-17
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-17
Louisiana (DW)	NELAP	6	LA170011	12-31-17
Maryland	State Program	3	310	09-30-17
Missouri	State Program	7	780	06-30-17
Nevada	State Program	9	MO000542017-1	07-31-17
New Jersey	NELAP	2	MO002	06-30-17
New York	NELAP	2	11616	03-31-17 *
North Dakota	State Program	8	R207	06-30-17
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-17
Pennsylvania	NELAP	3	68-00540	02-28-18
South Carolina	State Program	4	85002001	06-30-17
Texas	NELAP	6	T104704193-16-10	07-31-17
US Fish & Wildlife	Federal		LE058448-0	10-31-17
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542016-8	07-31-17
Virginia	NELAP	3	460230	06-14-17
Washington	State Program	10	C592	08-30-17
West Virginia DEP	State Program	3	381	08-31-17 *

* Certification renewal pending - certification considered valid.

Method Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-99713-2

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL

Protocol References:

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:

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

310-99713 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: OPPD

City/State: Omaha, NE | Project: Nebraska City Unit 1 CF

Receipt Information

Date/Time Received: 2/7/17 1000 | Received By: TP

Delivery Type: ☐ UPS ☑ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ TA Courier ☐ TA Field Services ☐ Client Drop-off ☐ Other:

Condition of Cooler/Containers

Sample(s) received in Cooler?	☑ Yes	☐ No	*If yes:* Cooler ID: AA-31
Multiple Coolers?	☑ Yes	☐ No	*If yes:* Cooler # 1 of 2
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

Temperature Blank? ☑ Yes ☐ No ID & Bottle Type:

NOTE: If yes, use temp blank for measurement. If no, specify sample ID(s) and bottle type used to take measurement.

Thermometer ID: H | Correction Factor (°C): 0.0

Uncorrected Temp (°C): -0.6 | Corrected Temp (°C): -0.6

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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: OPPD

City/State: Omaha, NE | Project: Nebraska CCR Units 1 & 2

Receipt Information

Date/Time Received: 2/7/17 1000 | Received By: TO

Delivery Type: ☐ UPS ☑ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ TA Courier ☐ TA Field Services ☐ Client Drop-off ☐ Other: _____

Condition of Cooler/Containers

Sample(s) received in Cooler? ☑ Yes ☐ No *If yes:* Cooler ID: AA-89

Multiple Coolers? ☑ Yes ☐ No *If yes:* Cooler # 2 of 2

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

Temperature Blank? ☑ Yes ☐ No ID & Bottle Type:

NOTE: If yes, use temp blank for measurement. If no, specify sample ID(s) and bottle type used to take measurement.

Thermometer ID: H | Correction Factor (°C): 0.0

Uncorrected Temp (°C): 0.9 | Corrected Temp (°C): 0.9

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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

SO# 21460

TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Phone (319) 277-2401 Fax (319) 277-2425

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Brad Sojka	Lab PM: Hayes, Shawn M	Carrier Tracking No(s):	COC No:
Client Contact: Brad Sojka	Phone: 402-636-2515	E-Mail: shawn.hayes@testamericainc.com		Page:
Company: Omaha Public Power District		Analysis Requested		Job #:
Address: 444 South 16th Street Mail 9E/EP1	Due Date Requested:			
City: Omaha	TAT Requested (days):			
State, Zip: NE, 68102-2247				
Phone: 402-636-2515(Tel)	PO #:			
Email: bsojka@oppd.com	WO #:			
Project Name: Nebraska City Unit 1 Landfill CCR	TestAmerica Project #: 31007558			
Site:	SSOW#:			

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Combined Ra226 and Ra228	6010C Lithium, 6020A CCR List, 7470A Mercury	2540C TDS, 9056A Chloride, Fluoride, Sulfate	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	D	N		
MW13	2/14/17	0914	G	GW	N	N	X	X	X		
MW4NC2		0942	G	GW			X	X	X		
MW11		1254	G	GW			X	X	X		
MW3		1204	G	GW			X	X	X		
MW4		1044	G	GW			X	X	X		
MW9		1134	G	GW			X	X	X		
MW2		1020	G	GW			X	X	X		
DUP	↓	1046	G	GW	↓	↓	X	X	X		

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	2/16/17 1000		Virgil Mullen	2/17/17 10:00	TestAmerica
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

3/15/2017

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MW13	310-99713-A-1	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW13	310-99713-B-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-99713-C-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4NC2	310-99713-A-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW4NC2	310-99713-B-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4NC2	310-99713-C-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW11	310-99713-A-3	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW11	310-99713-B-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW11	310-99713-C-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW3	310-99713-A-4	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW3	310-99713-B-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW3	310-99713-C-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4	310-99713-A-5	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW4	310-99713-B-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4	310-99713-C-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-99713-A-6	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW9	310-99713-B-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-99713-C-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-99713-A-7	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW2	310-99713-B-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-99713-C-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP	310-99713-A-8	Plastic 250ml - with Nitric Acid	<2	_____	_____
DUP	310-99713-B-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP	310-99713-C-8	Plastic 1 liter - Nitric Acid	<2	_____	_____

TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Phone (319) 277-2401 Fax (319) 277-2425

Chain of Custody Record

310-99713 Chain of Custody

America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Hayes, Shawn M		1
Client Contact: Shipping/Receiving	Phone:	E-Mail: shawn.hayes@testamericainc.com	Nebraska	Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 310-99713-2
Address: 13715 Rider Trail North, ,	Due Date Requested: 3/17/2017			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Nebraska City Unit 1 Landfill CCR	Project #: 31007558			
Site: 310 OPPD Nebraska City Unit 1	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Ra226Ra228_GFPC	9320_Ra228/PrecSep_0 Standard Target List	9315_Ra226/PrecSep_21 Standard Target List	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW13 (310-99713-1)	2/14/17	09:14 Central		Water			X	X	X	2	
MW4NC2 (310-99713-2)	2/14/17	09:42 Central		Water			X	X	X	2	
MW11 (310-99713-3)	2/14/17	12:54 Central		Water			X	X	X	2	
MW3 (310-99713-4)	2/14/17	12:04 Central		Water			X	X	X	2	
MW4 (310-99713-5)	2/14/17	10:44 Central		Water			X	X	X	2	
MW9 (310-99713-6)	2/14/17	11:34 Central		Water			X	X	X	2	
MW2 (310-99713-7)	2/14/17	10:20 Central		Water			X	X	X	2	
DUP (310-99713-8)	2/14/17	10:46 Central		Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 2/17/17 1502	Company	Received by:	Date/Time: 2.20.17 1050	Company TASL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

3/15/2017

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-99713-2

Login Number: 99713

List Source: TestAmerica Cedar Falls

List Number: 1

Creator: Muehling, Angela C

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

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-99713-2

Login Number: 99713
List Number: 2
Creator: Clarke, Jill C

List Source: TestAmerica St. Louis
List Creation: 02/20/17 02:31 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
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.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	20.0, 20.0, 20.0
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?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Tracer/Carrier Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-99713-2

Method: 9315 - Radium-226 (GFPC)

Matrix: Ground Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(40-110)
310-99713-1	MW13	97.1
310-99713-2	MW4NC2	99.1
310-99713-3	MW11	91.2
310-99713-4	MW3	95.0
310-99713-5	MW4	86.1
310-99713-6	MW9	92.0
310-99713-7	MW2	95.6
310-99713-8	DUP	92.9

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9315 - Radium-226 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(40-110)
LCS 160-293560/2-A	Lab Control Sample	98.8
LCSD 160-293560/3-A	Lab Control Sample Dup	100
MB 160-293560/1-A	Method Blank	97.6

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Ground Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
310-99713-1	MW13	97.1	84.1
310-99713-2	MW4NC2	99.1	86.7
310-99713-3	MW11	91.2	83.4
310-99713-4	MW3	95.0	83.0
310-99713-5	MW4	86.1	87.1
310-99713-6	MW9	92.0	80.7
310-99713-7	MW2	95.6	82.2
310-99713-8	DUP	92.9	90.1

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Tracer/Carrier Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-99713-2

Method: 9320 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)									
		Ba	Y								
Lab Sample ID	Client Sample ID	(40-110)	(40-110)								
LCS 160-293659/2-A	Lab Control Sample	98.8	89.0								
LCSD 160-293659/3-A	Lab Control Sample Dup	100	86.4								
MB 160-293659/1-A	Method Blank	97.6	84.1								

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319)277-2401

TestAmerica Job ID: 310-104576-1
Client Project/Site: Nebraska City Unit 1
Sampling Event: CCR and Landfill Q2 and Q4

For:
Omaha Public Power District
Attn: Accounts Payable, 4E/EP-5
444 South 16th Street Mall
Omaha, Nebraska 68102-2247

Attn: Brad Sojka

Authorized for release by:
5/17/2017 5:57:48 PM

Shawn Hayes, Senior Project Manager
(319)277-2401
shawn.hayes@testamericainc.com

Table of Contents

Case Narrative

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-104576-1

Job ID: 310-104576-1

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-104576-1

Comments
No additional comments.

Receipt
The samples were received on 4/28/2017 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.8º C and 5.9º C.

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

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

Sample Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-104576-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-104576-1	MW13	Ground Water	04/25/17 09:58	04/28/17 09:30
310-104576-2	MW4NC2	Ground Water	04/25/17 10:30	04/28/17 09:30
310-104576-3	MW11	Ground Water	04/25/17 11:02	04/28/17 09:30
310-104576-4	MW3	Ground Water	04/25/17 12:52	04/28/17 09:30
310-104576-5	MW4	Ground Water	04/25/17 11:08	04/28/17 09:30
310-104576-6	MW9	Ground Water	04/25/17 13:28	04/28/17 09:30
310-104576-7	MW2	Ground Water	04/25/17 11:32	04/28/17 09:30
310-104576-8	DUP	Ground Water	04/25/17 13:30	04/28/17 09:30

Detection Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-104576-1

Client Sample ID: MW13 — Lab Sample ID: 310-104576-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	12.1		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.803		0.500		mg/L	5		9056A	Total/NA
Sulfate	38.9		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.00269		0.00200		mg/L	1		6020A	Total/NA
Barium	0.358		0.00200		mg/L	1		6020A	Total/NA
Calcium	93.5		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.00141		0.000500		mg/L	1		6020A	Total/NA
Lead	0.000522		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	430		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW4NC2 — Lab Sample ID: 310-104576-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	38.3		5.00		mg/L	5		9056A	Total/NA
Barium	0.300		0.00200		mg/L	1		6020A	Total/NA
Calcium	122		0.200		mg/L	1		6020A	Total/NA
Lead	0.000714		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00323		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	594		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW11 — Lab Sample ID: 310-104576-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.17		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.44		0.500		mg/L	5		9056A	Total/NA
Sulfate	94.7		5.00		mg/L	5		9056A	Total/NA
Barium	0.249		0.00200		mg/L	1		6020A	Total/NA
Boron	1.02		0.200		mg/L	1		6020A	Total/NA
Calcium	102		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.00500		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	508		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW3 — Lab Sample ID: 310-104576-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	10.1		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.974		0.500		mg/L	5		9056A	Total/NA
Sulfate	338		10.0		mg/L	10		9056A	Total/NA
Arsenic	0.0131		0.00200		mg/L	1		6020A	Total/NA
Barium	0.106		0.00200		mg/L	1		6020A	Total/NA
Boron	1.97		0.200		mg/L	1		6020A	Total/NA
Calcium	166		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.00144		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	924		60.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW4 — Lab Sample ID: 310-104576-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.19		5.00		mg/L	5		9056A	Total/NA
Sulfate	244		10.0		mg/L	10		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-104576-1

Client Sample ID: MW4 (Continued) — Lab Sample ID: 310-104576-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00344		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0968		0.00200		mg/L	1		6020A	Total/NA
Boron	1.39		0.200		mg/L	1		6020A	Total/NA
Calcium	102		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.0249		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	582		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW9 — Lab Sample ID: 310-104576-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.80		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.934		0.500		mg/L	5		9056A	Total/NA
Sulfate	291		10.0		mg/L	10		9056A	Total/NA
Arsenic	0.0164		0.00200		mg/L	1		6020A	Total/NA
Barium	0.115		0.00200		mg/L	1		6020A	Total/NA
Boron	2.50		0.200		mg/L	1		6020A	Total/NA
Calcium	164		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.00124		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.0473		0.00200		mg/L	1		6020A	Total/NA
Selenium	0.0101		0.00500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1100		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW2 — Lab Sample ID: 310-104576-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	1.40		0.500		mg/L	5		9056A	Total/NA
Sulfate	59.8		5.00		mg/L	5		9056A	Total/NA
Barium	0.0889		0.00200		mg/L	1		6020A	Total/NA
Boron	0.226		0.200		mg/L	1		6020A	Total/NA
Calcium	87.0		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.0489		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	536		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP — Lab Sample ID: 310-104576-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.01		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.998		0.500		mg/L	5		9056A	Total/NA
Sulfate	294		10.0		mg/L	10		9056A	Total/NA
Arsenic	0.0121		0.00200		mg/L	1		6020A	Total/NA
Barium	0.116		0.00200		mg/L	1		6020A	Total/NA
Boron	2.76		0.200		mg/L	1		6020A	Total/NA
Calcium	166		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.00187		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.0444		0.00200		mg/L	1		6020A	Total/NA
Selenium	0.0120		0.00500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	920		30.0		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW13
Date Collected: 04/25/17 09:58
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104576-1
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**12.1**		5.00		mg/L			05/04/17 03:14	5
Fluoride	**0.803**		0.500		mg/L			05/04/17 03:14	5
Sulfate	**38.9**		5.00		mg/L			05/04/17 03:14	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		05/03/17 07:59	05/04/17 19:14	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		05/02/17 10:00	05/11/17 17:31	1
Arsenic	**0.00269**		0.00200		mg/L		05/02/17 10:00	05/11/17 17:31	1
Barium	**0.358**		0.00200		mg/L		05/02/17 10:00	05/11/17 17:31	1
Beryllium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/11/17 17:31	1
Boron	<0.200		0.200		mg/L		05/02/17 10:00	05/11/17 17:31	1
Cadmium	<0.000500		0.000500		mg/L		05/02/17 10:00	05/11/17 17:31	1
Calcium	**93.5**		0.200		mg/L		05/02/17 10:00	05/11/17 17:31	1
Chromium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/11/17 17:31	1
Cobalt	**0.00141**		0.000500		mg/L		05/02/17 10:00	05/11/17 17:31	1
Lead	**0.000522**		0.000500		mg/L		05/02/17 10:00	05/11/17 17:31	1
Molybdenum	<0.00200		0.00200		mg/L		05/02/17 10:00	05/11/17 17:31	1
Selenium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/11/17 17:31	1
Thallium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/11/17 19:47	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		05/02/17 12:34	05/03/17 14:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**430**		30.0		mg/L			04/29/17 08:01	1

Client Sample ID: MW4NC2

Date Collected: 04/25/17 10:30
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104576-2

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			05/04/17 03:59	5
Fluoride	<0.500		0.500		mg/L			05/04/17 03:59	5
Sulfate	**38.3**		5.00		mg/L			05/04/17 03:59	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		05/03/17 07:59	05/04/17 19:17	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		05/02/17 10:00	05/11/17 17:52	1
Arsenic	<0.00200		0.00200		mg/L		05/02/17 10:00	05/11/17 17:52	1
Barium	**0.300**		0.00200		mg/L		05/02/17 10:00	05/11/17 17:52	1
Beryllium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/11/17 17:52	1
Boron	<0.200		0.200		mg/L		05/02/17 10:00	05/11/17 17:52	1
Cadmium	<0.000500		0.000500		mg/L		05/02/17 10:00	05/11/17 17:52	1
Calcium	**122**		0.200		mg/L		05/02/17 10:00	05/11/17 17:52	1
Chromium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/11/17 17:52	1
Cobalt	<0.000500		0.000500		mg/L		05/02/17 10:00	05/11/17 17:52	1
Lead	**0.000714**		0.000500		mg/L		05/02/17 10:00	05/11/17 17:52	1
Molybdenum	**0.00323**		0.00200		mg/L		05/02/17 10:00	05/11/17 17:52	1
Selenium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/11/17 17:52	1
Thallium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/11/17 19:59	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		05/02/17 12:34	05/03/17 14:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**594**		30.0		mg/L			04/29/17 08:01	1

Client Sample ID: MW11

Date Collected: 04/25/17 11:02
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104576-3

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6.17**		5.00		mg/L			05/04/17 04:14	5
Fluoride	**1.44**		0.500		mg/L			05/04/17 04:14	5
Sulfate	**94.7**		5.00		mg/L			05/04/17 04:14	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		05/03/17 07:59	05/04/17 19:21	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		05/02/17 10:00	05/11/17 17:55	1
Arsenic	<0.00200		0.00200		mg/L		05/02/17 10:00	05/11/17 17:55	1
Barium	**0.249**		0.00200		mg/L		05/02/17 10:00	05/11/17 17:55	1
Beryllium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/11/17 17:55	1
Boron	**1.02**		0.200		mg/L		05/02/17 10:00	05/11/17 17:55	1
Cadmium	<0.000500		0.000500		mg/L		05/02/17 10:00	05/11/17 17:55	1
Calcium	**102**		0.200		mg/L		05/02/17 10:00	05/11/17 17:55	1
Chromium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/11/17 17:55	1
Cobalt	<0.000500		0.000500		mg/L		05/02/17 10:00	05/11/17 17:55	1
Lead	<0.000500		0.000500		mg/L		05/02/17 10:00	05/11/17 17:55	1
Molybdenum	**0.00500**		0.00200		mg/L		05/02/17 10:00	05/11/17 17:55	1
Selenium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/11/17 17:55	1
Thallium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/11/17 20:02	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		05/02/17 12:34	05/03/17 14:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**508**		30.0		mg/L			04/29/17 08:01	1

Client Sample ID: MW3

Date Collected: 04/25/17 12:52
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104576-4

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10.1**		5.00		mg/L			05/04/17 04:29	5
Fluoride	**0.974**		0.500		mg/L			05/04/17 04:29	5
Sulfate	**338**		10.0		mg/L			05/04/17 04:44	10

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		05/03/17 07:59	05/04/17 19:23	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		05/02/17 10:00	05/11/17 17:59	1
Arsenic	**0.0131**		0.00200		mg/L		05/02/17 10:00	05/11/17 17:59	1
Barium	**0.106**		0.00200		mg/L		05/02/17 10:00	05/11/17 17:59	1
Beryllium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/11/17 17:59	1
Boron	**1.97**		0.200		mg/L		05/02/17 10:00	05/11/17 17:59	1
Cadmium	<0.000500		0.000500		mg/L		05/02/17 10:00	05/11/17 17:59	1
Calcium	**166**		0.200		mg/L		05/02/17 10:00	05/11/17 17:59	1
Chromium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/11/17 17:59	1
Cobalt	**0.00144**		0.000500		mg/L		05/02/17 10:00	05/11/17 17:59	1
Lead	<0.000500		0.000500		mg/L		05/02/17 10:00	05/11/17 17:59	1
Molybdenum	<0.00200		0.00200		mg/L		05/02/17 10:00	05/11/17 17:59	1
Selenium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/11/17 17:59	1
Thallium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/11/17 20:14	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		05/02/17 12:34	05/03/17 14:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**924**		60.0		mg/L			04/29/17 08:01	1

Client Sample ID: MW4

Date Collected: 04/25/17 11:08
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104576-5

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5.19**		5.00		mg/L			05/04/17 04:59	5
Fluoride	<0.500		0.500		mg/L			05/04/17 04:59	5
Sulfate	**244**		10.0		mg/L			05/04/17 05:44	10

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		05/03/17 07:59	05/04/17 19:25	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		05/02/17 10:00	05/11/17 18:02	1
Arsenic	**0.00344**		0.00200		mg/L		05/02/17 10:00	05/11/17 18:02	1
Barium	**0.0968**		0.00200		mg/L		05/02/17 10:00	05/11/17 18:02	1
Beryllium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/11/17 18:02	1
Boron	**1.39**		0.200		mg/L		05/02/17 10:00	05/11/17 18:02	1
Cadmium	<0.000500		0.000500		mg/L		05/02/17 10:00	05/11/17 18:02	1
Calcium	**102**		0.200		mg/L		05/02/17 10:00	05/11/17 18:02	1
Chromium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/11/17 18:02	1
Cobalt	<0.000500		0.000500		mg/L		05/02/17 10:00	05/11/17 18:02	1
Lead	<0.000500		0.000500		mg/L		05/02/17 10:00	05/11/17 18:02	1
Molybdenum	**0.0249**		0.00200		mg/L		05/02/17 10:00	05/11/17 18:02	1
Selenium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/11/17 18:02	1
Thallium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/11/17 20:18	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		05/02/17 12:34	05/03/17 14:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**582**		30.0		mg/L			04/29/17 08:01	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-104576-1

Client Sample ID: MW9
Date Collected: 04/25/17 13:28
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104576-6
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5.80**		5.00		mg/L			05/04/17 05:59	5
Fluoride	**0.934**		0.500		mg/L			05/04/17 05:59	5
Sulfate	**291**		10.0		mg/L			05/04/17 06:14	10

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		05/03/17 07:59	05/04/17 19:36	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		05/02/17 10:00	05/11/17 18:05	1
Arsenic	**0.0164**		0.00200		mg/L		05/02/17 10:00	05/11/17 18:05	1
Barium	**0.115**		0.00200		mg/L		05/02/17 10:00	05/11/17 18:05	1
Beryllium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/11/17 18:05	1
Boron	**2.50**		0.200		mg/L		05/02/17 10:00	05/11/17 18:05	1
Cadmium	<0.000500		0.000500		mg/L		05/02/17 10:00	05/11/17 18:05	1
Calcium	**164**		0.200		mg/L		05/02/17 10:00	05/11/17 18:05	1
Chromium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/11/17 18:05	1
Cobalt	**0.00124**		0.000500		mg/L		05/02/17 10:00	05/11/17 18:05	1
Lead	<0.000500		0.000500		mg/L		05/02/17 10:00	05/11/17 18:05	1
Molybdenum	**0.0473**		0.00200		mg/L		05/02/17 10:00	05/11/17 18:05	1
Selenium	**0.0101**		0.00500		mg/L		05/02/17 10:00	05/11/17 18:05	1
Thallium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/11/17 20:21	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		05/02/17 12:34	05/03/17 14:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1100**		30.0		mg/L			04/29/17 08:01	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-104576-1

Client Sample ID: MW2
Date Collected: 04/25/17 11:32
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104576-7
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			05/04/17 06:29	5
Fluoride	**1.40**		0.500		mg/L			05/04/17 06:29	5
Sulfate	**59.8**		5.00		mg/L			05/04/17 06:29	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		05/03/17 08:00	05/04/17 19:40	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		05/02/17 10:00	05/11/17 18:08	1
Arsenic	<0.00200		0.00200		mg/L		05/02/17 10:00	05/11/17 18:08	1
Barium	**0.0889**		0.00200		mg/L		05/02/17 10:00	05/11/17 18:08	1
Beryllium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/11/17 18:08	1
Boron	**0.226**		0.200		mg/L		05/02/17 10:00	05/11/17 18:08	1
Cadmium	<0.000500		0.000500		mg/L		05/02/17 10:00	05/11/17 18:08	1
Calcium	**87.0**		0.200		mg/L		05/02/17 10:00	05/11/17 18:08	1
Chromium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/11/17 18:08	1
Cobalt	<0.000500		0.000500		mg/L		05/02/17 10:00	05/11/17 18:08	1
Lead	<0.000500		0.000500		mg/L		05/02/17 10:00	05/11/17 18:08	1
Molybdenum	**0.0489**		0.00200		mg/L		05/02/17 10:00	05/11/17 18:08	1
Selenium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/11/17 18:08	1
Thallium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/11/17 20:24	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		05/02/17 12:34	05/03/17 14:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**536**		30.0		mg/L			04/29/17 08:01	1

Client Sample ID: DUP

Date Collected: 04/25/17 13:30
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104576-8

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6.01**		5.00		mg/L			05/04/17 06:44	5
Fluoride	**0.998**		0.500		mg/L			05/04/17 06:44	5
Sulfate	**294**		10.0		mg/L			05/04/17 06:59	10

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		05/03/17 08:00	05/04/17 19:42	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		05/02/17 10:00	05/11/17 18:11	1
Arsenic	**0.0121**		0.00200		mg/L		05/02/17 10:00	05/11/17 18:11	1
Barium	**0.116**		0.00200		mg/L		05/02/17 10:00	05/11/17 18:11	1
Beryllium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/11/17 18:11	1
Boron	**2.76**		0.200		mg/L		05/02/17 10:00	05/11/17 18:11	1
Cadmium	<0.000500		0.000500		mg/L		05/02/17 10:00	05/11/17 18:11	1
Calcium	**166**		0.200		mg/L		05/02/17 10:00	05/11/17 18:11	1
Chromium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/11/17 18:11	1
Cobalt	**0.00187**		0.000500		mg/L		05/02/17 10:00	05/11/17 18:11	1
Lead	<0.000500		0.000500		mg/L		05/02/17 10:00	05/11/17 18:11	1
Molybdenum	**0.0444**		0.00200		mg/L		05/02/17 10:00	05/11/17 18:11	1
Selenium	**0.0120**		0.00500		mg/L		05/02/17 10:00	05/11/17 18:11	1
Thallium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/11/17 20:27	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		05/02/17 12:34	05/03/17 14:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**920**		30.0		mg/L			04/29/17 08:01	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.

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
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-165273/3
Matrix: Water
Analysis Batch: 165273

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			05/04/17 02:44	1
Fluoride	<0.100		0.100		mg/L			05/04/17 02:44	1
Sulfate	<1.00		1.00		mg/L			05/04/17 02:44	1

Lab Sample ID: LCS 310-165273/4
Matrix: Water
Analysis Batch: 165273

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	7.50	7.654		mg/L		102	90 - 110
Fluoride	1.50	1.439		mg/L		96	90 - 110
Sulfate	7.50	7.631		mg/L		102	90 - 110

Lab Sample ID: 310-104576-1 MS
Matrix: Ground Water
Analysis Batch: 165273

Client Sample ID: MW13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	12.1		25.0	37.25		mg/L		101	80 - 120
Fluoride	0.803		5.00	6.075		mg/L		105	80 - 120
Sulfate	38.9		25.0	61.91		mg/L		92	80 - 120

Lab Sample ID: 310-104576-1 MSD
Matrix: Ground Water
Analysis Batch: 165273

Client Sample ID: MW13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	12.1		25.0	36.16		mg/L		96	80 - 120	3	15
Fluoride	0.803		5.00	5.452		mg/L		93	80 - 120	11	15
Sulfate	38.9		25.0	63.15		mg/L		97	80 - 120	2	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 310-164981/1-A
Matrix: Water
Analysis Batch: 165335

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 164981

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		05/03/17 07:59	05/04/17 18:34	1

Lab Sample ID: LCS 310-164981/2-A
Matrix: Water
Analysis Batch: 165335

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 164981

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	2.00	1.987		mg/L		99	80 - 120

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 310-104576-2 DU
Matrix: Ground Water
Analysis Batch: 165335

Client Sample ID: MW4NC2
Prep Type: Total/NA
Prep Batch: 164981

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Lithium	<0.0500		<0.0500		mg/L		NC	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 310-164793/1-A
Matrix: Water
Analysis Batch: 166133

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 164793

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		05/02/17 10:00	05/11/17 17:25	1
Arsenic	<0.00200		0.00200		mg/L		05/02/17 10:00	05/11/17 17:25	1
Barium	<0.00200		0.00200		mg/L		05/02/17 10:00	05/11/17 17:25	1
Beryllium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/11/17 17:25	1
Boron	<0.200		0.200		mg/L		05/02/17 10:00	05/11/17 17:25	1
Cadmium	<0.000500		0.000500		mg/L		05/02/17 10:00	05/11/17 17:25	1
Calcium	<0.200		0.200		mg/L		05/02/17 10:00	05/11/17 17:25	1
Chromium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/11/17 17:25	1
Cobalt	<0.000500		0.000500		mg/L		05/02/17 10:00	05/11/17 17:25	1
Lead	<0.000500		0.000500		mg/L		05/02/17 10:00	05/11/17 17:25	1
Molybdenum	<0.00200		0.00200		mg/L		05/02/17 10:00	05/11/17 17:25	1
Selenium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/11/17 17:25	1

Lab Sample ID: MB 310-164793/1-A
Matrix: Water
Analysis Batch: 166134

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 164793

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/11/17 19:41	1

Lab Sample ID: LCS 310-164793/2-A
Matrix: Water
Analysis Batch: 166133

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 164793

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0200	0.02003		mg/L		100	80 - 120
Arsenic	0.0400	0.04398		mg/L		110	80 - 120
Barium	0.0400	0.04588		mg/L		115	80 - 120
Beryllium	0.0200	0.02246		mg/L		112	80 - 120
Boron	0.880	0.9978		mg/L		113	80 - 120
Cadmium	0.0200	0.02274		mg/L		114	80 - 120
Calcium	2.00	2.211		mg/L		111	80 - 120
Chromium	0.0400	0.04412		mg/L		110	80 - 120
Cobalt	0.0200	0.02284		mg/L		114	80 - 120
Lead	0.0200	0.02221		mg/L		111	80 - 120
Molybdenum	0.0400	0.04059		mg/L		101	80 - 120
Selenium	0.0400	0.04326		mg/L		108	80 - 120

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

Lab Sample ID: LCS 310-164793/2-A
Matrix: Water
Analysis Batch: 166134

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 164793

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Thallium	0.0160	0.01630		mg/L		102	80 - 120

Lab Sample ID: 310-104576-1 MS
Matrix: Ground Water
Analysis Batch: 166133

Client Sample ID: MW13
Prep Type: Total/NA
Prep Batch: 164793

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.00100		0.0200	0.01958		mg/L		98	75 - 125
Arsenic	0.00269		0.0400	0.04503		mg/L		106	75 - 125
Barium	0.358		0.0400	0.4183	4	mg/L		150	75 - 125
Beryllium	<0.00100		0.0200	0.02223		mg/L		111	75 - 125
Boron	<0.200		0.880	1.049		mg/L		106	75 - 125
Cadmium	<0.000500		0.0200	0.02249		mg/L		112	75 - 125
Calcium	93.5		2.00	97.29	4	mg/L		187	75 - 125
Chromium	<0.00500		0.0400	0.04171		mg/L		104	75 - 125
Cobalt	0.00141		0.0200	0.02292		mg/L		108	75 - 125
Lead	0.000522		0.0200	0.02266		mg/L		111	75 - 125
Molybdenum	<0.00200		0.0400	0.04354		mg/L		104	75 - 125
Selenium	<0.00500		0.0400	0.04249		mg/L		106	75 - 125

Lab Sample ID: 310-104576-1 MS
Matrix: Ground Water
Analysis Batch: 166134

Client Sample ID: MW13
Prep Type: Total/NA
Prep Batch: 164793

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Thallium	<0.00100		0.0160	0.01687		mg/L		105	75 - 125

Lab Sample ID: 310-104576-1 MSD
Matrix: Ground Water
Analysis Batch: 166133

Client Sample ID: MW13
Prep Type: Total/NA
Prep Batch: 164793

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	<0.00100		0.0200	0.01998		mg/L		100	75 - 125	2	20
Arsenic	0.00269		0.0400	0.04483		mg/L		105	75 - 125	0	20
Barium	0.358		0.0400	0.4291	4	mg/L		177	75 - 125	3	20
Beryllium	<0.00100		0.0200	0.02312		mg/L		116	75 - 125	4	20
Boron	<0.200		0.880	1.080		mg/L		110	75 - 125	3	20
Cadmium	<0.000500		0.0200	0.02271		mg/L		114	75 - 125	1	20
Calcium	93.5		2.00	97.22	4	mg/L		184	75 - 125	0	20
Chromium	<0.00500		0.0400	0.04209		mg/L		105	75 - 125	1	20
Cobalt	0.00141		0.0200	0.02274		mg/L		107	75 - 125	1	20
Lead	0.000522		0.0200	0.02287		mg/L		112	75 - 125	1	20
Molybdenum	<0.00200		0.0400	0.04435		mg/L		106	75 - 125	2	20
Selenium	<0.00500		0.0400	0.04216		mg/L		105	75 - 125	1	20

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

Lab Sample ID: 310-104576-1 MSD
Matrix: Ground Water
Analysis Batch: 166134

Client Sample ID: MW13
Prep Type: Total/NA
Prep Batch: 164793

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Thallium	<0.00100		0.0160	0.01713		mg/L		107	75 - 125	2	20

Lab Sample ID: LCS 310-165820/2-A
Matrix: Water
Analysis Batch: 166133

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 165820

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0200	0.02052		mg/L		103	80 - 120
Arsenic	0.0400	0.04418		mg/L		110	80 - 120
Barium	0.0400	0.04657		mg/L		116	80 - 120
Beryllium	0.0200	0.02203		mg/L		110	80 - 120
Boron	0.880	0.9513		mg/L		108	80 - 120
Cadmium	0.0200	0.02276		mg/L		114	80 - 120
Calcium	2.00	2.207		mg/L		110	80 - 120
Chromium	0.0400	0.04324		mg/L		108	80 - 120
Cobalt	0.0200	0.02239		mg/L		112	80 - 120
Lead	0.0200	0.02215		mg/L		111	80 - 120
Molybdenum	0.0400	0.04097		mg/L		102	80 - 120
Selenium	0.0400	0.04418		mg/L		110	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-164906/1-A
Matrix: Water
Analysis Batch: 165078

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 164906

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		05/02/17 12:34	05/03/17 13:34	1

Lab Sample ID: LCS 310-164906/2-A
Matrix: Water
Analysis Batch: 165078

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 164906

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00167	0.001424		mg/L		85	80 - 120

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

Lab Sample ID: MB 310-164691/1
Matrix: Water
Analysis Batch: 164691

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	<30.0		30.0		mg/L			04/29/17 08:01	1

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

Lab Sample ID: LCS 310-164691/2
Matrix: Water
Analysis Batch: 164691

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	1102		mg/L		110	90 - 110

HPLC/IC

Analysis Batch: 165273

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-104576-1	MW13	Total/NA	Ground Water	9056A	
310-104576-2	MW4NC2	Total/NA	Ground Water	9056A	
310-104576-3	MW11	Total/NA	Ground Water	9056A	
310-104576-4	MW3	Total/NA	Ground Water	9056A	
310-104576-4	MW3	Total/NA	Ground Water	9056A	
310-104576-5	MW4	Total/NA	Ground Water	9056A	
310-104576-5	MW4	Total/NA	Ground Water	9056A	
310-104576-6	MW9	Total/NA	Ground Water	9056A	
310-104576-6	MW9	Total/NA	Ground Water	9056A	
310-104576-7	MW2	Total/NA	Ground Water	9056A	
310-104576-8	DUP	Total/NA	Ground Water	9056A	
310-104576-8	DUP	Total/NA	Ground Water	9056A	
MB 310-165273/3	Method Blank	Total/NA	Water	9056A	
LCS 310-165273/4	Lab Control Sample	Total/NA	Water	9056A	
310-104576-1 MS	MW13	Total/NA	Ground Water	9056A	
310-104576-1 MSD	MW13	Total/NA	Ground Water	9056A	

Metals

Prep Batch: 164793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-104576-1	MW13	Total/NA	Ground Water	3010A	
310-104576-2	MW4NC2	Total/NA	Ground Water	3010A	
310-104576-3	MW11	Total/NA	Ground Water	3010A	
310-104576-4	MW3	Total/NA	Ground Water	3010A	
310-104576-5	MW4	Total/NA	Ground Water	3010A	
310-104576-6	MW9	Total/NA	Ground Water	3010A	
310-104576-7	MW2	Total/NA	Ground Water	3010A	
310-104576-8	DUP	Total/NA	Ground Water	3010A	
MB 310-164793/1-A	Method Blank	Total/NA	Water	3010A	
LCS 310-164793/2-A	Lab Control Sample	Total/NA	Water	3010A	
310-104576-1 MS	MW13	Total/NA	Ground Water	3010A	
310-104576-1 MSD	MW13	Total/NA	Ground Water	3010A	

Prep Batch: 164906

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-104576-1	MW13	Total/NA	Ground Water	7470A	
310-104576-2	MW4NC2	Total/NA	Ground Water	7470A	
310-104576-3	MW11	Total/NA	Ground Water	7470A	
310-104576-4	MW3	Total/NA	Ground Water	7470A	
310-104576-5	MW4	Total/NA	Ground Water	7470A	
310-104576-6	MW9	Total/NA	Ground Water	7470A	
310-104576-7	MW2	Total/NA	Ground Water	7470A	
310-104576-8	DUP	Total/NA	Ground Water	7470A	
MB 310-164906/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-164906/2-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 164981

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-104576-1	MW13	Total/NA	Ground Water	3010A	

Metals (Continued)

Prep Batch: 164981 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-104576-2	MW4NC2	Total/NA	Ground Water	3010A	
310-104576-3	MW11	Total/NA	Ground Water	3010A	
310-104576-4	MW3	Total/NA	Ground Water	3010A	
310-104576-5	MW4	Total/NA	Ground Water	3010A	
310-104576-6	MW9	Total/NA	Ground Water	3010A	
310-104576-7	MW2	Total/NA	Ground Water	3010A	
310-104576-8	DUP	Total/NA	Ground Water	3010A	
MB 310-164981/1-A	Method Blank	Total/NA	Water	3010A	
LCS 310-164981/2-A	Lab Control Sample	Total/NA	Water	3010A	
310-104576-2 DU	MW4NC2	Total/NA	Ground Water	3010A	

Analysis Batch: 165078

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-104576-1	MW13	Total/NA	Ground Water	7470A	164906
310-104576-2	MW4NC2	Total/NA	Ground Water	7470A	164906
310-104576-3	MW11	Total/NA	Ground Water	7470A	164906
310-104576-4	MW3	Total/NA	Ground Water	7470A	164906
310-104576-5	MW4	Total/NA	Ground Water	7470A	164906
310-104576-6	MW9	Total/NA	Ground Water	7470A	164906
310-104576-7	MW2	Total/NA	Ground Water	7470A	164906
310-104576-8	DUP	Total/NA	Ground Water	7470A	164906
MB 310-164906/1-A	Method Blank	Total/NA	Water	7470A	164906
LCS 310-164906/2-A	Lab Control Sample	Total/NA	Water	7470A	164906

Analysis Batch: 165335

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-104576-1	MW13	Total/NA	Ground Water	6010C	164981
310-104576-2	MW4NC2	Total/NA	Ground Water	6010C	164981
310-104576-3	MW11	Total/NA	Ground Water	6010C	164981
310-104576-4	MW3	Total/NA	Ground Water	6010C	164981
310-104576-5	MW4	Total/NA	Ground Water	6010C	164981
310-104576-6	MW9	Total/NA	Ground Water	6010C	164981
310-104576-7	MW2	Total/NA	Ground Water	6010C	164981
310-104576-8	DUP	Total/NA	Ground Water	6010C	164981
MB 310-164981/1-A	Method Blank	Total/NA	Water	6010C	164981
LCS 310-164981/2-A	Lab Control Sample	Total/NA	Water	6010C	164981
310-104576-2 DU	MW4NC2	Total/NA	Ground Water	6010C	164981

Prep Batch: 165820

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 310-165820/2-A	Lab Control Sample	Total/NA	Water	200.8	

Analysis Batch: 166133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-104576-1	MW13	Total/NA	Ground Water	6020A	164793
310-104576-2	MW4NC2	Total/NA	Ground Water	6020A	164793
310-104576-3	MW11	Total/NA	Ground Water	6020A	164793
310-104576-4	MW3	Total/NA	Ground Water	6020A	164793
310-104576-5	MW4	Total/NA	Ground Water	6020A	164793
310-104576-6	MW9	Total/NA	Ground Water	6020A	164793
310-104576-7	MW2	Total/NA	Ground Water	6020A	164793

Metals (Continued)

Analysis Batch: 166133 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-104576-8	DUP	Total/NA	Ground Water	6020A	164793
MB 310-164793/1-A	Method Blank	Total/NA	Water	6020A	164793
LCS 310-164793/2-A	Lab Control Sample	Total/NA	Water	6020A	164793
LCS 310-165820/2-A	Lab Control Sample	Total/NA	Water	6020A	165820
310-104576-1 MS	MW13	Total/NA	Ground Water	6020A	164793
310-104576-1 MSD	MW13	Total/NA	Ground Water	6020A	164793

Analysis Batch: 166134

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-104576-1	MW13	Total/NA	Ground Water	6020A	164793
310-104576-2	MW4NC2	Total/NA	Ground Water	6020A	164793
310-104576-3	MW11	Total/NA	Ground Water	6020A	164793
310-104576-4	MW3	Total/NA	Ground Water	6020A	164793
310-104576-5	MW4	Total/NA	Ground Water	6020A	164793
310-104576-6	MW9	Total/NA	Ground Water	6020A	164793
310-104576-7	MW2	Total/NA	Ground Water	6020A	164793
310-104576-8	DUP	Total/NA	Ground Water	6020A	164793
MB 310-164793/1-A	Method Blank	Total/NA	Water	6020A	164793
LCS 310-164793/2-A	Lab Control Sample	Total/NA	Water	6020A	164793
310-104576-1 MS	MW13	Total/NA	Ground Water	6020A	164793
310-104576-1 MSD	MW13	Total/NA	Ground Water	6020A	164793

General Chemistry

Analysis Batch: 164691

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-104576-1	MW13	Total/NA	Ground Water	SM 2540C	
310-104576-2	MW4NC2	Total/NA	Ground Water	SM 2540C	
310-104576-3	MW11	Total/NA	Ground Water	SM 2540C	
310-104576-4	MW3	Total/NA	Ground Water	SM 2540C	
310-104576-5	MW4	Total/NA	Ground Water	SM 2540C	
310-104576-6	MW9	Total/NA	Ground Water	SM 2540C	
310-104576-7	MW2	Total/NA	Ground Water	SM 2540C	
310-104576-8	DUP	Total/NA	Ground Water	SM 2540C	
MB 310-164691/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-164691/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-104576-1

Client Sample ID: MW13

Date Collected: 04/25/17 09:58
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104576-1
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	165273	05/04/17 03:14	SAD	TAL CF
Total/NA	Prep	3010A			164981	05/03/17 07:59	JNR	TAL CF
Total/NA	Analysis	6010C		1	165335	05/04/17 19:14	OAD	TAL CF
Total/NA	Prep	3010A			164793	05/02/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166133	05/11/17 17:31	OAD	TAL CF
Total/NA	Prep	3010A			164793	05/02/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166134	05/11/17 19:47	OAD	TAL CF
Total/NA	Prep	7470A			164906	05/02/17 12:34	SAD	TAL CF
Total/NA	Analysis	7470A		1	165078	05/03/17 14:01	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	164691	04/29/17 08:01	SAS	TAL CF

Client Sample ID: MW4NC2

Date Collected: 04/25/17 10:30
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104576-2
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	165273	05/04/17 03:59	SAD	TAL CF
Total/NA	Prep	3010A			164981	05/03/17 07:59	JNR	TAL CF
Total/NA	Analysis	6010C		1	165335	05/04/17 19:17	OAD	TAL CF
Total/NA	Prep	3010A			164793	05/02/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166133	05/11/17 17:52	OAD	TAL CF
Total/NA	Prep	3010A			164793	05/02/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166134	05/11/17 19:59	OAD	TAL CF
Total/NA	Prep	7470A			164906	05/02/17 12:34	SAD	TAL CF
Total/NA	Analysis	7470A		1	165078	05/03/17 14:03	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	164691	04/29/17 08:01	SAS	TAL CF

Client Sample ID: MW11

Date Collected: 04/25/17 11:02
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104576-3
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	165273	05/04/17 04:14	SAD	TAL CF
Total/NA	Prep	3010A			164981	05/03/17 07:59	JNR	TAL CF
Total/NA	Analysis	6010C		1	165335	05/04/17 19:21	OAD	TAL CF
Total/NA	Prep	3010A			164793	05/02/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166133	05/11/17 17:55	OAD	TAL CF
Total/NA	Prep	3010A			164793	05/02/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166134	05/11/17 20:02	OAD	TAL CF
Total/NA	Prep	7470A			164906	05/02/17 12:34	SAD	TAL CF
Total/NA	Analysis	7470A		1	165078	05/03/17 14:05	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	164691	04/29/17 08:01	SAS	TAL CF

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-104576-1

Client Sample ID: MW3

Date Collected: 04/25/17 12:52
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104576-4
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	165273	05/04/17 04:29	SAD	TAL CF
Total/NA	Analysis	9056A		10	165273	05/04/17 04:44	SAD	TAL CF
Total/NA	Prep	3010A			164981	05/03/17 07:59	JNR	TAL CF
Total/NA	Analysis	6010C		1	165335	05/04/17 19:23	OAD	TAL CF
Total/NA	Prep	3010A			164793	05/02/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166133	05/11/17 17:59	OAD	TAL CF
Total/NA	Prep	3010A			164793	05/02/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166134	05/11/17 20:14	OAD	TAL CF
Total/NA	Prep	7470A			164906	05/02/17 12:34	SAD	TAL CF
Total/NA	Analysis	7470A		1	165078	05/03/17 14:09	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	164691	04/29/17 08:01	SAS	TAL CF

Client Sample ID: MW4

Date Collected: 04/25/17 11:08
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104576-5
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	165273	05/04/17 04:59	SAD	TAL CF
Total/NA	Analysis	9056A		10	165273	05/04/17 05:44	SAD	TAL CF
Total/NA	Prep	3010A			164981	05/03/17 07:59	JNR	TAL CF
Total/NA	Analysis	6010C		1	165335	05/04/17 19:25	OAD	TAL CF
Total/NA	Prep	3010A			164793	05/02/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166133	05/11/17 18:02	OAD	TAL CF
Total/NA	Prep	3010A			164793	05/02/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166134	05/11/17 20:18	OAD	TAL CF
Total/NA	Prep	7470A			164906	05/02/17 12:34	SAD	TAL CF
Total/NA	Analysis	7470A		1	165078	05/03/17 14:11	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	164691	04/29/17 08:01	SAS	TAL CF

Client Sample ID: MW9

Date Collected: 04/25/17 13:28
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104576-6
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	165273	05/04/17 05:59	SAD	TAL CF
Total/NA	Analysis	9056A		10	165273	05/04/17 06:14	SAD	TAL CF
Total/NA	Prep	3010A			164981	05/03/17 07:59	JNR	TAL CF
Total/NA	Analysis	6010C		1	165335	05/04/17 19:36	OAD	TAL CF
Total/NA	Prep	3010A			164793	05/02/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166133	05/11/17 18:05	OAD	TAL CF
Total/NA	Prep	3010A			164793	05/02/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166134	05/11/17 20:21	OAD	TAL CF

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-104576-1

Client Sample ID: MW9

Date Collected: 04/25/17 13:28
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104576-6

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			164906	05/02/17 12:34	SAD	TAL CF
Total/NA	Analysis	7470A		1	165078	05/03/17 14:13	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	164691	04/29/17 08:01	SAS	TAL CF

Client Sample ID: MW2

Date Collected: 04/25/17 11:32
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104576-7

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	165273	05/04/17 06:29	SAD	TAL CF
Total/NA	Prep	3010A			164981	05/03/17 08:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	165335	05/04/17 19:40	OAD	TAL CF
Total/NA	Prep	3010A			164793	05/02/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166133	05/11/17 18:08	OAD	TAL CF
Total/NA	Prep	3010A			164793	05/02/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166134	05/11/17 20:24	OAD	TAL CF
Total/NA	Prep	7470A			164906	05/02/17 12:34	SAD	TAL CF
Total/NA	Analysis	7470A		1	165078	05/03/17 14:14	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	164691	04/29/17 08:01	SAS	TAL CF

Client Sample ID: DUP

Date Collected: 04/25/17 13:30
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104576-8

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	165273	05/04/17 06:44	SAD	TAL CF
Total/NA	Analysis	9056A		10	165273	05/04/17 06:59	SAD	TAL CF
Total/NA	Prep	3010A			164981	05/03/17 08:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	165335	05/04/17 19:42	OAD	TAL CF
Total/NA	Prep	3010A			164793	05/02/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166133	05/11/17 18:11	OAD	TAL CF
Total/NA	Prep	3010A			164793	05/02/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166134	05/11/17 20:27	OAD	TAL CF
Total/NA	Prep	7470A			164906	05/02/17 12:34	SAD	TAL CF
Total/NA	Analysis	7470A		1	165078	05/03/17 14:16	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	164691	04/29/17 08:01	SAS	TAL CF

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401

Accreditation/Certification Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-104576-1

Laboratory: TestAmerica Cedar Falls

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
AIHA-LAP, LLC	IHLAP		101044	11-01-18
Georgia	State Program	4	N/A	09-29-17
Illinois	NELAP	5	200024	11-29-17
Iowa	State Program	7	007	12-01-17
Kansas	NELAP	7	E-10341	01-31-18
Minnesota	NELAP	5	019-999-319	12-31-17
Minnesota (Petrofund)	State Program	1	3349	08-22-17
North Dakota	State Program	8	R-186	09-29-17
Oregon	NELAP	10	IA100001	09-29-17

Method Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-104576-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	TAL CF
6010C	Metals (ICP)	SW846	TAL CF
6020A	Metals (ICP/MS)	SW846	TAL CF
7470A	Mercury (CVAA)	SW846	TAL CF
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL 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:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

310-104576 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Omaha Public Power

City/State: Omaha, NE | Project: Unit 1 LF

Receipt Information

Date/Time Received: 4.28.17 930 | Received By: BB

Delivery Type: ☐ UPS ☑ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ TA Courier ☐ TA Field Services ☐ Client Drop-off ☐ Other: _____

Condition of Cooler/Containers

Sample(s) received in Cooler?	☑ Yes ☐ No	*If yes:* Cooler ID:	H21
Multiple Coolers?	☑ Yes ☐ No	*If yes:* Cooler #	1 of 2
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: Melted ☐ NONE

Temperature Blank? ☑ Yes ☐ No ID & Bottle Type:

NOTE: If yes, use temp blank for measurement. If no, specify sample ID(s) and bottle type used to take measurement.

Thermometer ID: H | Correction Factor (°C): 0.0

Uncorrected Temp (°C): 2.8 | Corrected Temp (°C): 2.8

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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Omaha Public Power

City/State: Omaha, NE | Project: Unit 1 LF

Receipt Information

Date/Time Received: 4.28.17 930 | Received By: BB

Delivery Type: ☐ UPS ☒ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ TA Courier ☐ TA Field Services ☐ Client Drop-off ☐ Other: _____

Condition of Cooler/Containers

Sample(s) received in Cooler?	☒ Yes	☐ No	*If yes:* Cooler ID: C-41
Multiple Coolers?	☒ Yes	☐ No	*If yes:* Cooler # 2 of 2
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: Melted ☐ NONE

Temperature Blank? ☒ Yes ☐ No ID & Bottle Type: MW-4 HNO3 250 pl

NOTE: If yes, use temp blank for measurement. If no, specify sample ID(s) and bottle type used to take measurement.

Thermometer ID: 4 | Correction Factor (°C): 0.0

Uncorrected Temp (°C): 5.9 | Corrected Temp (°C): 5.9

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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Phone (319) 277-2401 Fax (319) 277-2425

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Brad Sojka	Lab PM: Hayes, Shawn M	Carrier Tracking No(s):	COC No:
Client Contact: Brad Sojka	Phone: 402-626-2515	E-Mail: shawn.hayes@testamericainc.com		Page:
Company: Omaha Public Power District				Job #:
Address: 444 South 16th Street Mall 9E/EP1	Due Date Requested:			
City: Omaha	TAT Requested (days):			
State, Zip: NE, 68102-2247				
Phone: 402-636-2515(Tel)	PO #:			
Email: bsojka@oppd.com	WO #:			
Project Name: Nebraska City Unit 1 Landfill CCR	TestAmerica Project #: 31007558			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Combined Ra226 and Ra228	6010C Lithium, 6020A CCR List, 7470A Mercury	2540C TDS, 9056A Chloride, Fluoride, Sulfate	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	D	N		
MW13	4/25/17	09:58	G	GW			X	X	X		
MW4NC2	4/25/17	10:30	G	GW			X	X	X		
MW11	4/25/17	11:02	G	GW			X	X	X		
MW3	4/25/17	12:52	G	GW			X	X	X		
MW4	4/25/17	11:08	G	GW			X	X	X		
MW9	4/25/17	13:28	G	GW			X	X	X		
MW2	4/25/17	11:32	G	GW			X	X	X		
DUP	4/25/17	13:30	G	GW			X	X	X		

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown* ☐ *Radiological*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1				Cathy Watts	4-28-17 930	A
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MW13	310-104576-A-1	Plastic 250ml - with Nitric Acid	<2		
MW13	310-104576-C-1	Plastic 1 liter - Nitric Acid	<2		
MW13	310-104576-D-1	Plastic 1 liter - Nitric Acid	<2		
MW4NC2	310-104576-A-2	Plastic 250ml - with Nitric Acid	<2		
MW4NC2	310-104576-C-2	Plastic 1 liter - Nitric Acid	<2		
MW4NC2	310-104576-D-2	Plastic 1 liter - Nitric Acid	<2		
MW11	310-104576-A-3	Plastic 250ml - with Nitric Acid	<2		
MW11	310-104576-C-3	Plastic 1 liter - Nitric Acid	<2		
MW11	310-104576-D-3	Plastic 1 liter - Nitric Acid	<2		
MW3	310-104576-A-4	Plastic 250ml - with Nitric Acid	<2		
MW3	310-104576-C-4	Plastic 1 liter - Nitric Acid	<2		
MW3	310-104576-D-4	Plastic 1 liter - Nitric Acid	<2		
MW4	310-104576-A-5	Plastic 250ml - with Nitric Acid	<2		
MW4	310-104576-C-5	Plastic 1 liter - Nitric Acid	<2		
MW4	310-104576-D-5	Plastic 1 liter - Nitric Acid	<2		
MW9	310-104576-A-6	Plastic 250ml - with Nitric Acid	<2		
MW9	310-104576-C-6	Plastic 1 liter - Nitric Acid	<2		
MW9	310-104576-D-6	Plastic 1 liter - Nitric Acid	<2		
MW2	310-104576-A-7	Plastic 250ml - with Nitric Acid	<2		
MW2	310-104576-C-7	Plastic 1 liter - Nitric Acid	<2		
MW2	310-104576-D-7	Plastic 1 liter - Nitric Acid	<2		
DUP	310-104576-A-8	Plastic 250ml - with Nitric Acid	<2		
DUP	310-104576-C-8	Plastic 1 liter - Nitric Acid	<2		
DUP	310-104576-D-8	Plastic 1 liter - Nitric Acid	<2		

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-104576-1

Login Number: 104576
List Number: 1
Creator: Worthy, Ashley L

List Source: TestAmerica Cedar Falls

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319)277-2401

TestAmerica Job ID: 310-104576-2
Client Project/Site: Nebraska City Unit 1
Sampling Event: CCR and Landfill Q2 and Q4

For:
Omaha Public Power District
Attn: Accounts Payable, 4E/EP-5
444 South 16th Street Mall
Omaha, Nebraska 68102-2247

Attn: Brad Sojka

Authorized for release by:
5/26/2017 1:17:02 PM

Shawn Hayes, Senior Project Manager
(319)277-2401
shawn.hayes@testamericainc.com

Table of Contents

Case Narrative

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-104576-2

Job ID: 310-104576-2

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-104576-2

Comments
No additional comments.

Receipt
The samples were received on 4/28/2017 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.8º C and 5.9º C.

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

Sample Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-104576-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-104576-1	MW13	Ground Water	04/25/17 09:58	04/28/17 09:30
310-104576-2	MW4NC2	Ground Water	04/25/17 10:30	04/28/17 09:30
310-104576-3	MW11	Ground Water	04/25/17 11:02	04/28/17 09:30
310-104576-4	MW3	Ground Water	04/25/17 12:52	04/28/17 09:30
310-104576-5	MW4	Ground Water	04/25/17 11:08	04/28/17 09:30
310-104576-6	MW9	Ground Water	04/25/17 13:28	04/28/17 09:30
310-104576-7	MW2	Ground Water	04/25/17 11:32	04/28/17 09:30
310-104576-8	DUP	Ground Water	04/25/17 13:30	04/28/17 09:30

Client Sample ID: MW13
Date Collected: 04/25/17 09:58
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104576-1
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.159**		0.0876	0.0887	1.00	0.113	pCi/L	05/04/17 09:39	05/26/17 07:59	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*104*		*40 - 110*	*05/04/17 09:39*	*05/26/17 07:59*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.270	U	0.210	0.212	1.00	0.332	pCi/L	05/04/17 09:57	05/17/17 12:57	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*104*		*40 - 110*	*05/04/17 09:57*	*05/17/17 12:57*	*1*
Y Carrier	*87.5*		*40 - 110*	*05/04/17 09:57*	*05/17/17 12:57*	*1*

Method: 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	**0.429**		0.228	0.230	5.00	0.332	pCi/L		05/26/17 12:36	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-104576-2

Client Sample ID: MW4NC2
Date Collected: 04/25/17 10:30
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104576-2
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.611		0.141	0.152	1.00	0.102	pCi/L	05/04/17 09:39	05/26/17 07:59	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*105*		*40 - 110*	*05/04/17 09:39*	*05/26/17 07:59*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.620		0.229	0.236	1.00	0.313	pCi/L	05/04/17 09:57	05/17/17 12:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*105*		*40 - 110*	*05/04/17 09:57*	*05/17/17 12:58*	*1*
Y Carrier	*86.0*		*40 - 110*	*05/04/17 09:57*	*05/17/17 12:58*	*1*

Method: 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	1.23		0.269	0.281	5.00	0.313	pCi/L		05/26/17 12:36	1

Client Sample ID: MW11

Date Collected: 04/25/17 11:02
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104576-3

Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.142**		0.0854	0.0864	1.00	0.114	pCi/L	05/04/17 09:39	05/26/17 07:59	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.1*		*40 - 110*	*05/04/17 09:39*	*05/26/17 07:59*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.216	U	0.231	0.232	1.00	0.378	pCi/L	05/04/17 09:57	05/17/17 12:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.1*		*40 - 110*	*05/04/17 09:57*	*05/17/17 12:58*	*1*
Y Carrier	*78.5*		*40 - 110*	*05/04/17 09:57*	*05/17/17 12:58*	*1*

Method: 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	0.358	U	0.247	0.248	5.00	0.378	pCi/L		05/26/17 12:36	1

Client Sample ID: MW3

Date Collected: 04/25/17 12:52
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104576-4

Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.205**		0.0878	0.0897	1.00	0.0910	pCi/L	05/04/17 09:39	05/26/17 08:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*05/04/17 09:39*	*05/26/17 08:00*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0367	U	0.177	0.177	1.00	0.312	pCi/L	05/04/17 09:57	05/17/17 12:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*05/04/17 09:57*	*05/17/17 12:58*	*1*
Y Carrier	*86.0*		*40 - 110*	*05/04/17 09:57*	*05/17/17 12:58*	*1*

Method: 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	0.242	U	0.198	0.198	5.00	0.312	pCi/L		05/26/17 12:36	1

Client Sample ID: MW4
Date Collected: 04/25/17 11:08
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104576-5
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.261		0.108	0.111	1.00	0.120	pCi/L	05/04/17 09:39	05/26/17 08:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.8*		*40 - 110*	*05/04/17 09:39*	*05/26/17 08:00*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0526	U	0.198	0.199	1.00	0.348	pCi/L	05/04/17 09:57	05/17/17 12:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.8*		*40 - 110*	*05/04/17 09:57*	*05/17/17 12:58*	*1*
Y Carrier	*84.5*		*40 - 110*	*05/04/17 09:57*	*05/17/17 12:58*	*1*

Method: 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	0.313	U	0.226	0.227	5.00	0.348	pCi/L		05/26/17 12:36	1

Client Sample ID: MW9
Date Collected: 04/25/17 13:28
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104576-6
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.344**		0.112	0.116	1.00	0.0961	pCi/L	05/04/17 09:39	05/26/17 08:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*104*		*40 - 110*	*05/04/17 09:39*	*05/26/17 08:00*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.248	U	0.180	0.181	1.00	0.279	pCi/L	05/04/17 09:57	05/17/17 12:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*104*		*40 - 110*	*05/04/17 09:57*	*05/17/17 12:58*	*1*
Y Carrier	*87.9*		*40 - 110*	*05/04/17 09:57*	*05/17/17 12:58*	*1*

Method: 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	**0.592**		0.212	0.215	5.00	0.279	pCi/L		05/26/17 12:36	1

Client Sample ID: MW2
Date Collected: 04/25/17 11:32
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104576-7
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.177**		0.0836	0.0851	1.00	0.0905	pCi/L	05/04/17 09:39	05/26/17 08:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*105*		*40 - 110*	*05/04/17 09:39*	*05/26/17 08:00*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.219	U	0.167	0.168	1.00	0.261	pCi/L	05/04/17 09:57	05/17/17 12:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*105*		*40 - 110*	*05/04/17 09:57*	*05/17/17 12:58*	*1*
Y Carrier	*88.2*		*40 - 110*	*05/04/17 09:57*	*05/17/17 12:58*	*1*

Method: 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	**0.396**		0.187	0.189	5.00	0.261	pCi/L		05/26/17 12:36	1

Client Sample ID: DUP

Date Collected: 04/25/17 13:30
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104576-8

Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.195		0.0956	0.0972	1.00	0.108	pCi/L	05/04/17 09:39	05/26/17 08:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.7*		*40 - 110*	*05/04/17 09:39*	*05/26/17 08:00*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.375		0.226	0.229	1.00	0.341	pCi/L	05/04/17 09:57	05/17/17 12:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.7*		*40 - 110*	*05/04/17 09:57*	*05/17/17 12:58*	*1*
Y Carrier	*88.2*		*40 - 110*	*05/04/17 09:57*	*05/17/17 12:58*	*1*

Method: 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	0.570		0.246	0.249	5.00	0.341	pCi/L		05/26/17 12:36	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-104576-2

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
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-104576-2

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-307221/1-A
Matrix: Water
Analysis Batch: 310847

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 307221

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.1154	U	0.0837	0.0843	1.00	0.120	pCi/L	05/04/17 09:39	05/26/17 06:11	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.8*		*40 - 110*	*05/04/17 09:39*	*05/26/17 06:11*	*1*

Lab Sample ID: LCS 160-307221/2-A
Matrix: Water
Analysis Batch: 310847

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 307221

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.4	10.87		1.13	1.00	0.101	pCi/L	96	68 - 137		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*107*		*40 - 110*

Lab Sample ID: LCSD 160-307221/3-A
Matrix: Water
Analysis Batch: 310847

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 307221

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			11.4	11.66		1.20	1.00	0.107	pCi/L	103	68 - 137	0.34	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*108*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-307228/1-A
Matrix: Water
Analysis Batch: 309105

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 307228

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.09721	U	0.232	0.232	1.00	0.398	pCi/L	05/04/17 09:57	05/17/17 12:56	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.8*		*40 - 110*	*05/04/17 09:57*	*05/17/17 12:56*	*1*
Y Carrier	*77.0*		*40 - 110*	*05/04/17 09:57*	*05/17/17 12:56*	*1*

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

Lab Sample ID: LCS 160-307228/2-A
Matrix: Water
Analysis Batch: 309105

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 307228

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			13.4	13.69		1.45	1.00	0.316	pCi/L	102	56 - 140		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*107*		*40 - 110*
Y Carrier	*87.5*		*40 - 110*

Lab Sample ID: LCSD 160-307228/3-A
Matrix: Water
Analysis Batch: 309105

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 307228

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			13.4	13.31		1.42	1.00	0.349	pCi/L	99	56 - 140	0.13	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*108*		*40 - 110*
Y Carrier	*85.6*		*40 - 110*

Rad

Prep Batch: 307221

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-104576-1	MW13	Total/NA	Ground Water	PrecSep-21	
310-104576-2	MW4NC2	Total/NA	Ground Water	PrecSep-21	
310-104576-3	MW11	Total/NA	Ground Water	PrecSep-21	
310-104576-4	MW3	Total/NA	Ground Water	PrecSep-21	
310-104576-5	MW4	Total/NA	Ground Water	PrecSep-21	
310-104576-6	MW9	Total/NA	Ground Water	PrecSep-21	
310-104576-7	MW2	Total/NA	Ground Water	PrecSep-21	
310-104576-8	DUP	Total/NA	Ground Water	PrecSep-21	
MB 160-307221/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-307221/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-307221/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 307228

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-104576-1	MW13	Total/NA	Ground Water	PrecSep_0	
310-104576-2	MW4NC2	Total/NA	Ground Water	PrecSep_0	
310-104576-3	MW11	Total/NA	Ground Water	PrecSep_0	
310-104576-4	MW3	Total/NA	Ground Water	PrecSep_0	
310-104576-5	MW4	Total/NA	Ground Water	PrecSep_0	
310-104576-6	MW9	Total/NA	Ground Water	PrecSep_0	
310-104576-7	MW2	Total/NA	Ground Water	PrecSep_0	
310-104576-8	DUP	Total/NA	Ground Water	PrecSep_0	
MB 160-307228/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-307228/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-307228/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-104576-2

Client Sample ID: MW13

Lab Sample ID: 310-104576-1

Date Collected: 04/25/17 09:58

Matrix: Ground Water

Date Received: 04/28/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307221	05/04/17 09:39	LDE	TAL SL
Total/NA	Analysis	9315		1	310847	05/26/17 07:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			307228	05/04/17 09:57	LDE	TAL SL
Total/NA	Analysis	9320		1	308928	05/17/17 12:57	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

Client Sample ID: MW4NC2

Lab Sample ID: 310-104576-2

Date Collected: 04/25/17 10:30

Matrix: Ground Water

Date Received: 04/28/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307221	05/04/17 09:39	LDE	TAL SL
Total/NA	Analysis	9315		1	310847	05/26/17 07:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			307228	05/04/17 09:57	LDE	TAL SL
Total/NA	Analysis	9320		1	308928	05/17/17 12:58	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

Client Sample ID: MW11

Lab Sample ID: 310-104576-3

Date Collected: 04/25/17 11:02

Matrix: Ground Water

Date Received: 04/28/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307221	05/04/17 09:39	LDE	TAL SL
Total/NA	Analysis	9315		1	310847	05/26/17 07:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			307228	05/04/17 09:57	LDE	TAL SL
Total/NA	Analysis	9320		1	308928	05/17/17 12:58	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

Client Sample ID: MW3

Lab Sample ID: 310-104576-4

Date Collected: 04/25/17 12:52

Matrix: Ground Water

Date Received: 04/28/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307221	05/04/17 09:39	LDE	TAL SL
Total/NA	Analysis	9315		1	310847	05/26/17 08:00	RTM	TAL SL
Total/NA	Prep	PrecSep_0			307228	05/04/17 09:57	LDE	TAL SL
Total/NA	Analysis	9320		1	308928	05/17/17 12:58	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-104576-2

Client Sample ID: MW4

Lab Sample ID: 310-104576-5

Date Collected: 04/25/17 11:08
Date Received: 04/28/17 09:30

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307221	05/04/17 09:39	LDE	TAL SL
Total/NA	Analysis	9315		1	310847	05/26/17 08:00	RTM	TAL SL
Total/NA	Prep	PrecSep_0			307228	05/04/17 09:57	LDE	TAL SL
Total/NA	Analysis	9320		1	308928	05/17/17 12:58	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

Client Sample ID: MW9

Lab Sample ID: 310-104576-6

Date Collected: 04/25/17 13:28
Date Received: 04/28/17 09:30

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307221	05/04/17 09:39	LDE	TAL SL
Total/NA	Analysis	9315		1	310847	05/26/17 08:00	RTM	TAL SL
Total/NA	Prep	PrecSep_0			307228	05/04/17 09:57	LDE	TAL SL
Total/NA	Analysis	9320		1	308928	05/17/17 12:58	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

Client Sample ID: MW2

Lab Sample ID: 310-104576-7

Date Collected: 04/25/17 11:32
Date Received: 04/28/17 09:30

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307221	05/04/17 09:39	LDE	TAL SL
Total/NA	Analysis	9315		1	310847	05/26/17 08:00	RTM	TAL SL
Total/NA	Prep	PrecSep_0			307228	05/04/17 09:57	LDE	TAL SL
Total/NA	Analysis	9320		1	308928	05/17/17 12:58	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

Client Sample ID: DUP

Lab Sample ID: 310-104576-8

Date Collected: 04/25/17 13:30
Date Received: 04/28/17 09:30

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307221	05/04/17 09:39	LDE	TAL SL
Total/NA	Analysis	9315		1	310847	05/26/17 08:00	RTM	TAL SL
Total/NA	Prep	PrecSep_0			307228	05/04/17 09:57	LDE	TAL SL
Total/NA	Analysis	9320		1	308928	05/17/17 12:58	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

Laboratory References:

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

Accreditation/Certification Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-104576-2

Laboratory: TestAmerica Cedar Falls

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
AIHA-LAP, LLC	IHLAP		101044	11-01-18
Georgia	State Program	4	N/A	09-29-17
Illinois	NELAP	5	200024	11-29-17
Iowa	State Program	7	007	12-01-17
Kansas	NELAP	7	E-10341	01-31-18
Minnesota	NELAP	5	019-999-319	12-31-17
Minnesota (Petrofund)	State Program	1	3349	08-22-17
North Dakota	State Program	8	R-186	09-29-17
Oregon	NELAP	10	IA100001	09-29-17

Laboratory: TestAmerica St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-17 *
California	State Program	9	2886	03-31-18 *
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-17 *
Illinois	NELAP	5	200023	11-30-17
Iowa	State Program	7	373	02-01-18
Kansas	NELAP	7	E-10236	10-31-17
Kentucky (DW)	State Program	4	90125	12-31-17
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-17 *
Louisiana (DW)	NELAP	6	LA170011	12-31-17
Maryland	State Program	3	310	09-30-17
Missouri	State Program	7	780	06-30-17 *
Nevada	State Program	9	MO000542017-1	07-31-17
New Jersey	NELAP	2	MO002	06-30-17 *
New York	NELAP	2	11616	03-31-18
North Dakota	State Program	8	R207	06-30-17
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-17
Pennsylvania	NELAP	3	68-00540	02-21-18
South Carolina	State Program	4	85002001	06-30-17 *
Texas	NELAP	6	T104704193-16-10	07-31-17
US Fish & Wildlife	Federal		LE058448-0	10-31-17
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542016-8	07-31-17
Virginia	NELAP	3	460230	06-14-17 *
Washington	State Program	10	C592	08-30-17
West Virginia DEP	State Program	3	381	08-31-17 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-104576-2

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL

Protocol References:

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:

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

310-104576 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Omaha Public Power

City/State: Omaha, NE | Project: Unit 1 LF

Receipt Information

Date/Time Received: 4.28.17 930 | Received By: BB

Delivery Type: ☐ UPS ☑ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ TA Courier ☐ TA Field Services ☐ Client Drop-off ☐ Other:

Condition of Cooler/Containers

Sample(s) received in Cooler?	☑ Yes	☐ No	*If yes:* Cooler ID: H21
Multiple Coolers?	☑ Yes	☐ No	*If yes:* Cooler # 1 of 2
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: Melted ☐ NONE

Temperature Blank? ☑ Yes ☐ No ID & Bottle Type:

NOTE: If yes, use temp blank for measurement. If no, specify sample ID(s) and bottle type used to take measurement.

Thermometer ID: H | Correction Factor (°C): 0.0

Uncorrected Temp (°C): 2.8 | Corrected Temp (°C): 2.8

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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Omaha Public Power

City/State: Omaha, NE | Project: Unit 1 LF

Receipt Information

Date/Time Received: 4.28.17 930 | Received By: BB

Delivery Type: ☐ UPS ☒ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ TA Courier ☐ TA Field Services ☐ Client Drop-off ☐ Other: _____

Condition of Cooler/Containers

Sample(s) received in Cooler?	☒ Yes	☐ No	*If yes:* Cooler ID: C-41
Multiple Coolers?	☒ Yes	☐ No	*If yes:* Cooler # 2 of 2
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: melted ☐ NONE

Temperature Blank? ☒ Yes ☐ No ID & Bottle Type: MW-4 HNO3 250 pl

NOTE: If yes, use temp blank for measurement. If no, specify sample ID(s) and bottle type used to take measurement.

Thermometer ID: H | Correction Factor (°C): 0.0

Uncorrected Temp (°C): 5.9 | Corrected Temp (°C): 5.9

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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Phone (319) 277-2401 Fax (319) 277-2425

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Brad Sojka	Lab PM: Hayes, Shawn M	Carrier Tracking No(s):	COC No:
Client Contact: Brad Sojka	Phone: 402-626-2515	E-Mail: shawn.hayes@testamericainc.com		Page:
Company: Omaha Public Power District				Job #:
Address: 444 South 16th Street Mall 9E/EP1	Due Date Requested:			
City: Omaha	TAT Requested (days):			
State, Zip: NE, 68102-2247				
Phone: 402-636-2515(Tel)	PO #:			
Email: bsojka@oppd.com	WO #:			
Project Name: Nebraska City Unit 1 Landfill CCR	TestAmerica Project #: 31007558			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Combined Ra226 and Ra228	6010C Lithium, 6020A CCR List, 7470A Mercury	2540C TDS, 9056A Chloride, Fluoride, Sulfate	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	D	N		
MW13	4/25/17	09:58	G	GW			X	X	X		
MW4NC2	4/25/17	10:30	G	GW			X	X	X		
MW11	4/25/17	11:02	G	GW			X	X	X		
MW3	4/25/17	12:52	G	GW			X	X	X		
MW4	4/25/17	11:08	G	GW			X	X	X		
MW9	4/25/17	13:28	G	GW			X	X	X		
MW2	4/25/17	11:32	G	GW			X	X	X		
DUP	4/25/17	13:30	G	GW			X	X	X		

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown* ☐ *Radiological*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
			Cathy Watts	4-28-17 930	A
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

5/26/2017

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MW13	310-104576-A-1	Plastic 250ml - with Nitric Acid	<2		
MW13	310-104576-C-1	Plastic 1 liter - Nitric Acid	<2		
MW13	310-104576-D-1	Plastic 1 liter - Nitric Acid	<2		
MW4NC2	310-104576-A-2	Plastic 250ml - with Nitric Acid	<2		
MW4NC2	310-104576-C-2	Plastic 1 liter - Nitric Acid	<2		
MW4NC2	310-104576-D-2	Plastic 1 liter - Nitric Acid	<2		
MW11	310-104576-A-3	Plastic 250ml - with Nitric Acid	<2		
MW11	310-104576-C-3	Plastic 1 liter - Nitric Acid	<2		
MW11	310-104576-D-3	Plastic 1 liter - Nitric Acid	<2		
MW3	310-104576-A-4	Plastic 250ml - with Nitric Acid	<2		
MW3	310-104576-C-4	Plastic 1 liter - Nitric Acid	<2		
MW3	310-104576-D-4	Plastic 1 liter - Nitric Acid	<2		
MW4	310-104576-A-5	Plastic 250ml - with Nitric Acid	<2		
MW4	310-104576-C-5	Plastic 1 liter - Nitric Acid	<2		
MW4	310-104576-D-5	Plastic 1 liter - Nitric Acid	<2		
MW9	310-104576-A-6	Plastic 250ml - with Nitric Acid	<2		
MW9	310-104576-C-6	Plastic 1 liter - Nitric Acid	<2		
MW9	310-104576-D-6	Plastic 1 liter - Nitric Acid	<2		
MW2	310-104576-A-7	Plastic 250ml - with Nitric Acid	<2		
MW2	310-104576-C-7	Plastic 1 liter - Nitric Acid	<2		
MW2	310-104576-D-7	Plastic 1 liter - Nitric Acid	<2		
DUP	310-104576-A-8	Plastic 250ml - with Nitric Acid	<2		
DUP	310-104576-C-8	Plastic 1 liter - Nitric Acid	<2		
DUP	310-104576-D-8	Plastic 1 liter - Nitric Acid	<2		

TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Phone (319) 277-2401 Fax (319) 277-2425

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

310-104576 Chain of Custody

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Hayes, Shawn M	COC No: 310-9226.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: shawn.hayes@testamericainc.com | Nebraska	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):	Job #: 310-104576-2
Address: 13715 Rider Trail North,	Due Date Requested: 5/26/2017		
City: Earth City	TAT Requested (days):		
State, Zip: MO, 63045			
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:		
Email:	WO #:		
Project Name: Nebraska City Unit 1 Landfill CCR	Project #: 31007558		
Site: 310 OPPD Nebraska City Unit 1	SSOW#:		

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Ra226Ra228_GFPC	9315_Ra226/PrecSep_21 Standard Target List	9320_Ra228/PrecSep_0 Standard Target List	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW13 (310-104576-1)	4/25/17	09:58 Central		Water			X	X	X	2	
MW4NC2 (310-104576-2)	4/25/17	10:30 Central		Water			X	X	X	2	
MW11 (310-104576-3)	4/25/17	11:02 Central		Water			X	X	X	2	
MW3 (310-104576-4)	4/25/17	12:52 Central		Water			X	X	X	2	
MW4 (310-104576-5)	4/25/17	11:08 Central		Water			X	X	X	2	
MW9 (310-104576-6)	4/25/17	13:28 Central		Water			X	X	X	2	
MW2 (310-104576-7)	4/25/17	11:32 Central		Water			X	X	X	2	
DUP (310-104576-8)	4/25/17	13:30 Central		Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 4/25/17 1614	Company	Received by:	Date/Time: 5/1/17 0915	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-104576-2

Login Number: 104576

List Source: TestAmerica Cedar Falls

List Number: 1

Creator: Worthy, Ashley L

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-104576-2

Login Number: 104576
List Number: 2
Creator: Daniels, Brian J

List Source: TestAmerica St. Louis
List Creation: 05/01/17 04:41 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
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.	False	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	18
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?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Tracer/Carrier Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-104576-2

Method: 9315 - Radium-226 (GFPC)

Matrix: Ground Water — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(40-110)
310-104576-1	MW13	104
310-104576-2	MW4NC2	105
310-104576-3	MW11	99.1
310-104576-4	MW3	103
310-104576-5	MW4	96.8
310-104576-6	MW9	104
310-104576-7	MW2	105
310-104576-8	DUP	89.7

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9315 - Radium-226 (GFPC)

Matrix: Water — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(40-110)
LCS 160-307221/2-A	Lab Control Sample	107
LCSD 160-307221/3-A	Lab Control Sample Dup	108
MB 160-307221/1-A	Method Blank	96.8

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Ground Water — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
310-104576-1	MW13	104	87.5
310-104576-2	MW4NC2	105	86.0
310-104576-3	MW11	99.1	78.5
310-104576-4	MW3	103	86.0
310-104576-5	MW4	96.8	84.5
310-104576-6	MW9	104	87.9
310-104576-7	MW2	105	88.2
310-104576-8	DUP	89.7	88.2

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Tracer/Carrier Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-104576-2

Method: 9320 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)									
		Ba	Y								
Lab Sample ID	Client Sample ID	(40-110)	(40-110)								
LCS 160-307228/2-A	Lab Control Sample	107	87.5								
LCSD 160-307228/3-A	Lab Control Sample Dup	108	85.6								
MB 160-307228/1-A	Method Blank	96.8	77.0								

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319)277-2401

TestAmerica Job ID: 310-108372-1
Client Project/Site: Nebraska City Unit 1 Landfill CCR
Sampling Event: CCR and Landfill Q2 and Q4

For:
Omaha Public Power District
Attn: Accounts Payable, 4E/EP-5
444 South 16th Street Mall
Omaha, Nebraska 68102-2247

Attn: Brad Sojka

Authorized for release by:
6/29/2017 4:35:34 PM

Shawn Hayes, Senior Project Manager
(319)277-2401
shawn.hayes@testamericainc.com

Table of Contents

Case Narrative

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-108372-1

Job ID: 310-108372-1

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-108372-1

Comments
No additional comments.

Receipt
The samples were received on 6/22/2017 9:25 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.5º C and 2.8º C.

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

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

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

Sample Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-108372-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-108372-1	MW13	Ground Water	06/20/17 09:46	06/22/17 09:25
310-108372-2	MW4NC2	Ground Water	06/20/17 10:20	06/22/17 09:25
310-108372-3	MW11	Ground Water	06/20/17 12:49	06/22/17 09:25
310-108372-4	MW3	Ground Water	06/20/17 12:18	06/22/17 09:25
310-108372-5	MW4	Ground Water	06/20/17 11:18	06/22/17 09:25
310-108372-6	MW9	Ground Water	06/20/17 11:42	06/22/17 09:25
310-108372-7	MW2	Ground Water	06/20/17 10:50	06/22/17 09:25
310-108372-8	DUP	Ground Water	06/20/17 11:44	06/22/17 09:25

Detection Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-108372-1

Client Sample ID: MW13 — Lab Sample ID: 310-108372-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	12.7		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.505		0.500		mg/L	5		9056A	Total/NA
Sulfate	35.6		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.00268		0.00200		mg/L	1		6020A	Total/NA
Barium	0.311		0.00200		mg/L	1		6020A	Total/NA
Calcium	88.6		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.00119		0.000500		mg/L	1		6020A	Total/NA
Lead	0.00171		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	456		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW4NC2 — Lab Sample ID: 310-108372-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	33.1		5.00		mg/L	5		9056A	Total/NA
Barium	0.258		0.00200		mg/L	1		6020A	Total/NA
Calcium	119		0.200		mg/L	1		6020A	Total/NA
Lead	0.000754		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00551		0.00200		mg/L	1		6020A	Total/NA
Selenium	0.00593		0.00500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	558		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW11 — Lab Sample ID: 310-108372-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.562		0.500		mg/L	5		9056A	Total/NA
Sulfate	80.4		5.00		mg/L	5		9056A	Total/NA
Antimony	0.00235		0.00100		mg/L	1		6020A	Total/NA
Barium	0.156		0.00200		mg/L	1		6020A	Total/NA
Boron	0.843		0.200		mg/L	1		6020A	Total/NA
Calcium	76.1		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000549		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00788		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	400		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW3 — Lab Sample ID: 310-108372-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	10.5		10.0		mg/L	10		9056A	Total/NA
Fluoride	0.591		0.500		mg/L	5		9056A	Total/NA
Sulfate	361		10.0		mg/L	10		9056A	Total/NA
Arsenic	0.0195		0.00200		mg/L	1		6020A	Total/NA
Barium	0.115		0.00200		mg/L	1		6020A	Total/NA
Boron	2.42		0.200		mg/L	1		6020A	Total/NA
Calcium	155		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.00196		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1070		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW4 — Lab Sample ID: 310-108372-5

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW4 (Continued) — Lab Sample ID: 310-108372-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	210		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.00334		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0679		0.00200		mg/L	1		6020A	Total/NA
Boron	1.16		0.200		mg/L	1		6020A	Total/NA
Calcium	89.9		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.0356		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	448		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW9 — Lab Sample ID: 310-108372-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.69		5.00		mg/L	5		9056A	Total/NA
Sulfate	218		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.0100		0.00200		mg/L	1		6020A	Total/NA
Barium	0.114		0.00200		mg/L	1		6020A	Total/NA
Boron	1.39		0.200		mg/L	1		6020A	Total/NA
Calcium	174		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.00295		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.0486		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	870		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW2 — Lab Sample ID: 310-108372-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	54.4		5.00		mg/L	5		9056A	Total/NA
Barium	0.116		0.00200		mg/L	1		6020A	Total/NA
Calcium	112		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.0380		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	496		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP — Lab Sample ID: 310-108372-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.03		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.683		0.500		mg/L	5		9056A	Total/NA
Sulfate	227		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.0101		0.00200		mg/L	1		6020A	Total/NA
Barium	0.111		0.00200		mg/L	1		6020A	Total/NA
Boron	1.46		0.200		mg/L	1		6020A	Total/NA
Calcium	175		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.00210		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.0498		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	864		30.0		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW13
Date Collected: 06/20/17 09:46
Date Received: 06/22/17 09:25

Lab Sample ID: 310-108372-1
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**12.7**		5.00		mg/L			06/28/17 23:12	5
Fluoride	**0.505**		0.500		mg/L			06/28/17 23:12	5
Sulfate	**35.6**		5.00		mg/L			06/28/17 23:12	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/27/17 10:00	06/27/17 22:02	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/26/17 15:27	06/26/17 18:35	1
Arsenic	**0.00268**		0.00200		mg/L		06/26/17 15:27	06/26/17 18:35	1
Barium	**0.311**		0.00200		mg/L		06/26/17 15:27	06/26/17 18:35	1
Beryllium	<0.00100		0.00100		mg/L		06/26/17 15:27	06/26/17 18:35	1
Boron	<0.200		0.200		mg/L		06/26/17 15:27	06/28/17 12:52	1
Cadmium	<0.000500		0.000500		mg/L		06/26/17 15:27	06/26/17 18:35	1
Calcium	**88.6**		0.200		mg/L		06/26/17 15:27	06/26/17 18:35	1
Chromium	<0.00500		0.00500		mg/L		06/26/17 15:27	06/26/17 18:35	1
Cobalt	**0.00119**		0.000500		mg/L		06/26/17 15:27	06/26/17 18:35	1
Lead	**0.00171**		0.000500		mg/L		06/26/17 15:27	06/26/17 18:35	1
Molybdenum	<0.00200		0.00200		mg/L		06/26/17 15:27	06/26/17 18:35	1
Selenium	<0.00500		0.00500		mg/L		06/26/17 15:27	06/26/17 18:35	1
Thallium	<0.00100		0.00100		mg/L		06/26/17 15:27	06/26/17 18:35	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/27/17 10:38	06/28/17 13:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**456**		30.0		mg/L			06/22/17 15:20	1

Client Sample ID: MW4NC2
Date Collected: 06/20/17 10:20
Date Received: 06/22/17 09:25

Lab Sample ID: 310-108372-2
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			06/29/17 00:05	5
Fluoride	<0.500		0.500		mg/L			06/29/17 00:05	5
Sulfate	**33.1**		5.00		mg/L			06/29/17 00:05	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/27/17 10:00	06/27/17 22:05	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/26/17 15:27	06/26/17 18:57	1
Arsenic	<0.00200		0.00200		mg/L		06/26/17 15:27	06/26/17 18:57	1
Barium	**0.258**		0.00200		mg/L		06/26/17 15:27	06/26/17 18:57	1
Beryllium	<0.00100		0.00100		mg/L		06/26/17 15:27	06/26/17 18:57	1
Boron	<0.200		0.200		mg/L		06/26/17 15:27	06/28/17 13:01	1
Cadmium	<0.000500		0.000500		mg/L		06/26/17 15:27	06/26/17 18:57	1
Calcium	**119**		0.200		mg/L		06/26/17 15:27	06/26/17 18:57	1
Chromium	<0.00500		0.00500		mg/L		06/26/17 15:27	06/26/17 18:57	1
Cobalt	<0.000500		0.000500		mg/L		06/26/17 15:27	06/26/17 18:57	1
Lead	**0.000754**		0.000500		mg/L		06/26/17 15:27	06/26/17 18:57	1
Molybdenum	**0.00551**		0.00200		mg/L		06/26/17 15:27	06/26/17 18:57	1
Selenium	**0.00593**		0.00500		mg/L		06/26/17 15:27	06/26/17 18:57	1
Thallium	<0.00100		0.00100		mg/L		06/26/17 15:27	06/26/17 18:57	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/27/17 10:38	06/28/17 13:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**558**		30.0		mg/L			06/22/17 15:20	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-108372-1

Client Sample ID: MW11
Date Collected: 06/20/17 12:49
Date Received: 06/22/17 09:25

Lab Sample ID: 310-108372-3
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			06/29/17 00:57	5
Fluoride	**0.562**		0.500		mg/L			06/29/17 00:57	5
Sulfate	**80.4**		5.00		mg/L			06/29/17 00:57	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/27/17 10:00	06/27/17 22:07	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.00235**		0.00100		mg/L		06/26/17 15:27	06/26/17 19:00	1
Arsenic	<0.00200		0.00200		mg/L		06/26/17 15:27	06/26/17 19:00	1
Barium	**0.156**		0.00200		mg/L		06/26/17 15:27	06/26/17 19:00	1
Beryllium	<0.00100		0.00100		mg/L		06/26/17 15:27	06/26/17 19:00	1
Boron	**0.843**		0.200		mg/L		06/26/17 15:27	06/28/17 13:05	1
Cadmium	<0.000500		0.000500		mg/L		06/26/17 15:27	06/26/17 19:00	1
Calcium	**76.1**		0.200		mg/L		06/26/17 15:27	06/26/17 19:00	1
Chromium	<0.00500		0.00500		mg/L		06/26/17 15:27	06/26/17 19:00	1
Cobalt	**0.000549**		0.000500		mg/L		06/26/17 15:27	06/26/17 19:00	1
Lead	<0.000500		0.000500		mg/L		06/26/17 15:27	06/26/17 19:00	1
Molybdenum	**0.00788**		0.00200		mg/L		06/26/17 15:27	06/26/17 19:00	1
Selenium	<0.00500		0.00500		mg/L		06/26/17 15:27	06/26/17 19:00	1
Thallium	<0.00100		0.00100		mg/L		06/26/17 15:27	06/26/17 19:00	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/27/17 10:38	06/28/17 13:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**400**		30.0		mg/L			06/22/17 15:20	1

Client Sample ID: MW3

Date Collected: 06/20/17 12:18
Date Received: 06/22/17 09:25

Lab Sample ID: 310-108372-4

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10.5**		10.0		mg/L			06/29/17 01:15	10
Fluoride	**0.591**		0.500		mg/L			06/29/17 13:22	5
Sulfate	**361**		10.0		mg/L			06/29/17 01:15	10

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/27/17 10:00	06/27/17 22:09	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/26/17 15:27	06/26/17 19:03	1
Arsenic	**0.0195**		0.00200		mg/L		06/26/17 15:27	06/26/17 19:03	1
Barium	**0.115**		0.00200		mg/L		06/26/17 15:27	06/26/17 19:03	1
Beryllium	<0.00100		0.00100		mg/L		06/26/17 15:27	06/26/17 19:03	1
Boron	**2.42**		0.200		mg/L		06/26/17 15:27	06/28/17 13:08	1
Cadmium	<0.000500		0.000500		mg/L		06/26/17 15:27	06/26/17 19:03	1
Calcium	**155**		0.200		mg/L		06/26/17 15:27	06/26/17 19:03	1
Chromium	<0.00500		0.00500		mg/L		06/26/17 15:27	06/26/17 19:03	1
Cobalt	**0.00196**		0.000500		mg/L		06/26/17 15:27	06/26/17 19:03	1
Lead	<0.000500		0.000500		mg/L		06/26/17 15:27	06/26/17 19:03	1
Molybdenum	<0.00200		0.00200		mg/L		06/26/17 15:27	06/26/17 19:03	1
Selenium	<0.00500		0.00500		mg/L		06/26/17 15:27	06/26/17 19:03	1
Thallium	<0.00100		0.00100		mg/L		06/26/17 15:27	06/26/17 19:03	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/27/17 10:38	06/28/17 13:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1070**		30.0		mg/L			06/22/17 15:20	1

Client Sample ID: MW4

Date Collected: 06/20/17 11:18
Date Received: 06/22/17 09:25

Lab Sample ID: 310-108372-5

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			06/29/17 01:32	5
Fluoride	<0.500		0.500		mg/L			06/29/17 01:32	5
Sulfate	**210**		5.00		mg/L			06/29/17 01:32	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/27/17 10:00	06/27/17 22:11	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/26/17 15:27	06/26/17 19:06	1
Arsenic	**0.00334**		0.00200		mg/L		06/26/17 15:27	06/26/17 19:06	1
Barium	**0.0679**		0.00200		mg/L		06/26/17 15:27	06/26/17 19:06	1
Beryllium	<0.00100		0.00100		mg/L		06/26/17 15:27	06/26/17 19:06	1
Boron	**1.16**		0.200		mg/L		06/26/17 15:27	06/28/17 13:11	1
Cadmium	<0.000500		0.000500		mg/L		06/26/17 15:27	06/26/17 19:06	1
Calcium	**89.9**		0.200		mg/L		06/26/17 15:27	06/26/17 19:06	1
Chromium	<0.00500		0.00500		mg/L		06/26/17 15:27	06/26/17 19:06	1
Cobalt	<0.000500		0.000500		mg/L		06/26/17 15:27	06/26/17 19:06	1
Lead	<0.000500		0.000500		mg/L		06/26/17 15:27	06/26/17 19:06	1
Molybdenum	**0.0356**		0.00200		mg/L		06/26/17 15:27	06/26/17 19:06	1
Selenium	<0.00500		0.00500		mg/L		06/26/17 15:27	06/26/17 19:06	1
Thallium	<0.00100		0.00100		mg/L		06/26/17 15:27	06/26/17 19:06	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/27/17 10:38	06/28/17 13:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**448**		30.0		mg/L			06/22/17 15:20	1

Client Sample ID: MW9
Date Collected: 06/20/17 11:42
Date Received: 06/22/17 09:25

Lab Sample ID: 310-108372-6
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5.69**		5.00		mg/L			06/29/17 02:07	5
Fluoride	<0.500		0.500		mg/L			06/29/17 02:07	5
Sulfate	**218**		5.00		mg/L			06/29/17 02:07	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/27/17 10:00	06/27/17 22:14	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/26/17 15:27	06/26/17 19:10	1
Arsenic	**0.0100**		0.00200		mg/L		06/26/17 15:27	06/26/17 19:10	1
Barium	**0.114**		0.00200		mg/L		06/26/17 15:27	06/26/17 19:10	1
Beryllium	<0.00100		0.00100		mg/L		06/26/17 15:27	06/26/17 19:10	1
Boron	**1.39**		0.200		mg/L		06/26/17 15:27	06/28/17 13:14	1
Cadmium	<0.000500		0.000500		mg/L		06/26/17 15:27	06/26/17 19:10	1
Calcium	**174**		0.200		mg/L		06/26/17 15:27	06/26/17 19:10	1
Chromium	<0.00500		0.00500		mg/L		06/26/17 15:27	06/26/17 19:10	1
Cobalt	**0.00295**		0.000500		mg/L		06/26/17 15:27	06/26/17 19:10	1
Lead	<0.000500		0.000500		mg/L		06/26/17 15:27	06/26/17 19:10	1
Molybdenum	**0.0486**		0.00200		mg/L		06/26/17 15:27	06/26/17 19:10	1
Selenium	<0.00500		0.00500		mg/L		06/26/17 15:27	06/26/17 19:10	1
Thallium	<0.00100		0.00100		mg/L		06/26/17 15:27	06/26/17 19:10	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/27/17 10:38	06/28/17 14:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**870**		30.0		mg/L			06/23/17 14:01	1

Client Sample ID: MW2

Date Collected: 06/20/17 10:50
Date Received: 06/22/17 09:25

Lab Sample ID: 310-108372-7

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			06/29/17 02:42	5
Fluoride	<0.500		0.500		mg/L			06/29/17 02:42	5
Sulfate	**54.4**		5.00		mg/L			06/29/17 02:42	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/27/17 10:00	06/27/17 22:16	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/26/17 15:27	06/26/17 19:13	1
Arsenic	<0.00200		0.00200		mg/L		06/26/17 15:27	06/26/17 19:13	1
Barium	**0.116**		0.00200		mg/L		06/26/17 15:27	06/26/17 19:13	1
Beryllium	<0.00100		0.00100		mg/L		06/26/17 15:27	06/26/17 19:13	1
Boron	<0.200		0.200		mg/L		06/26/17 15:27	06/28/17 13:27	1
Cadmium	<0.000500		0.000500		mg/L		06/26/17 15:27	06/26/17 19:13	1
Calcium	**112**		0.200		mg/L		06/26/17 15:27	06/26/17 19:13	1
Chromium	<0.00500		0.00500		mg/L		06/26/17 15:27	06/26/17 19:13	1
Cobalt	<0.000500		0.000500		mg/L		06/26/17 15:27	06/26/17 19:13	1
Lead	<0.000500		0.000500		mg/L		06/26/17 15:27	06/26/17 19:13	1
Molybdenum	**0.0380**		0.00200		mg/L		06/26/17 15:27	06/26/17 19:13	1
Selenium	<0.00500		0.00500		mg/L		06/26/17 15:27	06/26/17 19:13	1
Thallium	<0.00100		0.00100		mg/L		06/26/17 15:27	06/26/17 19:13	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/27/17 10:38	06/28/17 14:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**496**		30.0		mg/L			06/22/17 15:20	1

Client Sample ID: DUP

Date Collected: 06/20/17 11:44
Date Received: 06/22/17 09:25

Lab Sample ID: 310-108372-8

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6.03**		5.00		mg/L			06/29/17 02:59	5
Fluoride	**0.683**		0.500		mg/L			06/29/17 02:59	5
Sulfate	**227**		5.00		mg/L			06/29/17 02:59	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/27/17 10:00	06/27/17 22:18	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/26/17 15:27	06/26/17 19:16	1
Arsenic	**0.0101**		0.00200		mg/L		06/26/17 15:27	06/26/17 19:16	1
Barium	**0.111**		0.00200		mg/L		06/26/17 15:27	06/26/17 19:16	1
Beryllium	<0.00100		0.00100		mg/L		06/26/17 15:27	06/26/17 19:16	1
Boron	**1.46**		0.200		mg/L		06/26/17 15:27	06/28/17 13:30	1
Cadmium	<0.000500		0.000500		mg/L		06/26/17 15:27	06/26/17 19:16	1
Calcium	**175**		0.200		mg/L		06/26/17 15:27	06/26/17 19:16	1
Chromium	<0.00500		0.00500		mg/L		06/26/17 15:27	06/26/17 19:16	1
Cobalt	**0.00210**		0.000500		mg/L		06/26/17 15:27	06/26/17 19:16	1
Lead	<0.000500		0.000500		mg/L		06/26/17 15:27	06/26/17 19:16	1
Molybdenum	**0.0498**		0.00200		mg/L		06/26/17 15:27	06/26/17 19:16	1
Selenium	<0.00500		0.00500		mg/L		06/26/17 15:27	06/26/17 19:16	1
Thallium	<0.00100		0.00100		mg/L		06/26/17 15:27	06/26/17 19:16	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/27/17 10:38	06/28/17 14:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**864**		30.0		mg/L			06/22/17 15:20	1

Definitions/Glossary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-108372-1

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.

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
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-170994/3
Matrix: Water
Analysis Batch: 170994

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			06/28/17 22:37	1
Fluoride	<0.100		0.100		mg/L			06/28/17 22:37	1
Sulfate	<1.00		1.00		mg/L			06/28/17 22:37	1

Lab Sample ID: LCS 310-170994/4
Matrix: Water
Analysis Batch: 170994

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	7.50	7.521		mg/L		100	90 - 110
Fluoride	1.50	1.519		mg/L		101	90 - 110
Sulfate	7.50	7.285		mg/L		97	90 - 110

Lab Sample ID: 310-108372-1 MS
Matrix: Ground Water
Analysis Batch: 170994

Client Sample ID: MW13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	12.7		25.0	36.52		mg/L		95	80 - 120
Fluoride	0.505		5.00	5.222		mg/L		94	80 - 120
Sulfate	35.6		25.0	56.85		mg/L		85	80 - 120

Lab Sample ID: 310-108372-1 MSD
Matrix: Ground Water
Analysis Batch: 170994

Client Sample ID: MW13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	12.7		25.0	36.52		mg/L		95	80 - 120	0	15
Fluoride	0.505		5.00	5.433		mg/L		99	80 - 120	4	15
Sulfate	35.6		25.0	58.78		mg/L		93	80 - 120	3	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 310-170604/1-A
Matrix: Water
Analysis Batch: 170788

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 170604

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/27/17 10:00	06/27/17 21:18	1

Lab Sample ID: LCS 310-170604/2-A
Matrix: Water
Analysis Batch: 170788

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 170604

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	2.00	2.085		mg/L		104	80 - 120

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 310-170450/1-A
Matrix: Water
Analysis Batch: 170652

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 170450

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/26/17 15:27	06/26/17 18:29	1
Arsenic	<0.00200		0.00200		mg/L		06/26/17 15:27	06/26/17 18:29	1
Barium	<0.00200		0.00200		mg/L		06/26/17 15:27	06/26/17 18:29	1
Beryllium	<0.00100		0.00100		mg/L		06/26/17 15:27	06/26/17 18:29	1
Cadmium	<0.000500		0.000500		mg/L		06/26/17 15:27	06/26/17 18:29	1
Calcium	<0.200		0.200		mg/L		06/26/17 15:27	06/26/17 18:29	1
Chromium	<0.00500		0.00500		mg/L		06/26/17 15:27	06/26/17 18:29	1
Cobalt	<0.000500		0.000500		mg/L		06/26/17 15:27	06/26/17 18:29	1
Lead	<0.000500		0.000500		mg/L		06/26/17 15:27	06/26/17 18:29	1
Molybdenum	<0.00200		0.00200		mg/L		06/26/17 15:27	06/26/17 18:29	1
Selenium	<0.00500		0.00500		mg/L		06/26/17 15:27	06/26/17 18:29	1
Thallium	<0.00100		0.00100		mg/L		06/26/17 15:27	06/26/17 18:29	1

Lab Sample ID: MB 310-170450/1-A
Matrix: Water
Analysis Batch: 170937

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 170450

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.200		0.200		mg/L		06/26/17 15:27	06/28/17 12:46	1

Lab Sample ID: LCS 310-170450/2-A
Matrix: Water
Analysis Batch: 170652

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 170450

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0200	0.01989		mg/L		99	80 - 120
Arsenic	0.0400	0.03829		mg/L		96	80 - 120
Barium	0.0400	0.04196		mg/L		105	80 - 120
Beryllium	0.0200	0.02104		mg/L		105	80 - 120
Cadmium	0.0200	0.02044		mg/L		102	80 - 120
Calcium	2.00	2.058		mg/L		103	80 - 120
Chromium	0.0400	0.04060		mg/L		101	80 - 120
Cobalt	0.0200	0.02060		mg/L		103	80 - 120
Lead	0.0200	0.02039		mg/L		102	80 - 120
Molybdenum	0.0400	0.03923		mg/L		98	80 - 120
Selenium	0.0400	0.03909		mg/L		98	80 - 120
Thallium	0.0160	0.01639		mg/L		102	80 - 120

Lab Sample ID: LCS 310-170450/2-A
Matrix: Water
Analysis Batch: 170937

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 170450

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.880	0.8663		mg/L		98	80 - 120

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

Lab Sample ID: 310-108372-1 MS
Matrix: Ground Water
Analysis Batch: 170652

Client Sample ID: MW13
Prep Type: Total/NA
Prep Batch: 170450

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.00100		0.0200	0.01945		mg/L		97	75 - 125
Arsenic	0.00268		0.0400	0.04000		mg/L		93	75 - 125
Barium	0.311		0.0400	0.3645	4	mg/L		135	75 - 125
Beryllium	<0.00100		0.0200	0.02020		mg/L		101	75 - 125
Cadmium	<0.000500		0.0200	0.02011		mg/L		101	75 - 125
Calcium	88.6		2.00	94.40	4	mg/L		290	75 - 125
Chromium	<0.00500		0.0400	0.03913		mg/L		98	75 - 125
Cobalt	0.00119		0.0200	0.02075		mg/L		98	75 - 125
Lead	0.00171		0.0200	0.02001		mg/L		92	75 - 125
Molybdenum	<0.00200		0.0400	0.04174		mg/L		99	75 - 125
Selenium	<0.00500		0.0400	0.03879		mg/L		97	75 - 125
Thallium	<0.00100		0.0160	0.01643		mg/L		103	75 - 125

Lab Sample ID: 310-108372-1 MS
Matrix: Ground Water
Analysis Batch: 170937

Client Sample ID: MW13
Prep Type: Total/NA
Prep Batch: 170450

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	<0.200		0.880	1.085		mg/L		123	75 - 125

Lab Sample ID: 310-108372-1 MSD
Matrix: Ground Water
Analysis Batch: 170652

Client Sample ID: MW13
Prep Type: Total/NA
Prep Batch: 170450

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	<0.00100		0.0200	0.02037		mg/L		102	75 - 125	5	20
Arsenic	0.00268		0.0400	0.04185		mg/L		98	75 - 125	5	20
Barium	0.311		0.0400	0.3675	4	mg/L		142	75 - 125	1	20
Beryllium	<0.00100		0.0200	0.02153		mg/L		108	75 - 125	6	20
Cadmium	<0.000500		0.0200	0.02100		mg/L		105	75 - 125	4	20
Calcium	88.6		2.00	95.01	4	mg/L		320	75 - 125	1	20
Chromium	<0.00500		0.0400	0.04099		mg/L		102	75 - 125	5	20
Cobalt	0.00119		0.0200	0.02143		mg/L		101	75 - 125	3	20
Lead	0.00171		0.0200	0.02080		mg/L		95	75 - 125	4	20
Molybdenum	<0.00200		0.0400	0.04296		mg/L		103	75 - 125	3	20
Selenium	<0.00500		0.0400	0.04081		mg/L		102	75 - 125	5	20
Thallium	<0.00100		0.0160	0.01699		mg/L		106	75 - 125	3	20

Lab Sample ID: 310-108372-1 MSD
Matrix: Ground Water
Analysis Batch: 170937

Client Sample ID: MW13
Prep Type: Total/NA
Prep Batch: 170450

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	<0.200		0.880	1.097		mg/L		125	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-170694/1-A
Matrix: Water
Analysis Batch: 170882

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 170694

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/27/17 10:38	06/28/17 13:41	1

Lab Sample ID: LCS 310-170694/2-A
Matrix: Water
Analysis Batch: 170882

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 170694

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00167	0.001513		mg/L		91	80 - 120

Lab Sample ID: 310-108372-2 MS
Matrix: Ground Water
Analysis Batch: 170882

Client Sample ID: MW4NC2
Prep Type: Total/NA
Prep Batch: 170694

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.000200		0.00167	0.001705		mg/L		102	80 - 120

Lab Sample ID: 310-108372-2 MSD
Matrix: Ground Water
Analysis Batch: 170882

Client Sample ID: MW4NC2
Prep Type: Total/NA
Prep Batch: 170694

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

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

Lab Sample ID: MB 310-170225/1
Matrix: Water
Analysis Batch: 170225

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	<30.0		30.0		mg/L			06/22/17 08:27	1

Lab Sample ID: LCS 310-170225/2
Matrix: Water
Analysis Batch: 170225

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	1082		mg/L		108	90 - 110

Lab Sample ID: MB 310-170429/1
Matrix: Water
Analysis Batch: 170429

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	<30.0		30.0		mg/L			06/23/17 14:01	1

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

Lab Sample ID: LCS 310-170429/2
Matrix: Water
Analysis Batch: 170429

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	1028		mg/L		103	90 - 110		

Lab Sample ID: 310-108372-6 DU
Matrix: Ground Water
Analysis Batch: 170429

Client Sample ID: MW9
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	870			822.0		mg/L				6	24

HPLC/IC

Analysis Batch: 170994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108372-1	MW13	Total/NA	Ground Water	9056A	
310-108372-2	MW4NC2	Total/NA	Ground Water	9056A	
310-108372-3	MW11	Total/NA	Ground Water	9056A	
310-108372-4	MW3	Total/NA	Ground Water	9056A	
310-108372-4	MW3	Total/NA	Ground Water	9056A	
310-108372-5	MW4	Total/NA	Ground Water	9056A	
310-108372-6	MW9	Total/NA	Ground Water	9056A	
310-108372-7	MW2	Total/NA	Ground Water	9056A	
310-108372-8	DUP	Total/NA	Ground Water	9056A	
MB 310-170994/3	Method Blank	Total/NA	Water	9056A	
LCS 310-170994/4	Lab Control Sample	Total/NA	Water	9056A	
310-108372-1 MS	MW13	Total/NA	Ground Water	9056A	
310-108372-1 MSD	MW13	Total/NA	Ground Water	9056A	

Metals

Prep Batch: 170450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108372-1	MW13	Total/NA	Ground Water	3010A	
310-108372-2	MW4NC2	Total/NA	Ground Water	3010A	
310-108372-3	MW11	Total/NA	Ground Water	3010A	
310-108372-4	MW3	Total/NA	Ground Water	3010A	
310-108372-5	MW4	Total/NA	Ground Water	3010A	
310-108372-6	MW9	Total/NA	Ground Water	3010A	
310-108372-7	MW2	Total/NA	Ground Water	3010A	
310-108372-8	DUP	Total/NA	Ground Water	3010A	
MB 310-170450/1-A	Method Blank	Total/NA	Water	3010A	
LCS 310-170450/2-A	Lab Control Sample	Total/NA	Water	3010A	
310-108372-1 MS	MW13	Total/NA	Ground Water	3010A	
310-108372-1 MSD	MW13	Total/NA	Ground Water	3010A	

Prep Batch: 170604

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108372-1	MW13	Total/NA	Ground Water	3010A	
310-108372-2	MW4NC2	Total/NA	Ground Water	3010A	
310-108372-3	MW11	Total/NA	Ground Water	3010A	
310-108372-4	MW3	Total/NA	Ground Water	3010A	
310-108372-5	MW4	Total/NA	Ground Water	3010A	
310-108372-6	MW9	Total/NA	Ground Water	3010A	
310-108372-7	MW2	Total/NA	Ground Water	3010A	
310-108372-8	DUP	Total/NA	Ground Water	3010A	
MB 310-170604/1-A	Method Blank	Total/NA	Water	3010A	
LCS 310-170604/2-A	Lab Control Sample	Total/NA	Water	3010A	

Analysis Batch: 170652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108372-1	MW13	Total/NA	Ground Water	6020A	170450
310-108372-2	MW4NC2	Total/NA	Ground Water	6020A	170450
310-108372-3	MW11	Total/NA	Ground Water	6020A	170450
310-108372-4	MW3	Total/NA	Ground Water	6020A	170450

Metals (Continued)

Analysis Batch: 170652 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108372-5	MW4	Total/NA	Ground Water	6020A	170450
310-108372-6	MW9	Total/NA	Ground Water	6020A	170450
310-108372-7	MW2	Total/NA	Ground Water	6020A	170450
310-108372-8	DUP	Total/NA	Ground Water	6020A	170450
MB 310-170450/1-A	Method Blank	Total/NA	Water	6020A	170450
LCS 310-170450/2-A	Lab Control Sample	Total/NA	Water	6020A	170450
310-108372-1 MS	MW13	Total/NA	Ground Water	6020A	170450
310-108372-1 MSD	MW13	Total/NA	Ground Water	6020A	170450

Prep Batch: 170694

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108372-1	MW13	Total/NA	Ground Water	7470A	
310-108372-2	MW4NC2	Total/NA	Ground Water	7470A	
310-108372-3	MW11	Total/NA	Ground Water	7470A	
310-108372-4	MW3	Total/NA	Ground Water	7470A	
310-108372-5	MW4	Total/NA	Ground Water	7470A	
310-108372-6	MW9	Total/NA	Ground Water	7470A	
310-108372-7	MW2	Total/NA	Ground Water	7470A	
310-108372-8	DUP	Total/NA	Ground Water	7470A	
MB 310-170694/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-170694/2-A	Lab Control Sample	Total/NA	Water	7470A	
310-108372-2 MS	MW4NC2	Total/NA	Ground Water	7470A	
310-108372-2 MSD	MW4NC2	Total/NA	Ground Water	7470A	

Analysis Batch: 170788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108372-1	MW13	Total/NA	Ground Water	6010C	170604
310-108372-2	MW4NC2	Total/NA	Ground Water	6010C	170604
310-108372-3	MW11	Total/NA	Ground Water	6010C	170604
310-108372-4	MW3	Total/NA	Ground Water	6010C	170604
310-108372-5	MW4	Total/NA	Ground Water	6010C	170604
310-108372-6	MW9	Total/NA	Ground Water	6010C	170604
310-108372-7	MW2	Total/NA	Ground Water	6010C	170604
310-108372-8	DUP	Total/NA	Ground Water	6010C	170604
MB 310-170604/1-A	Method Blank	Total/NA	Water	6010C	170604
LCS 310-170604/2-A	Lab Control Sample	Total/NA	Water	6010C	170604

Analysis Batch: 170882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108372-1	MW13	Total/NA	Ground Water	7470A	170694
310-108372-2	MW4NC2	Total/NA	Ground Water	7470A	170694
310-108372-3	MW11	Total/NA	Ground Water	7470A	170694
310-108372-4	MW3	Total/NA	Ground Water	7470A	170694
310-108372-5	MW4	Total/NA	Ground Water	7470A	170694
310-108372-6	MW9	Total/NA	Ground Water	7470A	170694
310-108372-7	MW2	Total/NA	Ground Water	7470A	170694
310-108372-8	DUP	Total/NA	Ground Water	7470A	170694
MB 310-170694/1-A	Method Blank	Total/NA	Water	7470A	170694
LCS 310-170694/2-A	Lab Control Sample	Total/NA	Water	7470A	170694
310-108372-2 MS	MW4NC2	Total/NA	Ground Water	7470A	170694
310-108372-2 MSD	MW4NC2	Total/NA	Ground Water	7470A	170694

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-108372-1

Analysis Batch: 170937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108372-1	MW13	Total/NA	Ground Water	6020A	170450
310-108372-2	MW4NC2	Total/NA	Ground Water	6020A	170450
310-108372-3	MW11	Total/NA	Ground Water	6020A	170450
310-108372-4	MW3	Total/NA	Ground Water	6020A	170450
310-108372-5	MW4	Total/NA	Ground Water	6020A	170450
310-108372-6	MW9	Total/NA	Ground Water	6020A	170450
310-108372-7	MW2	Total/NA	Ground Water	6020A	170450
310-108372-8	DUP	Total/NA	Ground Water	6020A	170450
MB 310-170450/1-A	Method Blank	Total/NA	Water	6020A	170450
LCS 310-170450/2-A	Lab Control Sample	Total/NA	Water	6020A	170450
310-108372-1 MS	MW13	Total/NA	Ground Water	6020A	170450
310-108372-1 MSD	MW13	Total/NA	Ground Water	6020A	170450

General Chemistry

Analysis Batch: 170225

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108372-1	MW13	Total/NA	Ground Water	SM 2540C	
310-108372-2	MW4NC2	Total/NA	Ground Water	SM 2540C	
310-108372-3	MW11	Total/NA	Ground Water	SM 2540C	
310-108372-4	MW3	Total/NA	Ground Water	SM 2540C	
310-108372-5	MW4	Total/NA	Ground Water	SM 2540C	
310-108372-7	MW2	Total/NA	Ground Water	SM 2540C	
310-108372-8	DUP	Total/NA	Ground Water	SM 2540C	
MB 310-170225/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-170225/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 170429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108372-6	MW9	Total/NA	Ground Water	SM 2540C	
MB 310-170429/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-170429/2	Lab Control Sample	Total/NA	Water	SM 2540C	
310-108372-6 DU	MW9	Total/NA	Ground Water	SM 2540C	

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-108372-1

Client Sample ID: MW13

Date Collected: 06/20/17 09:46
Date Received: 06/22/17 09:25

Lab Sample ID: 310-108372-1
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	170994	06/28/17 23:12	SAD	TAL CF
Total/NA	Prep	3010A			170604	06/27/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	170788	06/27/17 22:02	OAD	TAL CF
Total/NA	Prep	3010A			170450	06/26/17 15:27	CJT	TAL CF
Total/NA	Analysis	6020A		1	170652	06/26/17 18:35	OAD	TAL CF
Total/NA	Prep	3010A			170450	06/26/17 15:27	CJT	TAL CF
Total/NA	Analysis	6020A		1	170937	06/28/17 12:52	OAD	TAL CF
Total/NA	Prep	7470A			170694	06/27/17 10:38	MEG	TAL CF
Total/NA	Analysis	7470A		1	170882	06/28/17 13:44	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	170225	06/22/17 15:20	SAS	TAL CF

Client Sample ID: MW4NC2

Date Collected: 06/20/17 10:20
Date Received: 06/22/17 09:25

Lab Sample ID: 310-108372-2
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	170994	06/29/17 00:05	SAD	TAL CF
Total/NA	Prep	3010A			170604	06/27/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	170788	06/27/17 22:05	OAD	TAL CF
Total/NA	Prep	3010A			170450	06/26/17 15:27	CJT	TAL CF
Total/NA	Analysis	6020A		1	170652	06/26/17 18:57	OAD	TAL CF
Total/NA	Prep	3010A			170450	06/26/17 15:27	CJT	TAL CF
Total/NA	Analysis	6020A		1	170937	06/28/17 13:01	OAD	TAL CF
Total/NA	Prep	7470A			170694	06/27/17 10:38	MEG	TAL CF
Total/NA	Analysis	7470A		1	170882	06/28/17 13:46	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	170225	06/22/17 15:20	SAS	TAL CF

Client Sample ID: MW11

Date Collected: 06/20/17 12:49
Date Received: 06/22/17 09:25

Lab Sample ID: 310-108372-3
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	170994	06/29/17 00:57	SAD	TAL CF
Total/NA	Prep	3010A			170604	06/27/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	170788	06/27/17 22:07	OAD	TAL CF
Total/NA	Prep	3010A			170450	06/26/17 15:27	CJT	TAL CF
Total/NA	Analysis	6020A		1	170652	06/26/17 19:00	OAD	TAL CF
Total/NA	Prep	3010A			170450	06/26/17 15:27	CJT	TAL CF
Total/NA	Analysis	6020A		1	170937	06/28/17 13:05	OAD	TAL CF
Total/NA	Prep	7470A			170694	06/27/17 10:38	MEG	TAL CF
Total/NA	Analysis	7470A		1	170882	06/28/17 13:51	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	170225	06/22/17 15:20	SAS	TAL CF

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-108372-1

Client Sample ID: MW3

Date Collected: 06/20/17 12:18
Date Received: 06/22/17 09:25

Lab Sample ID: 310-108372-4

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		10	170994	06/29/17 01:15	SAD	TAL CF
Total/NA	Analysis	9056A		5	170994	06/29/17 13:22	SAD	TAL CF
Total/NA	Prep	3010A			170604	06/27/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	170788	06/27/17 22:09	OAD	TAL CF
Total/NA	Prep	3010A			170450	06/26/17 15:27	CJT	TAL CF
Total/NA	Analysis	6020A		1	170652	06/26/17 19:03	OAD	TAL CF
Total/NA	Prep	3010A			170450	06/26/17 15:27	CJT	TAL CF
Total/NA	Analysis	6020A		1	170937	06/28/17 13:08	OAD	TAL CF
Total/NA	Prep	7470A			170694	06/27/17 10:38	MEG	TAL CF
Total/NA	Analysis	7470A		1	170882	06/28/17 13:52	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	170225	06/22/17 15:20	SAS	TAL CF

Client Sample ID: MW4

Date Collected: 06/20/17 11:18
Date Received: 06/22/17 09:25

Lab Sample ID: 310-108372-5

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	170994	06/29/17 01:32	SAD	TAL CF
Total/NA	Prep	3010A			170604	06/27/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	170788	06/27/17 22:11	OAD	TAL CF
Total/NA	Prep	3010A			170450	06/26/17 15:27	CJT	TAL CF
Total/NA	Analysis	6020A		1	170652	06/26/17 19:06	OAD	TAL CF
Total/NA	Prep	3010A			170450	06/26/17 15:27	CJT	TAL CF
Total/NA	Analysis	6020A		1	170937	06/28/17 13:11	OAD	TAL CF
Total/NA	Prep	7470A			170694	06/27/17 10:38	MEG	TAL CF
Total/NA	Analysis	7470A		1	170882	06/28/17 13:54	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	170225	06/22/17 15:20	SAS	TAL CF

Client Sample ID: MW9

Date Collected: 06/20/17 11:42
Date Received: 06/22/17 09:25

Lab Sample ID: 310-108372-6

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	170994	06/29/17 02:07	SAD	TAL CF
Total/NA	Prep	3010A			170604	06/27/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	170788	06/27/17 22:14	OAD	TAL CF
Total/NA	Prep	3010A			170450	06/26/17 15:27	CJT	TAL CF
Total/NA	Analysis	6020A		1	170652	06/26/17 19:10	OAD	TAL CF
Total/NA	Prep	3010A			170450	06/26/17 15:27	CJT	TAL CF
Total/NA	Analysis	6020A		1	170937	06/28/17 13:14	OAD	TAL CF
Total/NA	Prep	7470A			170694	06/27/17 10:38	MEG	TAL CF
Total/NA	Analysis	7470A		1	170882	06/28/17 14:00	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	170429	06/23/17 14:01	SAS	TAL CF

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-108372-1

Client Sample ID: MW2

Date Collected: 06/20/17 10:50
Date Received: 06/22/17 09:25

Lab Sample ID: 310-108372-7

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	170994	06/29/17 02:42	SAD	TAL CF
Total/NA	Prep	3010A			170604	06/27/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	170788	06/27/17 22:16	OAD	TAL CF
Total/NA	Prep	3010A			170450	06/26/17 15:27	CJT	TAL CF
Total/NA	Analysis	6020A		1	170652	06/26/17 19:13	OAD	TAL CF
Total/NA	Prep	3010A			170450	06/26/17 15:27	CJT	TAL CF
Total/NA	Analysis	6020A		1	170937	06/28/17 13:27	OAD	TAL CF
Total/NA	Prep	7470A			170694	06/27/17 10:38	MEG	TAL CF
Total/NA	Analysis	7470A		1	170882	06/28/17 14:01	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	170225	06/22/17 15:20	SAS	TAL CF

Client Sample ID: DUP

Date Collected: 06/20/17 11:44
Date Received: 06/22/17 09:25

Lab Sample ID: 310-108372-8

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	170994	06/29/17 02:59	SAD	TAL CF
Total/NA	Prep	3010A			170604	06/27/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	170788	06/27/17 22:18	OAD	TAL CF
Total/NA	Prep	3010A			170450	06/26/17 15:27	CJT	TAL CF
Total/NA	Analysis	6020A		1	170652	06/26/17 19:16	OAD	TAL CF
Total/NA	Prep	3010A			170450	06/26/17 15:27	CJT	TAL CF
Total/NA	Analysis	6020A		1	170937	06/28/17 13:30	OAD	TAL CF
Total/NA	Prep	7470A			170694	06/27/17 10:38	MEG	TAL CF
Total/NA	Analysis	7470A		1	170882	06/28/17 14:03	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	170225	06/22/17 15:20	SAS	TAL CF

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401

Accreditation/Certification Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-108372-1

Laboratory: TestAmerica Cedar Falls

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
AIHA-LAP, LLC	IHLAP		101044	11-01-18
Georgia	State Program	4	IA100001 (OR)	09-29-17
Illinois	NELAP	5	200024	11-29-17
Iowa	State Program	7	007	12-01-17
Kansas	NELAP	7	E-10341	01-31-18
Minnesota	NELAP	5	019-999-319	12-31-17
Minnesota (Petrofund)	State Program	1	3349	08-22-17
North Dakota	State Program	8	R-186	09-29-17
Oregon	NELAP	10	IA100001	09-29-17

Method Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-108372-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	TAL CF
6010C	Metals (ICP)	SW846	TAL CF
6020A	Metals (ICP/MS)	SW846	TAL CF
7470A	Mercury (CVAA)	SW846	TAL CF
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL 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:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

310-108372 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Omaha Public Power District

City/State: Omaha NE | Project: Nebraska City Unit 1 Landfill CCR

Receipt Information

Date/Time Received: 6-22-17 925 | Received By: KP

Delivery Type: ☐ UPS ☑ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ TA Courier ☐ TA Field Services ☐ Client Drop-off ☐ Other: _____

Condition of Cooler/Containers

Sample(s) received in Cooler?	☑ Yes ☐ No	*If yes:* Cooler ID:	BAT-2
Multiple Coolers?	☑ Yes ☐ No	*If yes:* Cooler #	1 of 2
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: Melted ice ☐ NONE

Thermometer ID: H | Correction Factor (°C): +0.0

• **Temp Blank Temperature** – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 2.8 | Corrected Temp (°C): 2.8

• **Sample Container Temperature**

Sample ID(s) & bottle type used: CONTAINER 1 | CONTAINER 2

Uncorrected Temp (°C): TEMP 1 TEMP 2 | Corrected Temp (°C): TEMP 1 TEMP 2

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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

MW2, 4, Dup

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Omaha Public Power District

City/State: Omaha NE | Project: Nebraska City Unit 1 Landfill CCR

Receipt Information

Date/Time Received: 6-22-17 925 | Received By: MP

Delivery Type: ☐ UPS ☑ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ TA Courier ☐ TA Field Services ☐ Client Drop-off ☐ Other: _____

Condition of Cooler/Containers

Sample(s) received in Cooler?	☑ Yes ☐ No	*If yes:* Cooler ID:	CF 117 B
Multiple Coolers?	☑ Yes ☐ No	*If yes:* Cooler #	2 of 2
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: H | Correction Factor (°C): +0.0

• **Temp Blank Temperature** – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 2.5 | Corrected Temp (°C): 2.5

• **Sample Container Temperature**

Sample ID(s) & bottle type used: CONTAINER 1 | CONTAINER 2

Uncorrected Temp (°C): TEMP 1 TEMP 2 | Corrected Temp (°C): TEMP 1 TEMP 2

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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Phone (319) 277-2401 Fax (319) 277-2425

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Brad Sojka	Lab PM: Hayes, Shawn M	Carrier Tracking No(s):	COC No:
Client Contact: Brad Sojka	Phone: 402-636-2515	E-Mail: shawn.hayes@testamericainc.com		Page:
Company: Omaha Public Power District				Job #:

Address: 444 South 16th Street Mall 9E/EP1	Due Date Requested:
City: Omaha	TAT Requested (days):
State, Zip: NE, 68102-2247	
Phone: 402-636-2515(Tel)	PO #:
Email: bsojka@oppd.com	WO #:
Project Name: Nebraska City Unit 1 Landfill CCR	TestAmerica Project #: 31007558
Site:	SSOW#:

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Combined Ra226 and Ra228	6010C Lithium, 6020A CCR List, 7470A Mercury	2540C TDS, 9056A Chloride, Fluoride, Sulfate	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	D	N		
MW13	6/20/17	0946	G	GW			X	X	X		
MW4NC2		1020	G	GW			X	X	X		
MW11		1249	G	GW			X	X	X		
MW3		1218	G	GW			X	X	X		
MW4		1118	G	GW			X	X	X		
MW9		1142	G	GW			X	X	X		
MW2		1050	G	GW			X	X	X		
DUP		1144	G	GW			X	X	X		

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown* ☐ *Radiological*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 6/21/17 1600	Company	Received by: S Wadhan	Date/Time: 6/22/17 935	Company TAL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

6/29/2017

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MW13	310-108372-A-1	Plastic 250ml - with Nitric Acid	<2		
MW13	310-108372-C-1	Plastic 1 liter - Nitric Acid	<2		
MW13	310-108372-D-1	Plastic 1 liter - Nitric Acid	<2		
MW4NC2	310-108372-A-2	Plastic 250ml - with Nitric Acid	<		
MW4NC2	310-108372-C-2	Plastic 1 liter - Nitric Acid	<2		
MW4NC2	310-108372-D-2	Plastic 1 liter - Nitric Acid	<2		
MW11	310-108372-A-3	Plastic 250ml - with Nitric Acid	<		
MW11	310-108372-C-3	Plastic 1 liter - Nitric Acid	<2		
MW11	310-108372-D-3	Plastic 1 liter - Nitric Acid	<2		
MW3	310-108372-A-4	Plastic 250ml - with Nitric Acid	<		
MW3	310-108372-C-4	Plastic 1 liter - Nitric Acid	<2		
MW3	310-108372-D-4	Plastic 1 liter - Nitric Acid	<2		
MW4	310-108372-A-5	Plastic 250ml - with Nitric Acid	<		
MW4	310-108372-C-5	Plastic 1 liter - Nitric Acid	<2		
MW4	310-108372-D-5	Plastic 1 liter - Nitric Acid	<2		
MW9	310-108372-A-6	Plastic 250ml - with Nitric Acid	<		
MW9	310-108372-C-6	Plastic 1 liter - Nitric Acid	<2		
MW9	310-108372-D-6	Plastic 1 liter - Nitric Acid	<2		
MW2	310-108372-A-7	Plastic 250ml - with Nitric Acid	<		
MW2	310-108372-C-7	Plastic 1 liter - Nitric Acid	<2		
MW2	310-108372-D-7	Plastic 1 liter - Nitric Acid	<2		
DUP	310-108372-A-8	Plastic 250ml - with Nitric Acid	<		
DUP	310-108372-C-8	Plastic 1 liter - Nitric Acid	<2		
DUP	310-108372-D-8	Plastic 1 liter - Nitric Acid	<2		

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-108372-1

Login Number: 108372
List Number: 1
Creator: Tuladhar, Sushil X

List Source: TestAmerica Cedar Falls

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

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319)277-2401

TestAmerica Job ID: 310-108372-2
Client Project/Site: Nebraska City Unit 1 Landfill CCR
Sampling Event: CCR and Landfill Q2 and Q4

For:
Omaha Public Power District
Attn: Accounts Payable, 4E/EP-5
444 South 16th Street Mall
Omaha, Nebraska 68102-2247

Attn: Brad Sojka

Authorized for release by:
7/19/2017 3:26:01 PM

Shawn Hayes, Senior Project Manager
(319)277-2401
shawn.hayes@testamericainc.com

Table of Contents

Case Narrative

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-108372-2

Job ID: 310-108372-2

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-108372-2

Comments
No additional comments.

Receipt
The samples were received on 6/22/2017 9:25 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.5º C and 2.8º C.

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

Sample Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-108372-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-108372-1	MW13	Ground Water	06/20/17 09:46	06/22/17 09:25
310-108372-2	MW4NC2	Ground Water	06/20/17 10:20	06/22/17 09:25
310-108372-3	MW11	Ground Water	06/20/17 12:49	06/22/17 09:25
310-108372-4	MW3	Ground Water	06/20/17 12:18	06/22/17 09:25
310-108372-5	MW4	Ground Water	06/20/17 11:18	06/22/17 09:25
310-108372-6	MW9	Ground Water	06/20/17 11:42	06/22/17 09:25
310-108372-7	MW2	Ground Water	06/20/17 10:50	06/22/17 09:25
310-108372-8	DUP	Ground Water	06/20/17 11:44	06/22/17 09:25

Client Sample ID: MW13
Date Collected: 06/20/17 09:46
Date Received: 06/22/17 09:25

Lab Sample ID: 310-108372-1
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.171**		0.0793	0.0808	1.00	0.0916	pCi/L	06/27/17 10:19	07/19/17 06:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*06/27/17 10:19*	*07/19/17 06:10*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.312	U	0.217	0.219	1.00	0.339	pCi/L	06/27/17 12:00	07/07/17 14:34	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*06/27/17 12:00*	*07/07/17 14:34*	*1*
Y Carrier	*94.2*		*40 - 110*	*06/27/17 12:00*	*07/07/17 14:34*	*1*

Method: 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	**0.483**		0.231	0.234	5.00	0.339	pCi/L		07/19/17 14:39	1

Client Sample ID: MW4NC2
Date Collected: 06/20/17 10:20
Date Received: 06/22/17 09:25

Lab Sample ID: 310-108372-2
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.282		0.0924	0.0959	1.00	0.0800	pCi/L	06/27/17 10:19	07/19/17 06:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*102*		*40 - 110*	*06/27/17 10:19*	*07/19/17 06:10*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.878		0.287	0.298	1.00	0.398	pCi/L	06/27/17 12:00	07/07/17 14:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*102*		*40 - 110*	*06/27/17 12:00*	*07/07/17 14:36*	*1*
Y Carrier	*93.8*		*40 - 110*	*06/27/17 12:00*	*07/07/17 14:36*	*1*

Method: 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	1.16		0.302	0.313	5.00	0.398	pCi/L		07/19/17 14:39	1

Client Sample ID: MW11

Date Collected: 06/20/17 12:49
Date Received: 06/22/17 09:25

Lab Sample ID: 310-108372-3

Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.163**		0.0777	0.0790	1.00	0.0905	pCi/L	06/27/17 10:19	07/19/17 06:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*06/27/17 10:19*	*07/19/17 06:10*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.235	U	0.214	0.215	1.00	0.344	pCi/L	06/27/17 12:00	07/07/17 14:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*06/27/17 12:00*	*07/07/17 14:36*	*1*
Y Carrier	*87.9*		*40 - 110*	*06/27/17 12:00*	*07/07/17 14:36*	*1*

Method: 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	**0.398**		0.228	0.229	5.00	0.344	pCi/L		07/19/17 14:39	1

Client Sample ID: MW3
Date Collected: 06/20/17 12:18
Date Received: 06/22/17 09:25

Lab Sample ID: 310-108372-4
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.121		0.0676	0.0685	1.00	0.0822	pCi/L	06/27/17 10:19	07/19/17 06:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*100*		*40 - 110*	*06/27/17 10:19*	*07/19/17 06:10*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.590		0.262	0.267	1.00	0.381	pCi/L	06/27/17 12:00	07/07/17 14:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*100*		*40 - 110*	*06/27/17 12:00*	*07/07/17 14:36*	*1*
Y Carrier	*88.6*		*40 - 110*	*06/27/17 12:00*	*07/07/17 14:36*	*1*

Method: 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	0.711		0.271	0.276	5.00	0.381	pCi/L		07/19/17 14:39	1

Client Sample ID: MW4

Date Collected: 06/20/17 11:18
Date Received: 06/22/17 09:25

Lab Sample ID: 310-108372-5

Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0939		0.0604	0.0610	1.00	0.0758	pCi/L	06/27/17 10:19	07/19/17 06:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*100*		*40 - 110*	*06/27/17 10:19*	*07/19/17 06:10*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.135	U	0.191	0.191	1.00	0.361	pCi/L	06/27/17 12:00	07/07/17 14:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*100*		*40 - 110*	*06/27/17 12:00*	*07/07/17 14:36*	*1*
Y Carrier	*93.5*		*40 - 110*	*06/27/17 12:00*	*07/07/17 14:36*	*1*

Method: 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	-0.0408	U	0.200	0.201	5.00	0.361	pCi/L		07/19/17 14:39	1

Client Sample ID: MW9
Date Collected: 06/20/17 11:42
Date Received: 06/22/17 09:25

Lab Sample ID: 310-108372-6
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.164**		0.0811	0.0824	1.00	0.102	pCi/L	06/27/17 10:19	07/19/17 06:06	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.1*		*40 - 110*	*06/27/17 10:19*	*07/19/17 06:06*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.309	U	0.221	0.223	1.00	0.346	pCi/L	06/27/17 12:00	07/07/17 14:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.1*		*40 - 110*	*06/27/17 12:00*	*07/07/17 14:36*	*1*
Y Carrier	*91.6*		*40 - 110*	*06/27/17 12:00*	*07/07/17 14:36*	*1*

Method: 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	**0.473**		0.236	0.238	5.00	0.346	pCi/L		07/19/17 14:39	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-108372-2

Client Sample ID: MW2
Date Collected: 06/20/17 10:50
Date Received: 06/22/17 09:25

Lab Sample ID: 310-108372-7
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.166		0.0720	0.0736	1.00	0.0746	pCi/L	06/27/17 10:19	07/19/17 06:06	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.8*		*40 - 110*	*06/27/17 10:19*	*07/19/17 06:06*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.00785	U	0.251	0.251	1.00	0.441	pCi/L	06/27/17 12:00	07/07/17 14:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.8*		*40 - 110*	*06/27/17 12:00*	*07/07/17 14:36*	*1*
Y Carrier	*89.7*		*40 - 110*	*06/27/17 12:00*	*07/07/17 14:36*	*1*

Method: 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	0.174	U	0.261	0.261	5.00	0.441	pCi/L		07/19/17 14:39	1

Client Sample ID: DUP

Date Collected: 06/20/17 11:44
Date Received: 06/22/17 09:25

Lab Sample ID: 310-108372-8

Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.165**		0.0753	0.0768	1.00	0.0861	pCi/L	06/27/17 10:19	07/19/17 06:06	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*06/27/17 10:19*	*07/19/17 06:06*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.173	U	0.224	0.224	1.00	0.371	pCi/L	06/27/17 12:00	07/07/17 14:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*06/27/17 12:00*	*07/07/17 14:36*	*1*
Y Carrier	*91.6*		*40 - 110*	*06/27/17 12:00*	*07/07/17 14:36*	*1*

Method: 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	0.337	U	0.236	0.237	5.00	0.371	pCi/L		07/19/17 14:39	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-108372-2

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
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-108372-2

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-315499/1-A
Matrix: Water
Analysis Batch: 318055

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 315499

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.03611	U	0.0475	0.0476	1.00	0.0784	pCi/L	06/27/17 10:19	07/19/17 06:08	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*109*		*40 - 110*	*06/27/17 10:19*	*07/19/17 06:08*	*1*

Lab Sample ID: LCS 160-315499/2-A
Matrix: Water
Analysis Batch: 318055

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 315499

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			15.1	13.23		1.36	1.00	0.0873	pCi/L	87	68 - 137		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*107*		*40 - 110*

Lab Sample ID: LCSD 160-315499/3-A
Matrix: Water
Analysis Batch: 318055

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 315499

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			15.1	12.31		1.28	1.00	0.118	pCi/L	81	68 - 137	0.35	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*108*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-315521/1-A
Matrix: Water
Analysis Batch: 316537

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 315521

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.04539	U	0.240	0.240	1.00	0.424	pCi/L	06/27/17 12:00	07/07/17 14:33	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*109*		*40 - 110*	*06/27/17 12:00*	*07/07/17 14:33*	*1*
Y Carrier	*87.5*		*40 - 110*	*06/27/17 12:00*	*07/07/17 14:33*	*1*

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

Lab Sample ID: LCS 160-315521/2-A
Matrix: Water
Analysis Batch: 316537

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 315521

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			17.6	17.42		1.85	1.00	0.435	pCi/L	99	56 - 140		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*107*		*40 - 110*
Y Carrier	*89.3*		*40 - 110*

Lab Sample ID: LCSD 160-315521/3-A
Matrix: Water
Analysis Batch: 316537

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 315521

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			17.6	16.95		1.81	1.00	0.410	pCi/L	96	56 - 140	0.13	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*108*		*40 - 110*
Y Carrier	*90.5*		*40 - 110*

Rad

Prep Batch: 315499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108372-1	MW13	Total/NA	Ground Water	PrecSep-21	
310-108372-2	MW4NC2	Total/NA	Ground Water	PrecSep-21	
310-108372-3	MW11	Total/NA	Ground Water	PrecSep-21	
310-108372-4	MW3	Total/NA	Ground Water	PrecSep-21	
310-108372-5	MW4	Total/NA	Ground Water	PrecSep-21	
310-108372-6	MW9	Total/NA	Ground Water	PrecSep-21	
310-108372-7	MW2	Total/NA	Ground Water	PrecSep-21	
310-108372-8	DUP	Total/NA	Ground Water	PrecSep-21	
MB 160-315499/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-315499/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-315499/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 315521

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108372-1	MW13	Total/NA	Ground Water	PrecSep_0	
310-108372-2	MW4NC2	Total/NA	Ground Water	PrecSep_0	
310-108372-3	MW11	Total/NA	Ground Water	PrecSep_0	
310-108372-4	MW3	Total/NA	Ground Water	PrecSep_0	
310-108372-5	MW4	Total/NA	Ground Water	PrecSep_0	
310-108372-6	MW9	Total/NA	Ground Water	PrecSep_0	
310-108372-7	MW2	Total/NA	Ground Water	PrecSep_0	
310-108372-8	DUP	Total/NA	Ground Water	PrecSep_0	
MB 160-315521/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-315521/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-315521/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-108372-2

Client Sample ID: MW13

Lab Sample ID: 310-108372-1

Date Collected: 06/20/17 09:46

Matrix: Ground Water

Date Received: 06/22/17 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			315499	06/27/17 10:19	LDE	TAL SL
Total/NA	Analysis	9315		1	318055	07/19/17 06:10	RTM	TAL SL
Total/NA	Prep	PrecSep_0			315521	06/27/17 12:00	LDE	TAL SL
Total/NA	Analysis	9320		1	316537	07/07/17 14:34	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	318182	07/19/17 14:39	RTM	TAL SL

Client Sample ID: MW4NC2

Lab Sample ID: 310-108372-2

Date Collected: 06/20/17 10:20

Matrix: Ground Water

Date Received: 06/22/17 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			315499	06/27/17 10:19	LDE	TAL SL
Total/NA	Analysis	9315		1	318055	07/19/17 06:10	RTM	TAL SL
Total/NA	Prep	PrecSep_0			315521	06/27/17 12:00	LDE	TAL SL
Total/NA	Analysis	9320		1	316538	07/07/17 14:36	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	318182	07/19/17 14:39	RTM	TAL SL

Client Sample ID: MW11

Lab Sample ID: 310-108372-3

Date Collected: 06/20/17 12:49

Matrix: Ground Water

Date Received: 06/22/17 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			315499	06/27/17 10:19	LDE	TAL SL
Total/NA	Analysis	9315		1	318055	07/19/17 06:10	RTM	TAL SL
Total/NA	Prep	PrecSep_0			315521	06/27/17 12:00	LDE	TAL SL
Total/NA	Analysis	9320		1	316538	07/07/17 14:36	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	318182	07/19/17 14:39	RTM	TAL SL

Client Sample ID: MW3

Lab Sample ID: 310-108372-4

Date Collected: 06/20/17 12:18

Matrix: Ground Water

Date Received: 06/22/17 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			315499	06/27/17 10:19	LDE	TAL SL
Total/NA	Analysis	9315		1	318055	07/19/17 06:10	RTM	TAL SL
Total/NA	Prep	PrecSep_0			315521	06/27/17 12:00	LDE	TAL SL
Total/NA	Analysis	9320		1	316538	07/07/17 14:36	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	318182	07/19/17 14:39	RTM	TAL SL

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-108372-2

Client Sample ID: MW4

Lab Sample ID: 310-108372-5

Date Collected: 06/20/17 11:18
Matrix: Ground Water
Date Received: 06/22/17 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			315499	06/27/17 10:19	LDE	TAL SL
Total/NA	Analysis	9315		1	318055	07/19/17 06:10	RTM	TAL SL
Total/NA	Prep	PrecSep_0			315521	06/27/17 12:00	LDE	TAL SL
Total/NA	Analysis	9320		1	316538	07/07/17 14:36	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	318182	07/19/17 14:39	RTM	TAL SL

Client Sample ID: MW9

Lab Sample ID: 310-108372-6

Date Collected: 06/20/17 11:42
Matrix: Ground Water
Date Received: 06/22/17 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			315499	06/27/17 10:19	LDE	TAL SL
Total/NA	Analysis	9315		1	318053	07/19/17 06:06	RTM	TAL SL
Total/NA	Prep	PrecSep_0			315521	06/27/17 12:00	LDE	TAL SL
Total/NA	Analysis	9320		1	316538	07/07/17 14:36	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	318182	07/19/17 14:39	RTM	TAL SL

Client Sample ID: MW2

Lab Sample ID: 310-108372-7

Date Collected: 06/20/17 10:50
Matrix: Ground Water
Date Received: 06/22/17 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			315499	06/27/17 10:19	LDE	TAL SL
Total/NA	Analysis	9315		1	318053	07/19/17 06:06	RTM	TAL SL
Total/NA	Prep	PrecSep_0			315521	06/27/17 12:00	LDE	TAL SL
Total/NA	Analysis	9320		1	316538	07/07/17 14:36	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	318182	07/19/17 14:39	RTM	TAL SL

Client Sample ID: DUP

Lab Sample ID: 310-108372-8

Date Collected: 06/20/17 11:44
Matrix: Ground Water
Date Received: 06/22/17 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			315499	06/27/17 10:19	LDE	TAL SL
Total/NA	Analysis	9315		1	318053	07/19/17 06:06	RTM	TAL SL
Total/NA	Prep	PrecSep_0			315521	06/27/17 12:00	LDE	TAL SL
Total/NA	Analysis	9320		1	316538	07/07/17 14:36	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	318182	07/19/17 14:39	RTM	TAL SL

Laboratory References:

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

Accreditation/Certification Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-108372-2

Laboratory: TestAmerica Cedar Falls

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
AIHA-LAP, LLC	IHLAP		101044	11-01-18
Georgia	State Program	4	IA100001 (OR)	09-29-17
Illinois	NELAP	5	200024	11-29-17
Iowa	State Program	7	007	12-01-17
Kansas	NELAP	7	E-10341	01-31-18
Minnesota	NELAP	5	019-999-319	12-31-17
Minnesota (Petrofund)	State Program	1	3349	08-22-17
North Dakota	State Program	8	R-186	09-29-17
Oregon	NELAP	10	IA100001	09-29-17

Laboratory: TestAmerica St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-18
California	State Program	9	2886	03-31-18 *
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-18
Illinois	NELAP	5	200023	11-30-17
Iowa	State Program	7	373	02-01-18
Kansas	NELAP	7	E-10236	10-31-17
Kentucky (DW)	State Program	4	90125	12-31-17
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-18
Louisiana (DW)	NELAP	6	LA170011	12-31-17
Maryland	State Program	3	310	09-30-18
Missouri	State Program	7	780	06-30-17 *
Nevada	State Program	9	MO000542017-1	07-31-17 *
New Jersey	NELAP	2	MO002	06-30-18
New York	NELAP	2	11616	03-31-18
North Dakota	State Program	8	R207	06-30-17 *
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-17 *
Pennsylvania	NELAP	3	68-00540	02-21-18
South Carolina	State Program	4	85002001	06-30-17 *
Texas	NELAP	6	T104704193-16-10	07-31-17 *
US Fish & Wildlife	Federal		LE058448-0	10-31-17
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542016-8	07-31-17 *
Virginia	NELAP	3	460230	06-14-18
Washington	State Program	10	C592	08-30-17 *
West Virginia DEP	State Program	3	381	08-31-17 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-108372-2

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL

Protocol References:

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:

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

310-108372 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Omaha Public Power District

City/State: Omaha NE | Project: Nebraska City Unit 1 Landfill CCR

Receipt Information

Date/Time Received: 6-22-17 925 | Received By: KP

Delivery Type: ☐ UPS ☑ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ TA Courier ☐ TA Field Services ☐ Client Drop-off ☐ Other: _____

Condition of Cooler/Containers

Sample(s) received in Cooler?	☑ Yes ☐ No	*If yes:* Cooler ID:	BAT-2
Multiple Coolers?	☑ Yes ☐ No	*If yes:* Cooler #	1 of 2
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: Melted ice ☐ NONE

Thermometer ID: H | Correction Factor (°C): +0.0

• **Temp Blank Temperature** – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 2.8 | Corrected Temp (°C): 2.8

• **Sample Container Temperature**

Sample ID(s) & bottle type used: CONTAINER 1 | CONTAINER 2

Uncorrected Temp (°C): TEMP 1 TEMP 2 | Corrected Temp (°C): TEMP 1 TEMP 2

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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

MW2, 4, Dup

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Omaha Public Power District

City/State: Omaha NE | Project: Nebraska City Unit 1 Landfill CCR

Receipt Information

Date/Time Received: 6-22-17 925 | Received By: MP

Delivery Type: ☐ UPS ☑ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ TA Courier ☐ TA Field Services ☐ Client Drop-off ☐ Other: _____

Condition of Cooler/Containers

Sample(s) received in Cooler?	☑ Yes ☐ No	*If yes:* Cooler ID:	CF 117 B
Multiple Coolers?	☑ Yes ☐ No	*If yes:* Cooler #	2 of 2
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: H | Correction Factor (°C): +0.0

• **Temp Blank Temperature** – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 2.5 | Corrected Temp (°C): 2.5

• **Sample Container Temperature**

Sample ID(s) & bottle type used: CONTAINER 1 | CONTAINER 2

Uncorrected Temp (°C): TEMP 1 TEMP 2 | Corrected Temp (°C): TEMP 1 TEMP 2

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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Phone (319) 277-2401 Fax (319) 277-2425

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Brad Sojka	Lab PM: Hayes, Shawn M	Carrier Tracking No(s):	COC No:
Client Contact: Brad Sojka	Phone: 402-636-2515	E-Mail: shawn.hayes@testamericainc.com		Page:
Company: Omaha Public Power District				Job #:
Address: 444 South 16th Street Mall 9E/EP1	Due Date Requested:			
City: Omaha	TAT Requested (days):			
State, Zip: NE, 68102-2247				
Phone: 402-636-2515(Tel)	PO #:			
Email: bsojka@oppd.com	WO #:			
Project Name: Nebraska City Unit 1 Landfill CCR	TestAmerica Project #: 31007558			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Combined Ra226 and Ra228	6010C Lithium, 6020A CCR List, 7470A Mercury	2540C TDS, 9056A Chloride, Fluoride, Sulfate	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	D	N		
MW13	6/20/17	0946	G	GW			X	X	X		
MW4NC2		1020	G	GW			X	X	X		
MW11		1249	G	GW			X	X	X		
MW3		1218	G	GW			X	X	X		
MW4		1118	G	GW			X	X	X		
MW9		1142	G	GW			X	X	X		
MW2		1050	G	GW			X	X	X		
DUP		1144	G	GW			X	X	X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	6/21/17 1600		Swadhan	6/22/17 935	TAL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

7/19/2017

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MW13	310-108372-A-1	Plastic 250ml - with Nitric Acid	<2		
MW13	310-108372-C-1	Plastic 1 liter - Nitric Acid	<2		
MW13	310-108372-D-1	Plastic 1 liter - Nitric Acid	<2		
MW4NC2	310-108372-A-2	Plastic 250ml - with Nitric Acid	<		
MW4NC2	310-108372-C-2	Plastic 1 liter - Nitric Acid	<2		
MW4NC2	310-108372-D-2	Plastic 1 liter - Nitric Acid	<2		
MW11	310-108372-A-3	Plastic 250ml - with Nitric Acid	<		
MW11	310-108372-C-3	Plastic 1 liter - Nitric Acid	<2		
MW11	310-108372-D-3	Plastic 1 liter - Nitric Acid	<2		
MW3	310-108372-A-4	Plastic 250ml - with Nitric Acid	<		
MW3	310-108372-C-4	Plastic 1 liter - Nitric Acid	<2		
MW3	310-108372-D-4	Plastic 1 liter - Nitric Acid	<2		
MW4	310-108372-A-5	Plastic 250ml - with Nitric Acid	<		
MW4	310-108372-C-5	Plastic 1 liter - Nitric Acid	<2		
MW4	310-108372-D-5	Plastic 1 liter - Nitric Acid	<2		
MW9	310-108372-A-6	Plastic 250ml - with Nitric Acid	<		
MW9	310-108372-C-6	Plastic 1 liter - Nitric Acid	<2		
MW9	310-108372-D-6	Plastic 1 liter - Nitric Acid	<2		
MW2	310-108372-A-7	Plastic 250ml - with Nitric Acid	<		
MW2	310-108372-C-7	Plastic 1 liter - Nitric Acid	<2		
MW2	310-108372-D-7	Plastic 1 liter - Nitric Acid	<2		
DUP	310-108372-A-8	Plastic 250ml - with Nitric Acid	<		
DUP	310-108372-C-8	Plastic 1 liter - Nitric Acid	<2		
DUP	310-108372-D-8	Plastic 1 liter - Nitric Acid	<2		

TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Phone (319) 277-2401 Fax (319) 277-2425

Chain of Custody Record

310-108372 Chain of Custody

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Hayes, Shawn M		773.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: shawn.hayes@testamericainc.com	State of Origin: Nebraska	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 310-108372-2
Address: 13715 Rider Trail North, ,	Due Date Requested: 7/5/2017			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045	PO #:			
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	WO #:			
Email:				
Project Name: Nebraska City Unit 1 Landfill CCR	Project #: 31007558			
Site: 310 OPPD Nebraska City Unit 1	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Ra226Ra228_GFPC	9315_Ra226/PrecSep_21 Standard Target List	9320_Ra228/PrecSep_0 Standard Target List	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW13 (310-108372-1)	6/20/17	09:46 Central		Water			X	X	X	2	
MW4NC2 (310-108372-2)	6/20/17	10:20 Central		Water			X	X	X	2	
MW11 (310-108372-3)	6/20/17	12:49 Central		Water			X	X	X	2	
MW3 (310-108372-4)	6/20/17	12:18 Central		Water			X	X	X	2	
MW4 (310-108372-5)	6/20/17	11:18 Central		Water			X	X	X	2	
MW9 (310-108372-6)	6/20/17	11:42 Central		Water			X	X	X	2	
MW2 (310-108372-7)	6/20/17	10:50 Central		Water			X	X	X	2	
DUP (310-108372-8)	6/20/17	11:44 Central		Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by: T. Kelly	Date/Time: 6/22/17 1456	Company	Received by: Del Clarke	Date/Time: 6.23.17 0850	Company TASR
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

7/19/2017

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-108372-2

Login Number: 108372

List Source: TestAmerica Cedar Falls

List Number: 1

Creator: Tuladhar, Sushil X

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

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-108372-2

Login Number: 108372
List Number: 2
Creator: Castillo, Robert L

List Source: TestAmerica St. Louis
List Creation: 06/23/17 12:04 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
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.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	17.0, 17.0
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?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Tracer/Carrier Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-108372-2

Method: 9315 - Radium-226 (GFPC)

Matrix: Ground Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(40-110)
310-108372-1	MW13	101
310-108372-2	MW4NC2	102
310-108372-3	MW11	101
310-108372-4	MW3	100
310-108372-5	MW4	100
310-108372-6	MW9	99.1
310-108372-7	MW2	98.8
310-108372-8	DUP	101

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9315 - Radium-226 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(40-110)
LCS 160-315499/2-A	Lab Control Sample	107
LCSD 160-315499/3-A	Lab Control Sample Dup	108
MB 160-315499/1-A	Method Blank	109

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Ground Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
310-108372-1	MW13	101	94.2
310-108372-2	MW4NC2	102	93.8
310-108372-3	MW11	101	87.9
310-108372-4	MW3	100	88.6
310-108372-5	MW4	100	93.5
310-108372-6	MW9	99.1	91.6
310-108372-7	MW2	98.8	89.7
310-108372-8	DUP	101	91.6

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Tracer/Carrier Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-108372-2

Method: 9320 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)									
		Ba	Y								
Lab Sample ID	Client Sample ID	(40-110)	(40-110)								
LCS 160-315521/2-A	Lab Control Sample	107	89.3								
LCSD 160-315521/3-A	Lab Control Sample Dup	108	90.5								
MB 160-315521/1-A	Method Blank	109	87.5								

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319)277-2401

TestAmerica Job ID: 310-110189-1
Client Project/Site: Nebraska City Unit 1 Landfill CCR
Sampling Event: CCR Parameters Q1 and Q3

For:
Omaha Public Power District
Attn: Accounts Payable, 4E/EP-5
444 South 16th Street Mall
Omaha, Nebraska 68102-2247

Attn: Brad Sojka

Authorized for release by:
7/31/2017 2:43:31 PM

Shawn Hayes, Senior Project Manager
(319)277-2401
shawn.hayes@testamericainc.com

Table of Contents

Case Narrative

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-110189-1

Job ID: 310-110189-1

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-110189-1

Comments
No additional comments.

Receipt
The samples were received on 7/19/2017 9:25 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.9º C and 3.6º C.

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

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

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

Sample Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-110189-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-110189-1	MW13	Ground Water	07/12/17 11:20	07/19/17 09:25
310-110189-2	MW4NC2	Ground Water	07/12/17 10:46	07/19/17 09:25
310-110189-3	MW11	Ground Water	07/13/17 12:00	07/19/17 09:25
310-110189-4	MW3	Ground Water	07/13/17 11:18	07/19/17 09:25
310-110189-5	MW4	Ground Water	07/13/17 09:48	07/19/17 09:25
310-110189-6	MW9	Ground Water	07/13/17 10:46	07/19/17 09:25
310-110189-7	MW2	Ground Water	07/13/17 12:47	07/19/17 09:25
310-110189-8	DUP	Ground Water	07/13/17 08:00	07/19/17 09:25

Detection Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-110189-1

Client Sample ID: MW13 — Lab Sample ID: 310-110189-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	12.5		5.00		mg/L	5		9056A	Total/NA
Sulfate	39.8		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.00325		0.00200		mg/L	1		6020A	Total/NA
Barium	0.330		0.00200		mg/L	1		6020A	Total/NA
Calcium	94.1		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.00108		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00206		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	592		60.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW4NC2 — Lab Sample ID: 310-110189-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	32.7		5.00		mg/L	5		9056A	Total/NA
Barium	0.236		0.00200		mg/L	1		6020A	Total/NA
Calcium	112		0.200		mg/L	1		6020A	Total/NA
Lead	0.000787		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00326		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	664		60.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW11 — Lab Sample ID: 310-110189-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.538		0.500		mg/L	5		9056A	Total/NA
Sulfate	74.2		5.00		mg/L	5		9056A	Total/NA
Barium	0.146		0.00200		mg/L	1		6020A	Total/NA
Boron	1.01		0.200		mg/L	1		6020A	Total/NA
Calcium	69.9		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000850		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00905		0.00200		mg/L	1		6020A	Total/NA
Mercury	0.000262		0.000200		mg/L	1		7470A	Total/NA
Total Dissolved Solids	520		60.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW3 — Lab Sample ID: 310-110189-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.81		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.603		0.500		mg/L	5		9056A	Total/NA
Sulfate	334		10.0		mg/L	10		9056A	Total/NA
Arsenic	0.0302		0.00200		mg/L	1		6020A	Total/NA
Barium	0.116		0.00200		mg/L	1		6020A	Total/NA
Boron	2.55		0.200		mg/L	1		6020A	Total/NA
Calcium	169		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.00257		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1080		60.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW4 — Lab Sample ID: 310-110189-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	196		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.00381		0.00200		mg/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW4 (Continued) — Lab Sample ID: 310-110189-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0687		0.00200		mg/L	1		6020A	Total/NA
Boron	1.41		0.200		mg/L	1		6020A	Total/NA
Calcium	88.2		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.0317		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	696		60.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW9 — Lab Sample ID: 310-110189-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.680		0.500		mg/L	5		9056A	Total/NA
Sulfate	159		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.00885		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0952		0.00200		mg/L	1		6020A	Total/NA
Boron	1.68		0.200		mg/L	1		6020A	Total/NA
Calcium	144		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000878		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.0302		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	792		60.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW2 — Lab Sample ID: 310-110189-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	44.5		5.00		mg/L	5		9056A	Total/NA
Barium	0.122		0.00200		mg/L	1		6020A	Total/NA
Boron	0.225		0.200		mg/L	1		6020A	Total/NA
Calcium	110		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.0374		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	524		60.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP — Lab Sample ID: 310-110189-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	195		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.00347		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0681		0.00200		mg/L	1		6020A	Total/NA
Boron	1.30		0.200		mg/L	1		6020A	Total/NA
Calcium	84.3		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.0287		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	512		60.0		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-110189-1

Client Sample ID: MW13
Date Collected: 07/12/17 11:20
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110189-1
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**12.5**		5.00		mg/L			07/20/17 13:04	5
Fluoride	<0.500		0.500		mg/L			07/20/17 13:04	5
Sulfate	**39.8**		5.00		mg/L			07/20/17 13:04	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		07/20/17 07:21	07/20/17 21:15	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:13	1
Arsenic	**0.00325**		0.00200		mg/L		07/20/17 07:19	07/24/17 17:13	1
Barium	**0.330**		0.00200		mg/L		07/20/17 07:19	07/24/17 17:13	1
Beryllium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:13	1
Boron	<0.200		0.200		mg/L		07/20/17 07:19	07/28/17 12:20	1
Cadmium	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 17:13	1
Calcium	**94.1**		0.200		mg/L		07/20/17 07:19	07/24/17 17:13	1
Chromium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 17:13	1
Cobalt	**0.00108**		0.000500		mg/L		07/20/17 07:19	07/24/17 17:13	1
Lead	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 17:13	1
Molybdenum	**0.00206**		0.00200		mg/L		07/20/17 07:19	07/24/17 17:13	1
Selenium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 17:13	1
Thallium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:13	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		07/20/17 11:40	07/21/17 14:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**592**		60.0		mg/L			07/19/17 15:27	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-110189-1

Client Sample ID: MW4NC2
Date Collected: 07/12/17 10:46
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110189-2
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			07/20/17 13:19	5
Fluoride	<0.500		0.500		mg/L			07/20/17 13:19	5
Sulfate	**32.7**		5.00		mg/L			07/20/17 13:19	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		07/20/17 07:21	07/20/17 21:17	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:29	1
Arsenic	<0.00200		0.00200		mg/L		07/20/17 07:19	07/24/17 17:29	1
Barium	**0.236**		0.00200		mg/L		07/20/17 07:19	07/24/17 17:29	1
Beryllium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:29	1
Boron	<0.200		0.200		mg/L		07/20/17 07:19	07/28/17 12:23	1
Cadmium	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 17:29	1
Calcium	**112**		0.200		mg/L		07/20/17 07:19	07/24/17 17:29	1
Chromium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 17:29	1
Cobalt	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 17:29	1
Lead	**0.000787**		0.000500		mg/L		07/20/17 07:19	07/24/17 17:29	1
Molybdenum	**0.00326**		0.00200		mg/L		07/20/17 07:19	07/24/17 17:29	1
Selenium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 17:29	1
Thallium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:29	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		07/20/17 11:40	07/21/17 14:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**664**		60.0		mg/L			07/19/17 15:27	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-110189-1

Client Sample ID: MW11
Date Collected: 07/13/17 12:00
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110189-3
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			07/20/17 13:35	5
Fluoride	**0.538**		0.500		mg/L			07/20/17 13:35	5
Sulfate	**74.2**		5.00		mg/L			07/20/17 13:35	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		07/20/17 07:21	07/20/17 21:19	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:35	1
Arsenic	<0.00200		0.00200		mg/L		07/20/17 07:19	07/24/17 17:35	1
Barium	**0.146**		0.00200		mg/L		07/20/17 07:19	07/24/17 17:35	1
Beryllium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:35	1
Boron	**1.01**		0.200		mg/L		07/20/17 07:19	07/28/17 12:30	1
Cadmium	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 17:35	1
Calcium	**69.9**		0.200		mg/L		07/20/17 07:19	07/24/17 17:35	1
Chromium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 17:35	1
Cobalt	**0.000850**		0.000500		mg/L		07/20/17 07:19	07/24/17 17:35	1
Lead	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 17:35	1
Molybdenum	**0.00905**		0.00200		mg/L		07/20/17 07:19	07/24/17 17:35	1
Selenium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 17:35	1
Thallium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:35	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.000262**		0.000200		mg/L		07/20/17 11:40	07/21/17 14:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**520**		60.0		mg/L			07/19/17 15:27	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-110189-1

Client Sample ID: MW3
Date Collected: 07/13/17 11:18
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110189-4
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7.81**		5.00		mg/L			07/20/17 13:50	5
Fluoride	**0.603**		0.500		mg/L			07/20/17 13:50	5
Sulfate	**334**		10.0		mg/L			07/20/17 14:06	10

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		07/20/17 07:21	07/20/17 21:23	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:39	1
Arsenic	**0.0302**		0.00200		mg/L		07/20/17 07:19	07/24/17 17:39	1
Barium	**0.116**		0.00200		mg/L		07/20/17 07:19	07/24/17 17:39	1
Beryllium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:39	1
Boron	**2.55**		0.200		mg/L		07/20/17 07:19	07/28/17 12:33	1
Cadmium	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 17:39	1
Calcium	**169**		0.200		mg/L		07/20/17 07:19	07/24/17 17:39	1
Chromium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 17:39	1
Cobalt	**0.00257**		0.000500		mg/L		07/20/17 07:19	07/24/17 17:39	1
Lead	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 17:39	1
Molybdenum	<0.00200		0.00200		mg/L		07/20/17 07:19	07/24/17 17:39	1
Selenium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 17:39	1
Thallium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:39	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		07/20/17 11:40	07/21/17 14:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1080**		60.0		mg/L			07/19/17 15:27	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-110189-1

Client Sample ID: MW4
Date Collected: 07/13/17 09:48
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110189-5
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			07/20/17 14:21	5
Fluoride	<0.500		0.500		mg/L			07/20/17 14:21	5
Sulfate	**196**		5.00		mg/L			07/20/17 14:21	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		07/20/17 07:21	07/20/17 21:26	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:42	1
Arsenic	**0.00381**		0.00200		mg/L		07/20/17 07:19	07/24/17 17:42	1
Barium	**0.0687**		0.00200		mg/L		07/20/17 07:19	07/24/17 17:42	1
Beryllium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:42	1
Boron	**1.41**		0.200		mg/L		07/20/17 07:19	07/28/17 12:36	1
Cadmium	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 17:42	1
Calcium	**88.2**		0.200		mg/L		07/20/17 07:19	07/24/17 17:42	1
Chromium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 17:42	1
Cobalt	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 17:42	1
Lead	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 17:42	1
Molybdenum	**0.0317**		0.00200		mg/L		07/20/17 07:19	07/24/17 17:42	1
Selenium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 17:42	1
Thallium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:42	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		07/20/17 11:40	07/21/17 14:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**696**		60.0		mg/L			07/19/17 15:27	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-110189-1

Client Sample ID: MW9
Date Collected: 07/13/17 10:46
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110189-6
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			07/20/17 14:37	5
Fluoride	**0.680**		0.500		mg/L			07/20/17 14:37	5
Sulfate	**159**		5.00		mg/L			07/20/17 14:37	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		07/20/17 07:21	07/20/17 21:32	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:45	1
Arsenic	**0.00885**		0.00200		mg/L		07/20/17 07:19	07/24/17 17:45	1
Barium	**0.0952**		0.00200		mg/L		07/20/17 07:19	07/24/17 17:45	1
Beryllium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:45	1
Boron	**1.68**		0.200		mg/L		07/20/17 07:19	07/28/17 12:39	1
Cadmium	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 17:45	1
Calcium	**144**		0.200		mg/L		07/20/17 07:19	07/24/17 17:45	1
Chromium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 17:45	1
Cobalt	**0.000878**		0.000500		mg/L		07/20/17 07:19	07/24/17 17:45	1
Lead	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 17:45	1
Molybdenum	**0.0302**		0.00200		mg/L		07/20/17 07:19	07/24/17 17:45	1
Selenium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 17:45	1
Thallium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:45	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		07/20/17 11:40	07/21/17 14:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**792**		60.0		mg/L			07/19/17 15:27	1

Client Sample ID: MW2
Date Collected: 07/13/17 12:47
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110189-7
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			07/20/17 14:52	5
Fluoride	<0.500		0.500		mg/L			07/20/17 14:52	5
Sulfate	**44.5**		5.00		mg/L			07/20/17 14:52	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		07/20/17 07:21	07/20/17 21:34	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:48	1
Arsenic	<0.00200		0.00200		mg/L		07/20/17 07:19	07/24/17 17:48	1
Barium	**0.122**		0.00200		mg/L		07/20/17 07:19	07/24/17 17:48	1
Beryllium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:48	1
Boron	**0.225**		0.200		mg/L		07/20/17 07:19	07/28/17 12:52	1
Cadmium	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 17:48	1
Calcium	**110**		0.200		mg/L		07/20/17 07:19	07/24/17 17:48	1
Chromium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 17:48	1
Cobalt	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 17:48	1
Lead	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 17:48	1
Molybdenum	**0.0374**		0.00200		mg/L		07/20/17 07:19	07/24/17 17:48	1
Selenium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 17:48	1
Thallium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:48	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		07/20/17 11:40	07/21/17 14:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**524**		60.0		mg/L			07/19/17 15:27	1

Client Sample ID: DUP
Date Collected: 07/13/17 08:00
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110189-8
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			07/20/17 15:38	5
Fluoride	<0.500		0.500		mg/L			07/20/17 15:38	5
Sulfate	**195**		5.00		mg/L			07/20/17 15:38	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		07/20/17 07:21	07/20/17 21:36	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:51	1
Arsenic	**0.00347**		0.00200		mg/L		07/20/17 07:19	07/24/17 17:51	1
Barium	**0.0681**		0.00200		mg/L		07/20/17 07:19	07/24/17 17:51	1
Beryllium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:51	1
Boron	**1.30**		0.200		mg/L		07/20/17 07:19	07/28/17 12:55	1
Cadmium	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 17:51	1
Calcium	**84.3**		0.200		mg/L		07/20/17 07:19	07/24/17 17:51	1
Chromium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 17:51	1
Cobalt	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 17:51	1
Lead	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 17:51	1
Molybdenum	**0.0287**		0.00200		mg/L		07/20/17 07:19	07/24/17 17:51	1
Selenium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 17:51	1
Thallium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:51	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		07/20/17 11:40	07/21/17 14:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**512**		60.0		mg/L			07/19/17 15:27	1

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
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-173315/3
Matrix: Water
Analysis Batch: 173315

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			07/20/17 09:06	1
Fluoride	<0.100		0.100		mg/L			07/20/17 09:06	1
Sulfate	<1.00		1.00		mg/L			07/20/17 09:06	1

Lab Sample ID: LCS 310-173315/4
Matrix: Water
Analysis Batch: 173315

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	7.50	7.431		mg/L		99	90 - 110
Fluoride	1.50	1.472		mg/L		98	90 - 110
Sulfate	7.50	7.002		mg/L		93	90 - 110

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 310-172980/1-A
Matrix: Water
Analysis Batch: 173119

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 172980

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		07/20/17 07:21	07/20/17 20:44	1

Lab Sample ID: LCS 310-172980/2-A
Matrix: Water
Analysis Batch: 173119

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 172980

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	2.00	1.929		mg/L		96	80 - 120

Lab Sample ID: 310-110189-3 DU
Matrix: Ground Water
Analysis Batch: 173119

Client Sample ID: MW11
Prep Type: Total/NA
Prep Batch: 172980

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Lithium	<0.0500		<0.0500		mg/L		NC	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 310-172979/1-A
Matrix: Water
Analysis Batch: 173409

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 172979

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 16:20	1
Arsenic	<0.00200		0.00200		mg/L		07/20/17 07:19	07/24/17 16:20	1
Barium	<0.00200		0.00200		mg/L		07/20/17 07:19	07/24/17 16:20	1
Beryllium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 16:20	1
Cadmium	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 16:20	1
Calcium	<0.200		0.200		mg/L		07/20/17 07:19	07/24/17 16:20	1

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

Lab Sample ID: MB 310-172979/1-A
Matrix: Water
Analysis Batch: 173409

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 172979

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 16:20	1
Cobalt	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 16:20	1
Lead	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 16:20	1
Molybdenum	<0.00200		0.00200		mg/L		07/20/17 07:19	07/24/17 16:20	1
Selenium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 16:20	1
Thallium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 16:20	1

Lab Sample ID: MB 310-172979/1-A
Matrix: Water
Analysis Batch: 173902

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 172979

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.200		0.200		mg/L		07/20/17 07:19	07/28/17 11:30	1

Lab Sample ID: LCS 310-172979/2-A
Matrix: Water
Analysis Batch: 173409

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 172979

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0200	0.01966		mg/L		98	80 - 120
Arsenic	0.0400	0.03832		mg/L		96	80 - 120
Barium	0.0400	0.04128		mg/L		103	80 - 120
Beryllium	0.0200	0.02039		mg/L		102	80 - 120
Cadmium	0.0200	0.02074		mg/L		104	80 - 120
Calcium	2.00	2.082		mg/L		104	80 - 120
Chromium	0.0400	0.04159		mg/L		104	80 - 120
Cobalt	0.0200	0.02038		mg/L		102	80 - 120
Lead	0.0200	0.02052		mg/L		103	80 - 120
Molybdenum	0.0400	0.03950		mg/L		99	80 - 120
Selenium	0.0400	0.04082		mg/L		102	80 - 120
Thallium	0.0160	0.01676		mg/L		105	80 - 120

Lab Sample ID: LCS 310-172979/2-A
Matrix: Water
Analysis Batch: 173902

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 172979

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.880	0.8684		mg/L		99	80 - 120

Lab Sample ID: 310-110189-2 DU
Matrix: Ground Water
Analysis Batch: 173409

Client Sample ID: MW4NC2
Prep Type: Total/NA
Prep Batch: 172979

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	<0.00100		<0.00100		mg/L		NC	20
Arsenic	<0.00200		<0.00200		mg/L		NC	20
Barium	0.236		0.2429		mg/L		3	20
Beryllium	<0.00100		<0.00100		mg/L		NC	20
Cadmium	<0.000500		<0.000500		mg/L		NC	20

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

Lab Sample ID: 310-110189-2 DU — **Client Sample ID: MW4NC2**
Matrix: Ground Water — **Prep Type: Total/NA**
Analysis Batch: 173409 — **Prep Batch: 172979**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Calcium	112		114.6		mg/L		2	20
Chromium	<0.00500		<0.00500		mg/L		NC	20
Cobalt	<0.000500		<0.000500		mg/L		NC	20
Lead	0.000787		0.0007860		mg/L		0.1	20
Molybdenum	0.00326		0.003224		mg/L		1	20
Selenium	<0.00500		<0.00500		mg/L		NC	20
Thallium	<0.00100		<0.00100		mg/L		NC	20

Lab Sample ID: 310-110189-2 DU — **Client Sample ID: MW4NC2**
Matrix: Ground Water — **Prep Type: Total/NA**
Analysis Batch: 173902 — **Prep Batch: 172979**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Boron	<0.200		<0.200		mg/L		NC	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-173031/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 173205 — **Prep Batch: 173031**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		07/20/17 11:40	07/21/17 13:54	1

Lab Sample ID: LCS 310-173031/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 173205 — **Prep Batch: 173031**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00167	0.001735		mg/L		104	80 - 120

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

Lab Sample ID: MB 310-172922/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 172922

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<30.0		30.0		mg/L			07/19/17 15:27	1

Lab Sample ID: LCS 310-172922/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 172922

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	1000	1030		mg/L		103	90 - 110

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

Lab Sample ID: 310-110189-8 DU
Matrix: Ground Water
Analysis Batch: 172922

Client Sample ID: DUP
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	512			488.0		mg/L				4	24

HPLC/IC

Analysis Batch: 173315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-110189-1	MW13	Total/NA	Ground Water	9056A	
310-110189-2	MW4NC2	Total/NA	Ground Water	9056A	
310-110189-3	MW11	Total/NA	Ground Water	9056A	
310-110189-4	MW3	Total/NA	Ground Water	9056A	
310-110189-4	MW3	Total/NA	Ground Water	9056A	
310-110189-5	MW4	Total/NA	Ground Water	9056A	
310-110189-6	MW9	Total/NA	Ground Water	9056A	
310-110189-7	MW2	Total/NA	Ground Water	9056A	
310-110189-8	DUP	Total/NA	Ground Water	9056A	
MB 310-173315/3	Method Blank	Total/NA	Water	9056A	
LCS 310-173315/4	Lab Control Sample	Total/NA	Water	9056A	

Metals

Prep Batch: 172979

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-110189-1	MW13	Total/NA	Ground Water	3010A	
310-110189-2	MW4NC2	Total/NA	Ground Water	3010A	
310-110189-3	MW11	Total/NA	Ground Water	3010A	
310-110189-4	MW3	Total/NA	Ground Water	3010A	
310-110189-5	MW4	Total/NA	Ground Water	3010A	
310-110189-6	MW9	Total/NA	Ground Water	3010A	
310-110189-7	MW2	Total/NA	Ground Water	3010A	
310-110189-8	DUP	Total/NA	Ground Water	3010A	
MB 310-172979/1-A	Method Blank	Total/NA	Water	3010A	
LCS 310-172979/2-A	Lab Control Sample	Total/NA	Water	3010A	
310-110189-2 DU	MW4NC2	Total/NA	Ground Water	3010A	

Prep Batch: 172980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-110189-1	MW13	Total/NA	Ground Water	3010A	
310-110189-2	MW4NC2	Total/NA	Ground Water	3010A	
310-110189-3	MW11	Total/NA	Ground Water	3010A	
310-110189-4	MW3	Total/NA	Ground Water	3010A	
310-110189-5	MW4	Total/NA	Ground Water	3010A	
310-110189-6	MW9	Total/NA	Ground Water	3010A	
310-110189-7	MW2	Total/NA	Ground Water	3010A	
310-110189-8	DUP	Total/NA	Ground Water	3010A	
MB 310-172980/1-A	Method Blank	Total/NA	Water	3010A	
LCS 310-172980/2-A	Lab Control Sample	Total/NA	Water	3010A	
310-110189-3 DU	MW11	Total/NA	Ground Water	3010A	

Prep Batch: 173031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-110189-1	MW13	Total/NA	Ground Water	7470A	
310-110189-2	MW4NC2	Total/NA	Ground Water	7470A	
310-110189-3	MW11	Total/NA	Ground Water	7470A	
310-110189-4	MW3	Total/NA	Ground Water	7470A	
310-110189-5	MW4	Total/NA	Ground Water	7470A	
310-110189-6	MW9	Total/NA	Ground Water	7470A	

Metals (Continued)

Prep Batch: 173031 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-110189-7	MW2	Total/NA	Ground Water	7470A	
310-110189-8	DUP	Total/NA	Ground Water	7470A	
MB 310-173031/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-173031/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 173119

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-110189-1	MW13	Total/NA	Ground Water	6010C	172980
310-110189-2	MW4NC2	Total/NA	Ground Water	6010C	172980
310-110189-3	MW11	Total/NA	Ground Water	6010C	172980
310-110189-4	MW3	Total/NA	Ground Water	6010C	172980
310-110189-5	MW4	Total/NA	Ground Water	6010C	172980
310-110189-6	MW9	Total/NA	Ground Water	6010C	172980
310-110189-7	MW2	Total/NA	Ground Water	6010C	172980
310-110189-8	DUP	Total/NA	Ground Water	6010C	172980
MB 310-172980/1-A	Method Blank	Total/NA	Water	6010C	172980
LCS 310-172980/2-A	Lab Control Sample	Total/NA	Water	6010C	172980
310-110189-3 DU	MW11	Total/NA	Ground Water	6010C	172980

Analysis Batch: 173205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-110189-1	MW13	Total/NA	Ground Water	7470A	173031
310-110189-2	MW4NC2	Total/NA	Ground Water	7470A	173031
310-110189-3	MW11	Total/NA	Ground Water	7470A	173031
310-110189-4	MW3	Total/NA	Ground Water	7470A	173031
310-110189-5	MW4	Total/NA	Ground Water	7470A	173031
310-110189-6	MW9	Total/NA	Ground Water	7470A	173031
310-110189-7	MW2	Total/NA	Ground Water	7470A	173031
310-110189-8	DUP	Total/NA	Ground Water	7470A	173031
MB 310-173031/1-A	Method Blank	Total/NA	Water	7470A	173031
LCS 310-173031/2-A	Lab Control Sample	Total/NA	Water	7470A	173031

Analysis Batch: 173409

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-110189-1	MW13	Total/NA	Ground Water	6020A	172979
310-110189-2	MW4NC2	Total/NA	Ground Water	6020A	172979
310-110189-3	MW11	Total/NA	Ground Water	6020A	172979
310-110189-4	MW3	Total/NA	Ground Water	6020A	172979
310-110189-5	MW4	Total/NA	Ground Water	6020A	172979
310-110189-6	MW9	Total/NA	Ground Water	6020A	172979
310-110189-7	MW2	Total/NA	Ground Water	6020A	172979
310-110189-8	DUP	Total/NA	Ground Water	6020A	172979
MB 310-172979/1-A	Method Blank	Total/NA	Water	6020A	172979
LCS 310-172979/2-A	Lab Control Sample	Total/NA	Water	6020A	172979
310-110189-2 DU	MW4NC2	Total/NA	Ground Water	6020A	172979

Analysis Batch: 173902

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-110189-1	MW13	Total/NA	Ground Water	6020A	172979
310-110189-2	MW4NC2	Total/NA	Ground Water	6020A	172979
310-110189-3	MW11	Total/NA	Ground Water	6020A	172979

Metals (Continued)

Analysis Batch: 173902 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-110189-4	MW3	Total/NA	Ground Water	6020A	172979
310-110189-5	MW4	Total/NA	Ground Water	6020A	172979
310-110189-6	MW9	Total/NA	Ground Water	6020A	172979
310-110189-7	MW2	Total/NA	Ground Water	6020A	172979
310-110189-8	DUP	Total/NA	Ground Water	6020A	172979
MB 310-172979/1-A	Method Blank	Total/NA	Water	6020A	172979
LCS 310-172979/2-A	Lab Control Sample	Total/NA	Water	6020A	172979
310-110189-2 DU	MW4NC2	Total/NA	Ground Water	6020A	172979

General Chemistry

Analysis Batch: 172922

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-110189-1	MW13	Total/NA	Ground Water	SM 2540C	
310-110189-2	MW4NC2	Total/NA	Ground Water	SM 2540C	
310-110189-3	MW11	Total/NA	Ground Water	SM 2540C	
310-110189-4	MW3	Total/NA	Ground Water	SM 2540C	
310-110189-5	MW4	Total/NA	Ground Water	SM 2540C	
310-110189-6	MW9	Total/NA	Ground Water	SM 2540C	
310-110189-7	MW2	Total/NA	Ground Water	SM 2540C	
310-110189-8	DUP	Total/NA	Ground Water	SM 2540C	
MB 310-172922/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-172922/2	Lab Control Sample	Total/NA	Water	SM 2540C	
310-110189-8 DU	DUP	Total/NA	Ground Water	SM 2540C	

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-110189-1

Client Sample ID: MW13

Lab Sample ID: 310-110189-1

Date Collected: 07/12/17 11:20

Matrix: Ground Water

Date Received: 07/19/17 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	173315	07/20/17 13:04	SAD	TAL CF
Total/NA	Prep	3010A			172980	07/20/17 07:21	JNR	TAL CF
Total/NA	Analysis	6010C		1	173119	07/20/17 21:15	OAD	TAL CF
Total/NA	Prep	3010A			172979	07/20/17 07:19	JNR	TAL CF
Total/NA	Analysis	6020A		1	173409	07/24/17 17:13	OAD	TAL CF
Total/NA	Prep	3010A			172979	07/20/17 07:19	JNR	TAL CF
Total/NA	Analysis	6020A		1	173902	07/28/17 12:20	OAD	TAL CF
Total/NA	Prep	7470A			173031	07/20/17 11:40	MEG	TAL CF
Total/NA	Analysis	7470A		1	173205	07/21/17 14:16	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	172922	07/19/17 15:27	MDK	TAL CF

Client Sample ID: MW4NC2

Lab Sample ID: 310-110189-2

Date Collected: 07/12/17 10:46

Matrix: Ground Water

Date Received: 07/19/17 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	173315	07/20/17 13:19	SAD	TAL CF
Total/NA	Prep	3010A			172980	07/20/17 07:21	JNR	TAL CF
Total/NA	Analysis	6010C		1	173119	07/20/17 21:17	OAD	TAL CF
Total/NA	Prep	3010A			172979	07/20/17 07:19	JNR	TAL CF
Total/NA	Analysis	6020A		1	173409	07/24/17 17:29	OAD	TAL CF
Total/NA	Prep	3010A			172979	07/20/17 07:19	JNR	TAL CF
Total/NA	Analysis	6020A		1	173902	07/28/17 12:23	OAD	TAL CF
Total/NA	Prep	7470A			173031	07/20/17 11:40	MEG	TAL CF
Total/NA	Analysis	7470A		1	173205	07/21/17 14:18	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	172922	07/19/17 15:27	MDK	TAL CF

Client Sample ID: MW11

Lab Sample ID: 310-110189-3

Date Collected: 07/13/17 12:00

Matrix: Ground Water

Date Received: 07/19/17 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	173315	07/20/17 13:35	SAD	TAL CF
Total/NA	Prep	3010A			172980	07/20/17 07:21	JNR	TAL CF
Total/NA	Analysis	6010C		1	173119	07/20/17 21:19	OAD	TAL CF
Total/NA	Prep	3010A			172979	07/20/17 07:19	JNR	TAL CF
Total/NA	Analysis	6020A		1	173409	07/24/17 17:35	OAD	TAL CF
Total/NA	Prep	3010A			172979	07/20/17 07:19	JNR	TAL CF
Total/NA	Analysis	6020A		1	173902	07/28/17 12:30	OAD	TAL CF
Total/NA	Prep	7470A			173031	07/20/17 11:40	MEG	TAL CF
Total/NA	Analysis	7470A		1	173205	07/21/17 14:19	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	172922	07/19/17 15:27	MDK	TAL CF

Client Sample ID: MW3

Lab Sample ID: 310-110189-4

Date Collected: 07/13/17 11:18

Matrix: Ground Water

Date Received: 07/19/17 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	173315	07/20/17 13:50	SAD	TAL CF
Total/NA	Analysis	9056A		10	173315	07/20/17 14:06	SAD	TAL CF
Total/NA	Prep	3010A			172980	07/20/17 07:21	JNR	TAL CF
Total/NA	Analysis	6010C		1	173119	07/20/17 21:23	OAD	TAL CF
Total/NA	Prep	3010A			172979	07/20/17 07:19	JNR	TAL CF
Total/NA	Analysis	6020A		1	173409	07/24/17 17:39	OAD	TAL CF
Total/NA	Prep	3010A			172979	07/20/17 07:19	JNR	TAL CF
Total/NA	Analysis	6020A		1	173902	07/28/17 12:33	OAD	TAL CF
Total/NA	Prep	7470A			173031	07/20/17 11:40	MEG	TAL CF
Total/NA	Analysis	7470A		1	173205	07/21/17 14:21	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	172922	07/19/17 15:27	MDK	TAL CF

Client Sample ID: MW4

Lab Sample ID: 310-110189-5

Date Collected: 07/13/17 09:48

Matrix: Ground Water

Date Received: 07/19/17 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	173315	07/20/17 14:21	SAD	TAL CF
Total/NA	Prep	3010A			172980	07/20/17 07:21	JNR	TAL CF
Total/NA	Analysis	6010C		1	173119	07/20/17 21:26	OAD	TAL CF
Total/NA	Prep	3010A			172979	07/20/17 07:19	JNR	TAL CF
Total/NA	Analysis	6020A		1	173409	07/24/17 17:42	OAD	TAL CF
Total/NA	Prep	3010A			172979	07/20/17 07:19	JNR	TAL CF
Total/NA	Analysis	6020A		1	173902	07/28/17 12:36	OAD	TAL CF
Total/NA	Prep	7470A			173031	07/20/17 11:40	MEG	TAL CF
Total/NA	Analysis	7470A		1	173205	07/21/17 14:23	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	172922	07/19/17 15:27	MDK	TAL CF

Client Sample ID: MW9

Lab Sample ID: 310-110189-6

Date Collected: 07/13/17 10:46

Matrix: Ground Water

Date Received: 07/19/17 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	173315	07/20/17 14:37	SAD	TAL CF
Total/NA	Prep	3010A			172980	07/20/17 07:21	JNR	TAL CF
Total/NA	Analysis	6010C		1	173119	07/20/17 21:32	OAD	TAL CF
Total/NA	Prep	3010A			172979	07/20/17 07:19	JNR	TAL CF
Total/NA	Analysis	6020A		1	173409	07/24/17 17:45	OAD	TAL CF
Total/NA	Prep	3010A			172979	07/20/17 07:19	JNR	TAL CF
Total/NA	Analysis	6020A		1	173902	07/28/17 12:39	OAD	TAL CF
Total/NA	Prep	7470A			173031	07/20/17 11:40	MEG	TAL CF
Total/NA	Analysis	7470A		1	173205	07/21/17 14:24	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	172922	07/19/17 15:27	MDK	TAL CF

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-110189-1

Client Sample ID: MW2

Lab Sample ID: 310-110189-7

Date Collected: 07/13/17 12:47

Matrix: Ground Water

Date Received: 07/19/17 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	173315	07/20/17 14:52	SAD	TAL CF
Total/NA	Prep	3010A			172980	07/20/17 07:21	JNR	TAL CF
Total/NA	Analysis	6010C		1	173119	07/20/17 21:34	OAD	TAL CF
Total/NA	Prep	3010A			172979	07/20/17 07:19	JNR	TAL CF
Total/NA	Analysis	6020A		1	173409	07/24/17 17:48	OAD	TAL CF
Total/NA	Prep	3010A			172979	07/20/17 07:19	JNR	TAL CF
Total/NA	Analysis	6020A		1	173902	07/28/17 12:52	OAD	TAL CF
Total/NA	Prep	7470A			173031	07/20/17 11:40	MEG	TAL CF
Total/NA	Analysis	7470A		1	173205	07/21/17 14:26	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	172922	07/19/17 15:27	MDK	TAL CF

Client Sample ID: DUP

Lab Sample ID: 310-110189-8

Date Collected: 07/13/17 08:00

Matrix: Ground Water

Date Received: 07/19/17 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	173315	07/20/17 15:38	SAD	TAL CF
Total/NA	Prep	3010A			172980	07/20/17 07:21	JNR	TAL CF
Total/NA	Analysis	6010C		1	173119	07/20/17 21:36	OAD	TAL CF
Total/NA	Prep	3010A			172979	07/20/17 07:19	JNR	TAL CF
Total/NA	Analysis	6020A		1	173409	07/24/17 17:51	OAD	TAL CF
Total/NA	Prep	3010A			172979	07/20/17 07:19	JNR	TAL CF
Total/NA	Analysis	6020A		1	173902	07/28/17 12:55	OAD	TAL CF
Total/NA	Prep	7470A			173031	07/20/17 11:40	MEG	TAL CF
Total/NA	Analysis	7470A		1	173205	07/21/17 14:30	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	172922	07/19/17 15:27	MDK	TAL CF

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401

Accreditation/Certification Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-110189-1

Laboratory: TestAmerica Cedar Falls

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
AIHA-LAP, LLC	IHLAP		101044	11-01-18
Georgia	State Program	4	IA100001 (OR)	09-29-17
Illinois	NELAP	5	200024	11-29-17
Iowa	State Program	7	007	12-01-17
Kansas	NELAP	7	E-10341	01-31-18
Minnesota	NELAP	5	019-999-319	12-31-17
Minnesota (Petrofund)	State Program	1	3349	08-22-17
North Dakota	State Program	8	R-186	09-29-17
Oregon	NELAP	10	IA100001	09-29-17

Method Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-110189-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	TAL CF
6010C	Metals (ICP)	SW846	TAL CF
6020A	Metals (ICP/MS)	SW846	TAL CF
7470A	Mercury (CVAA)	SW846	TAL CF
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL 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:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401

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310-110189 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Omaha Public Power District

City/State: Omaha, NE | Project: Unit 1 LF CCR

Receipt Information

Date/Time Received: 7.19.17 925 | Received By: BKM

Delivery Type: ☐ UPS ☑ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ TA Courier ☐ TA Field Services ☐ Client Drop-off ☐ Other: _____

Condition of Cooler/Containers

Sample(s) received in Cooler? ☑ Yes ☐ No *If yes:* Cooler ID: 9000

Multiple Coolers? ☑ Yes ☒ No BKM 7.19.17 *If yes:* Cooler # 1 of 2

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: H | Correction Factor (°C): 0.0

• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 1.9 | Corrected Temp (°C): 1.9

• Sample Container Temperature

Sample ID(s) & bottle type used: CONTAINER 1 | CONTAINER 2

Uncorrected Temp (°C): TEMP 1 TEMP 2 | Corrected Temp (°C): TEMP 1 TEMP 2

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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Omaha Public Power District

City/State: Omaha, NE | Project: Unit 1 LF CCR

Receipt Information

Date/Time Received: 7.19.17 925 | Received By: BKM

Delivery Type: ☐ UPS ☑ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ TA Courier ☐ TA Field Services ☐ Client Drop-off ☐ Other: _____

Condition of Cooler/Containers

Sample(s) received in Cooler?	☑ Yes ☐ No	*If yes:* Cooler ID:	CF-71
Multiple Coolers?	☑ Yes ☐ No	*If yes:* Cooler #	2 of 2
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: 14 | Correction Factor (°C): 0.0

• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 3.6 | Corrected Temp (°C): 3.6

• Sample Container Temperature

	CONTAINER 1		CONTAINER 2	
Sample ID(s) & bottle type used:				
Uncorrected Temp (°C):	TEMP 1	TEMP 2		
Corrected Temp (°C):	TEMP 1	TEMP 2		

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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Phone (319) 277-2401 Fax (319) 277-2425

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Brad Sojka	Lab PM: Hayes, Shawn M	Carrier Tracking No(s):	COC No:
Client Contact: Brad Sojka	Phone: 402 636 2515	E-Mail: shawn.hayes@testamericainc.com		Page:
Company: Omaha Public Power District				Job #:
Address: 444 South 16th Street Mall 9E/EP1	Due Date Requested:			
City: Omaha	TAT Requested (days):			
State, Zip: NE, 68102-2247				
Phone: 402-636-2515(Tel)	PO #:			
Email: bsojka@oppd.com	WO #:			
Project Name: Nebraska City Unit 1 Landfill CCR	TestAmerica Project #: 31007558			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Combined Ra226 and Ra228	6010C Lithium, 6020A CCR List, 7470A Mercury	2540C TDS, 9056A Chloride, Fluoride, Sulfate	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	D	N		
MW13	7/12/17	1120	G	GW	N	N	X	X	X		
MW4NC2	7/12/17	1046	G	GW			X	X	X		
MW11	7/13/17	1200	G	GW			X	X	X		
MW3	7/12/17	1118	G	GW			X	X	X		
MW4	7/13/17	0948	G	GW			X	X	X		
MW9	7/13/17	1046 ~~1020~~	G	GW			X	X	X		
MW2	7/13/17	1247	G	GW			X	X	X		
DUP	7/13/17	0800	G	GW	✓	✓	X	X	X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	7/18/17 1300			7-19-17 925	TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MW13	310-110189-A-1	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW13	310-110189-C-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-110189-D-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4NC2	310-110189-A-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW4NC2	310-110189-C-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4NC2	310-110189-D-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW11	310-110189-A-3	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW11	310-110189-C-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW11	310-110189-D-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW3	310-110189-A-4	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW3	310-110189-C-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW3	310-110189-D-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4	310-110189-A-5	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW4	310-110189-C-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4	310-110189-D-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-110189-A-6	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW9	310-110189-C-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-110189-D-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-110189-A-7	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW2	310-110189-C-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-110189-D-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP	310-110189-A-8	Plastic 250ml - with Nitric Acid	<2	_____	_____
DUP	310-110189-C-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP	310-110189-D-8	Plastic 1 liter - Nitric Acid	<2	_____	_____

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-110189-1

Login Number: 110189

List Source: TestAmerica Cedar Falls

List Number: 1

Creator: Patrick, Kathryn E

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	1 of 2 coolers had a custody seal.
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319)277-2401

TestAmerica Job ID: 310-110189-2
Client Project/Site: Nebraska City Unit 1 Landfill CCR
Sampling Event: CCR Parameters Q1 and Q3

For:
Omaha Public Power District
Attn: Accounts Payable, 4E/EP-5
444 South 16th Street Mall
Omaha, Nebraska 68102-2247

Attn: Brad Sojka

Authorized for release by:
8/16/2017 11:39:10 AM

Shawn Hayes, Senior Project Manager
(319)277-2401
shawn.hayes@testamericainc.com

Table of Contents

Case Narrative

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-110189-2

Job ID: 310-110189-2

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-110189-2

Comments
No additional comments.

Receipt
The samples were received on 7/19/2017 9:25 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.9º C and 3.6º C.

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

Sample Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-110189-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-110189-1	MW13	Ground Water	07/12/17 11:20	07/19/17 09:25
310-110189-2	MW4NC2	Ground Water	07/12/17 10:46	07/19/17 09:25
310-110189-3	MW11	Ground Water	07/13/17 12:00	07/19/17 09:25
310-110189-4	MW3	Ground Water	07/13/17 11:18	07/19/17 09:25
310-110189-5	MW4	Ground Water	07/13/17 09:48	07/19/17 09:25
310-110189-6	MW9	Ground Water	07/13/17 10:46	07/19/17 09:25
310-110189-7	MW2	Ground Water	07/13/17 12:47	07/19/17 09:25
310-110189-8	DUP	Ground Water	07/13/17 08:00	07/19/17 09:25

Client Sample ID: MW13
Date Collected: 07/12/17 11:20
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110189-1
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.244**		0.0881	0.0908	1.00	0.0782	pCi/L	07/24/17 12:47	08/15/17 06:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.4*		*40 - 110*	*07/24/17 12:47*	*08/15/17 06:35*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.258	U	0.198	0.199	1.00	0.311	pCi/L	07/24/17 12:55	08/03/17 13:29	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.4*		*40 - 110*	*07/24/17 12:55*	*08/03/17 13:29*	*1*
Y Carrier	*99.7*		*40 - 110*	*07/24/17 12:55*	*08/03/17 13:29*	*1*

Method: 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	**0.502**		0.217	0.219	5.00	0.311	pCi/L		08/15/17 14:52	1

Client Sample ID: MW4NC2
Date Collected: 07/12/17 10:46
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110189-2
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.293		0.0972	0.101	1.00	0.0849	pCi/L	07/24/17 12:47	08/15/17 06:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.3*		*40 - 110*	*07/24/17 12:47*	*08/15/17 06:35*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.468		0.225	0.229	1.00	0.328	pCi/L	07/24/17 12:55	08/03/17 13:29	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.3*		*40 - 110*	*07/24/17 12:55*	*08/03/17 13:29*	*1*
Y Carrier	*99.7*		*40 - 110*	*07/24/17 12:55*	*08/03/17 13:29*	*1*

Method: 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	0.760		0.245	0.250	5.00	0.328	pCi/L		08/15/17 14:52	1

Client Sample ID: MW11
Date Collected: 07/13/17 12:00
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110189-3
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.166**		0.0708	0.0724	1.00	0.0598	pCi/L	07/24/17 12:47	08/15/17 06:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.3*		*40 - 110*	*07/24/17 12:47*	*08/15/17 06:36*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.230	U	0.205	0.206	1.00	0.329	pCi/L	07/24/17 12:55	08/03/17 13:29	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.3*		*40 - 110*	*07/24/17 12:55*	*08/03/17 13:29*	*1*
Y Carrier	*99.4*		*40 - 110*	*07/24/17 12:55*	*08/03/17 13:29*	*1*

Method: 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	**0.397**		0.217	0.218	5.00	0.329	pCi/L		08/15/17 14:52	1

Client Sample ID: MW3
Date Collected: 07/13/17 11:18
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110189-4
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0669	U	0.0534	0.0538	1.00	0.0742	pCi/L	07/24/17 12:47	08/15/17 06:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.5*		*40 - 110*	*07/24/17 12:47*	*08/15/17 06:36*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.272	U	0.225	0.226	1.00	0.359	pCi/L	07/24/17 12:55	08/03/17 13:29	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.5*		*40 - 110*	*07/24/17 12:55*	*08/03/17 13:29*	*1*
Y Carrier	*101*		*40 - 110*	*07/24/17 12:55*	*08/03/17 13:29*	*1*

Method: 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	0.339	U	0.231	0.232	5.00	0.359	pCi/L		08/15/17 14:52	1

Client Sample ID: MW4
Date Collected: 07/13/17 09:48
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110189-5
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0634	U	0.0551	0.0554	1.00	0.0806	pCi/L	07/24/17 12:47	08/15/17 06:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.5*		*40 - 110*	*07/24/17 12:47*	*08/15/17 06:36*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0267	U	0.157	0.157	1.00	0.280	pCi/L	07/24/17 12:55	08/03/17 13:29	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.5*		*40 - 110*	*07/24/17 12:55*	*08/03/17 13:29*	*1*
Y Carrier	*102*		*40 - 110*	*07/24/17 12:55*	*08/03/17 13:29*	*1*

Method: 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	0.0901	U	0.166	0.166	5.00	0.280	pCi/L		08/15/17 14:52	1

Client Sample ID: MW9
Date Collected: 07/13/17 10:46
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110189-6
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.108		0.0635	0.0642	1.00	0.0760	pCi/L	07/24/17 12:47	08/15/17 06:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.9*		*40 - 110*	*07/24/17 12:47*	*08/15/17 06:36*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.186	U	0.183	0.184	1.00	0.296	pCi/L	07/24/17 12:55	08/03/17 13:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.9*		*40 - 110*	*07/24/17 12:55*	*08/03/17 13:31*	*1*
Y Carrier	*103*		*40 - 110*	*07/24/17 12:55*	*08/03/17 13:31*	*1*

Method: 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	0.294	U	0.194	0.195	5.00	0.296	pCi/L		08/15/17 14:52	1

Client Sample ID: MW2

Date Collected: 07/13/17 12:47
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110189-7

Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.100**		0.0633	0.0640	1.00	0.0794	pCi/L	07/24/17 12:47	08/15/17 06:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.6*		*40 - 110*	*07/24/17 12:47*	*08/15/17 06:36*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.275	U	0.200	0.202	1.00	0.311	pCi/L	07/24/17 12:55	08/03/17 13:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.6*		*40 - 110*	*07/24/17 12:55*	*08/03/17 13:31*	*1*
Y Carrier	*100*		*40 - 110*	*07/24/17 12:55*	*08/03/17 13:31*	*1*

Method: 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	**0.375**		0.210	0.212	5.00	0.311	pCi/L		08/15/17 14:52	1

Client Sample ID: DUP

Date Collected: 07/13/17 08:00
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110189-8

Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.113**		0.0645	0.0653	1.00	0.0755	pCi/L	07/24/17 12:47	08/15/17 06:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.1*		*40 - 110*	*07/24/17 12:47*	*08/15/17 06:36*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0767	U	0.218	0.218	1.00	0.395	pCi/L	07/24/17 12:55	08/03/17 13:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.1*		*40 - 110*	*07/24/17 12:55*	*08/03/17 13:31*	*1*
Y Carrier	*101*		*40 - 110*	*07/24/17 12:55*	*08/03/17 13:31*	*1*

Method: 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	0.0368	U	0.227	0.228	5.00	0.395	pCi/L		08/15/17 14:52	1

Qualifiers

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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
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-318925/1-A
Matrix: Water
Analysis Batch: 322165

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 318925

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.06684	U	0.0535	0.0538	1.00	0.0751	pCi/L	07/24/17 12:47	08/15/17 06:35	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*104*		*40 - 110*	*07/24/17 12:47*	*08/15/17 06:35*	*1*

Lab Sample ID: LCS 160-318925/2-A
Matrix: Water
Analysis Batch: 322165

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 318925

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.4	9.553		0.993	1.00	0.0865	pCi/L	84	68 - 137		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*104*		*40 - 110*

Lab Sample ID: LCSD 160-318925/3-A
Matrix: Water
Analysis Batch: 322165

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 318925

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			11.4	11.57		1.18	1.00	0.0812	pCi/L	102	68 - 137	0.93	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*99.1*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-318926/1-A
Matrix: Water
Analysis Batch: 320544

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 318926

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1003	U	0.153	0.153	1.00	0.258	pCi/L	07/24/17 12:55	08/03/17 13:28	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*104*		*40 - 110*	*07/24/17 12:55*	*08/03/17 13:28*	*1*
Y Carrier	*102*		*40 - 110*	*07/24/17 12:55*	*08/03/17 13:28*	*1*

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

Lab Sample ID: LCS 160-318926/2-A
Matrix: Water
Analysis Batch: 320544

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 318926

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			13.1	11.44		1.24	1.00	0.304	pCi/L	87	56 - 140		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*104*		*40 - 110*
Y Carrier	*100*		*40 - 110*

Lab Sample ID: LCSD 160-318926/3-A
Matrix: Water
Analysis Batch: 320544

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 318926

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			13.1	12.20		1.31	1.00	0.308	pCi/L	93	56 - 140	0.30	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*99.1*		*40 - 110*
Y Carrier	*100*		*40 - 110*

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Prep Batch: 318925

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-110189-1	MW13	Total/NA	Ground Water	PrecSep-21	
310-110189-2	MW4NC2	Total/NA	Ground Water	PrecSep-21	
310-110189-3	MW11	Total/NA	Ground Water	PrecSep-21	
310-110189-4	MW3	Total/NA	Ground Water	PrecSep-21	
310-110189-5	MW4	Total/NA	Ground Water	PrecSep-21	
310-110189-6	MW9	Total/NA	Ground Water	PrecSep-21	
310-110189-7	MW2	Total/NA	Ground Water	PrecSep-21	
310-110189-8	DUP	Total/NA	Ground Water	PrecSep-21	
MB 160-318925/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-318925/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-318925/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 318926

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-110189-1	MW13	Total/NA	Ground Water	PrecSep_0	
310-110189-2	MW4NC2	Total/NA	Ground Water	PrecSep_0	
310-110189-3	MW11	Total/NA	Ground Water	PrecSep_0	
310-110189-4	MW3	Total/NA	Ground Water	PrecSep_0	
310-110189-5	MW4	Total/NA	Ground Water	PrecSep_0	
310-110189-6	MW9	Total/NA	Ground Water	PrecSep_0	
310-110189-7	MW2	Total/NA	Ground Water	PrecSep_0	
310-110189-8	DUP	Total/NA	Ground Water	PrecSep_0	
MB 160-318926/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-318926/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-318926/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-110189-2

Client Sample ID: MW13

Lab Sample ID: 310-110189-1

Date Collected: 07/12/17 11:20

Matrix: Ground Water

Date Received: 07/19/17 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			318925	07/24/17 12:47	LDE	TAL SL
Total/NA	Analysis	9315		1	322165	08/15/17 06:35	ALD	TAL SL
Total/NA	Prep	PrecSep_0			318926	07/24/17 12:55	LDE	TAL SL
Total/NA	Analysis	9320		1	320544	08/03/17 13:29	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	322313	08/15/17 14:52	RTM	TAL SL

Client Sample ID: MW4NC2

Lab Sample ID: 310-110189-2

Date Collected: 07/12/17 10:46

Matrix: Ground Water

Date Received: 07/19/17 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			318925	07/24/17 12:47	LDE	TAL SL
Total/NA	Analysis	9315		1	322165	08/15/17 06:35	ALD	TAL SL
Total/NA	Prep	PrecSep_0			318926	07/24/17 12:55	LDE	TAL SL
Total/NA	Analysis	9320		1	320544	08/03/17 13:29	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	322313	08/15/17 14:52	RTM	TAL SL

Client Sample ID: MW11

Lab Sample ID: 310-110189-3

Date Collected: 07/13/17 12:00

Matrix: Ground Water

Date Received: 07/19/17 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			318925	07/24/17 12:47	LDE	TAL SL
Total/NA	Analysis	9315		1	322165	08/15/17 06:36	ALD	TAL SL
Total/NA	Prep	PrecSep_0			318926	07/24/17 12:55	LDE	TAL SL
Total/NA	Analysis	9320		1	320544	08/03/17 13:29	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	322313	08/15/17 14:52	RTM	TAL SL

Client Sample ID: MW3

Lab Sample ID: 310-110189-4

Date Collected: 07/13/17 11:18

Matrix: Ground Water

Date Received: 07/19/17 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			318925	07/24/17 12:47	LDE	TAL SL
Total/NA	Analysis	9315		1	322165	08/15/17 06:36	ALD	TAL SL
Total/NA	Prep	PrecSep_0			318926	07/24/17 12:55	LDE	TAL SL
Total/NA	Analysis	9320		1	320544	08/03/17 13:29	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	322313	08/15/17 14:52	RTM	TAL SL

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-110189-2

Client Sample ID: MW4

Lab Sample ID: 310-110189-5

Date Collected: 07/13/17 09:48
Matrix: Ground Water
Date Received: 07/19/17 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			318925	07/24/17 12:47	LDE	TAL SL
Total/NA	Analysis	9315		1	322165	08/15/17 06:36	ALD	TAL SL
Total/NA	Prep	PrecSep_0			318926	07/24/17 12:55	LDE	TAL SL
Total/NA	Analysis	9320		1	320544	08/03/17 13:29	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	322313	08/15/17 14:52	RTM	TAL SL

Client Sample ID: MW9

Lab Sample ID: 310-110189-6

Date Collected: 07/13/17 10:46
Matrix: Ground Water
Date Received: 07/19/17 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			318925	07/24/17 12:47	LDE	TAL SL
Total/NA	Analysis	9315		1	322165	08/15/17 06:36	ALD	TAL SL
Total/NA	Prep	PrecSep_0			318926	07/24/17 12:55	LDE	TAL SL
Total/NA	Analysis	9320		1	320543	08/03/17 13:31	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	322313	08/15/17 14:52	RTM	TAL SL

Client Sample ID: MW2

Lab Sample ID: 310-110189-7

Date Collected: 07/13/17 12:47
Matrix: Ground Water
Date Received: 07/19/17 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			318925	07/24/17 12:47	LDE	TAL SL
Total/NA	Analysis	9315		1	322165	08/15/17 06:36	ALD	TAL SL
Total/NA	Prep	PrecSep_0			318926	07/24/17 12:55	LDE	TAL SL
Total/NA	Analysis	9320		1	320543	08/03/17 13:31	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	322313	08/15/17 14:52	RTM	TAL SL

Client Sample ID: DUP

Lab Sample ID: 310-110189-8

Date Collected: 07/13/17 08:00
Matrix: Ground Water
Date Received: 07/19/17 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			318925	07/24/17 12:47	LDE	TAL SL
Total/NA	Analysis	9315		1	322165	08/15/17 06:36	ALD	TAL SL
Total/NA	Prep	PrecSep_0			318926	07/24/17 12:55	LDE	TAL SL
Total/NA	Analysis	9320		1	320543	08/03/17 13:31	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	322313	08/15/17 14:52	RTM	TAL SL

Laboratory References:

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

Accreditation/Certification Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-110189-2

Laboratory: TestAmerica Cedar Falls

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
AIHA-LAP, LLC	IHLAP		101044	11-01-18
Georgia	State Program	4	IA100001 (OR)	09-29-17
Illinois	NELAP	5	200024	11-29-17
Iowa	State Program	7	007	12-01-17
Kansas	NELAP	7	E-10341	01-31-18
Minnesota	NELAP	5	019-999-319	12-31-17
Minnesota (Petrofund)	State Program	1	3349	08-22-17
North Dakota	State Program	8	R-186	09-29-17
Oregon	NELAP	10	IA100001	09-29-17

Laboratory: TestAmerica St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-18
California	State Program	9	2886	03-31-18 *
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-18
Illinois	NELAP	5	200023	11-30-17
Iowa	State Program	7	373	02-01-18
Kansas	NELAP	7	E-10236	10-31-17 *
Kentucky (DW)	State Program	4	90125	12-31-17
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-18
Louisiana (DW)	NELAP	6	LA170011	12-31-17
Maryland	State Program	3	310	09-30-18
Missouri	State Program	7	780	06-30-18
Nevada	State Program	9	MO000542017-1	07-31-18
New Jersey	NELAP	2	MO002	06-30-18
New York	NELAP	2	11616	03-31-18
North Dakota	State Program	8	R207	06-30-17 *
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-17 *
Pennsylvania	NELAP	3	68-00540	02-21-18
South Carolina	State Program	4	85002001	06-30-17 *
Texas	NELAP	6	T104704193-17-11	07-31-18
US Fish & Wildlife	Federal		LE058448-0	10-31-17
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542016-8	07-31-17 *
Virginia	NELAP	3	460230	06-14-18
Washington	State Program	10	C592	08-30-17 *
West Virginia DEP	State Program	3	381	08-31-17 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-110189-2

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL

Protocol References:

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:

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

310-110189 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Omaha Public Power District

City/State: Omaha, NE | Project: Unit 1 LF CCR

Receipt Information

Date/Time Received: 7.19.17 925 | Received By: BKM

Delivery Type: ☐ UPS ☑ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ TA Courier ☐ TA Field Services ☐ Client Drop-off ☐ Other: _____

Condition of Cooler/Containers

Sample(s) received in Cooler? ☑ Yes ☐ No *If yes:* Cooler ID: 9000

Multiple Coolers? ☑ Yes ☒ No BKM 7.19.17 *If yes:* Cooler # 1 of 2

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: H | Correction Factor (°C): 0.0

• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 1.9 | Corrected Temp (°C): 1.9

• Sample Container Temperature

Sample ID(s) & bottle type used: CONTAINER 1 | CONTAINER 2

Uncorrected Temp (°C): TEMP 1 TEMP 2 | Corrected Temp (°C): TEMP 1 TEMP 2

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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

Document: CF-LG-WI-002
Revision: 22
Date: 11/27/2015

TestAmerica Cedar Falls

General temperature criteria is 0 to 6°C
Bacteria temperature criteria is 0 to 10°C

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Omaha Public Power District

City/State: Omaha, NE | Project: Unit 1 LF CCR

Receipt Information

Date/Time Received: 7.19.17 925 | Received By: BKM

Delivery Type: ☐ UPS ☑ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ TA Courier ☐ TA Field Services ☐ Client Drop-off ☐ Other: _____

Condition of Cooler/Containers

Sample(s) received in Cooler?	☑ Yes ☐ No	*If yes:* Cooler ID:	CF-71
Multiple Coolers?	☑ Yes ☐ No	*If yes:* Cooler #	2 of 2
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: 14 | Correction Factor (°C): 0.0

• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 3.6 | Corrected Temp (°C): 3.6

• Sample Container Temperature

	CONTAINER 1		CONTAINER 2	
Sample ID(s) & bottle type used:				
Uncorrected Temp (°C):	TEMP 1	TEMP 2		
Corrected Temp (°C):	TEMP 1	TEMP 2		

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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Phone (319) 277-2401 Fax (319) 277-2425

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Brad Sojka	Lab PM: Hayes, Shawn M	Carrier Tracking No(s):	COC No:
Client Contact: Brad Sojka	Phone: 402 636 2515	E-Mail: shawn.hayes@testamericainc.com		Page:
Company: Omaha Public Power District				Job #:
Address: 444 South 16th Street Mall 9E/EP1	Due Date Requested:			
City: Omaha	TAT Requested (days):			
State, Zip: NE, 68102-2247				
Phone: 402-636-2515(Tel)	PO #:			
Email: bsojka@oppd.com	WO #:			
Project Name: Nebraska City Unit 1 Landfill CCR	TestAmerica Project #: 31007558			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226, 9320_Ra228, Combined Ra226 and Ra228	6010C Lithium, 6020A CCR List, 7470A Mercury	2540C TDS, 9056A Chloride, Fluoride, Sulfate	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	D	N		
MW13	7/12/17	1120	G	GW	N	N	X	X	X		
MW4NC2	7/12/17	1046	G	GW			X	X	X		
MW11	7/13/17	1200	G	GW			X	X	X		
MW3	7/12/17	1118	G	GW			X	X	X		
MW4	7/13/17	0948	G	GW			X	X	X		
MW9	7/13/17	1046 ~~1020~~	G	GW			X	X	X		
MW2	7/13/17	1247	G	GW			X	X	X		
DUP	7/13/17	0800	G	GW			X	X	X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		7/18/17 1300			7-19-17 925	TA
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MW13	310-110189-A-1	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW13	310-110189-C-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-110189-D-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4NC2	310-110189-A-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW4NC2	310-110189-C-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4NC2	310-110189-D-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW11	310-110189-A-3	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW11	310-110189-C-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW11	310-110189-D-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW3	310-110189-A-4	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW3	310-110189-C-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW3	310-110189-D-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4	310-110189-A-5	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW4	310-110189-C-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4	310-110189-D-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-110189-A-6	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW9	310-110189-C-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-110189-D-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-110189-A-7	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW2	310-110189-C-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-110189-D-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP	310-110189-A-8	Plastic 250ml - with Nitric Acid	<2	_____	_____
DUP	310-110189-C-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP	310-110189-D-8	Plastic 1 liter - Nitric Acid	<2	_____	_____

TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Phone (319) 277-2401 Fax (319) 277-2425

Chain of Custody Record

310-110189 Chain of Custody

estAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Hayes, Shawn M	C.No: 0-10007.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: shawn.hayes@testamericainc.com	State of Origin: Nebraska
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):	Page: Page 1 of 1
Address: 13715 Rider Trail North,	Due Date Requested: 7/31/2017		Job #: 310-110189-2
City: Earth City	TAT Requested (days):		
State, Zip: MO, 63045			
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:		
Email:	WO #:		
Project Name: Nebraska City Unit 1 Landfill CCR	Project #: 31007558		
Site: 310 OPPD Nebraska City Unit 1	SSOW#:		

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Ra226Ra228_GFPC	9320_Ra228/PrecSep_0 Standard Target List	9315_Ra226/PrecSep_21 Standard Target List	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW13 (310-110189-1)	7/12/17	11:20 Central		Water			X	X	X	2	
MW4NC2 (310-110189-2)	7/12/17	10:46 Central		Water			X	X	X	2	
MW11 (310-110189-3)	7/13/17	12:00 Central		Water			X	X	X	2	
MW3 (310-110189-4)	7/13/17	11:18 Central		Water			X	X	X	2	
MW4 (310-110189-5)	7/13/17	09:48 Central		Water			X	X	X	2	
MW9 (310-110189-6)	7/13/17	10:46 Central		Water			X	X	X	2	
MW2 (310-110189-7)	7/13/17	12:47 Central		Water			X	X	X	2	
DUP (310-110189-8)	7/13/17	08:00 Central		Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
T Dalla	7/19/17 1533			7/20/17 0830	TAR
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-110189-2

Login Number: 110189

List Source: TestAmerica Cedar Falls

List Number: 1

Creator: Patrick, Kathryn E

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	1 of 2 coolers had a custody seal.
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-110189-2

Login Number: 110189
List Number: 2
Creator: Taylor, Kristene N

List Source: TestAmerica St. Louis
List Creation: 07/20/17 04:24 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= 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.	N/A	
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	18.0,18.0,18.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Tracer/Carrier Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-110189-2

Method: 9315 - Radium-226 (GFPC)

Matrix: Ground Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(40-110)
310-110189-1	MW13	99.4
310-110189-2	MW4NC2	95.3
310-110189-3	MW11	95.3
310-110189-4	MW3	96.5
310-110189-5	MW4	98.5
310-110189-6	MW9	95.9
310-110189-7	MW2	92.6
310-110189-8	DUP	99.1

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9315 - Radium-226 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(40-110)
LCS 160-318925/2-A	Lab Control Sample	104
LCSD 160-318925/3-A	Lab Control Sample Dup	99.1
MB 160-318925/1-A	Method Blank	104

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Ground Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
310-110189-1	MW13	99.4	99.7
310-110189-2	MW4NC2	95.3	99.7
310-110189-3	MW11	95.3	99.4
310-110189-4	MW3	96.5	101
310-110189-5	MW4	98.5	102
310-110189-6	MW9	95.9	103
310-110189-7	MW2	92.6	100
310-110189-8	DUP	99.1	101

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Tracer/Carrier Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1 Landfill CCR

TestAmerica Job ID: 310-110189-2

Method: 9320 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)									
		Ba	Y								
Lab Sample ID	Client Sample ID	(40-110)	(40-110)								
LCS 160-318926/2-A	Lab Control Sample	104	100								
LCSD 160-318926/3-A	Lab Control Sample Dup	99.1	100								
MB 160-318926/1-A	Method Blank	104	102								

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319)277-2401

TestAmerica Job ID: 310-118606-1
Client Project/Site: Nebraska City Unit 1

For:
Omaha Public Power District
Attn: Accounts Payable, 4E/EP-5
444 South 16th Street Mall
Omaha, Nebraska 68102-2247

Attn: Brad Sojka

Authorized for release by:
11/28/2017 4:42:16 PM

Shawn Hayes, Senior Project Manager
(319)277-2401
shawn.hayes@testamericainc.com

Table of Contents

Case Narrative

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-118606-1

Job ID: 310-118606-1

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-118606-1

Comments
No additional comments.

Receipt
The samples were received on 11/10/2017 9:43 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.3º C.

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

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

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

Sample Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-118606-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-118606-1	MW2	Ground Water	11/08/17 10:56	11/10/17 09:43
310-118606-2	MW3	Ground Water	11/08/17 11:44	11/10/17 09:43
310-118606-3	MW4	Ground Water	11/08/17 11:22	11/10/17 09:43
310-118606-4	MW9	Ground Water	11/08/17 12:14	11/10/17 09:43
310-118606-5	MW11	Ground Water	11/08/17 10:28	11/10/17 09:43
310-118606-6	MW13	Ground Water	11/08/17 10:02	11/10/17 09:43
310-118606-7	MW4NC2	Ground Water	11/08/17 09:32	11/10/17 09:43
310-118606-8	DUP	Ground Water	11/08/17 08:00	11/10/17 09:43

Detection Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-118606-1

Client Sample ID: MW2 — Lab Sample ID: 310-118606-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.550		0.500		mg/L	5		9056A	Total/NA
Sulfate	121		5.00		mg/L	5		9056A	Total/NA
Calcium	135		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	592		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW3 — Lab Sample ID: 310-118606-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.53		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.648		0.500		mg/L	5		9056A	Total/NA
Sulfate	339		10.0		mg/L	10		9056A	Total/NA
Boron	2.04		0.200		mg/L	1		6020A	Total/NA
Calcium	144		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	852		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW4 — Lab Sample ID: 310-118606-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.39		5.00		mg/L	5		9056A	Total/NA
Sulfate	234		5.00		mg/L	5		9056A	Total/NA
Boron	1.13		0.200		mg/L	1		6020A	Total/NA
Calcium	97.6		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	480		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW9 — Lab Sample ID: 310-118606-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.77		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.735		0.500		mg/L	5		9056A	Total/NA
Sulfate	344		10.0		mg/L	10		9056A	Total/NA
Boron	2.65		0.200		mg/L	1		6020A	Total/NA
Calcium	167		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	846		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW11 — Lab Sample ID: 310-118606-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.620		0.500		mg/L	5		9056A	Total/NA
Sulfate	120		5.00		mg/L	5		9056A	Total/NA
Boron	1.05		0.200		mg/L	1		6020A	Total/NA
Calcium	87.2		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	492		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW13 — Lab Sample ID: 310-118606-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	12.7		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.608		0.500		mg/L	5		9056A	Total/NA
Sulfate	37.4		5.00		mg/L	5		9056A	Total/NA
Calcium	90.2		0.200		mg/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-118606-1

Client Sample ID: MW13 (Continued) — Lab Sample ID: 310-118606-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	498		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW4NC2 — Lab Sample ID: 310-118606-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	43.5		5.00		mg/L	5		9056A	Total/NA
Calcium	133		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	556		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP — Lab Sample ID: 310-118606-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.98		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.616		0.500		mg/L	5		9056A	Total/NA
Sulfate	332		10.0		mg/L	10		9056A	Total/NA
Boron	2.03		0.200		mg/L	1		6020A	Total/NA
Calcium	142		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	976		30.0		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-118606-1

Client Sample ID: MW2
Date Collected: 11/08/17 10:56
Date Received: 11/10/17 09:43

Lab Sample ID: 310-118606-1
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			11/16/17 17:58	5
Fluoride	**0.550**		0.500		mg/L			11/16/17 17:58	5
Sulfate	**121**		5.00		mg/L			11/16/17 17:58	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.200		0.200		mg/L		11/13/17 08:11	11/24/17 18:09	1
Calcium	**135**		0.200		mg/L		11/13/17 08:11	11/24/17 18:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**592**		30.0		mg/L			11/14/17 08:15	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-118606-1

Client Sample ID: MW3
Date Collected: 11/08/17 11:44
Date Received: 11/10/17 09:43

Lab Sample ID: 310-118606-2
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.53		5.00		mg/L			11/16/17 18:44	5
Fluoride	0.648		0.500		mg/L			11/16/17 18:44	5
Sulfate	339		10.0		mg/L			11/16/17 19:00	10

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.04		0.200		mg/L		11/13/17 08:11	11/24/17 18:12	1
Calcium	144		0.200		mg/L		11/13/17 08:11	11/24/17 18:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	852		30.0		mg/L			11/14/17 08:15	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-118606-1

Client Sample ID: MW4
Date Collected: 11/08/17 11:22
Date Received: 11/10/17 09:43

Lab Sample ID: 310-118606-3
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6.39**		5.00		mg/L			11/16/17 19:15	5
Fluoride	<0.500		0.500		mg/L			11/16/17 19:15	5
Sulfate	**234**		5.00		mg/L			11/16/17 19:15	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1.13**		0.200		mg/L		11/13/17 08:11	11/24/17 18:15	1
Calcium	**97.6**		0.200		mg/L		11/13/17 08:11	11/24/17 18:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**480**		30.0		mg/L			11/14/17 08:15	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-118606-1

Client Sample ID: MW9
Date Collected: 11/08/17 12:14
Date Received: 11/10/17 09:43

Lab Sample ID: 310-118606-4
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.77		5.00		mg/L			11/16/17 19:30	5
Fluoride	0.735		0.500		mg/L			11/16/17 19:30	5
Sulfate	344		10.0		mg/L			11/17/17 08:36	10

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.65		0.200		mg/L		11/13/17 08:11	11/24/17 18:31	1
Calcium	167		0.200		mg/L		11/13/17 08:11	11/24/17 18:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	846		30.0		mg/L			11/14/17 08:15	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-118606-1

Client Sample ID: MW11
Date Collected: 11/08/17 10:28
Date Received: 11/10/17 09:43

Lab Sample ID: 310-118606-5
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			11/16/17 19:46	5
Fluoride	**0.620**		0.500		mg/L			11/16/17 19:46	5
Sulfate	**120**		5.00		mg/L			11/16/17 19:46	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1.05**		0.200		mg/L		11/13/17 08:11	11/24/17 18:34	1
Calcium	**87.2**		0.200		mg/L		11/13/17 08:11	11/24/17 18:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**492**		30.0		mg/L			11/14/17 08:15	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-118606-1

Client Sample ID: MW13
Date Collected: 11/08/17 10:02
Date Received: 11/10/17 09:43

Lab Sample ID: 310-118606-6
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**12.7**		5.00		mg/L			11/16/17 20:32	5
Fluoride	**0.608**		0.500		mg/L			11/16/17 20:32	5
Sulfate	**37.4**		5.00		mg/L			11/16/17 20:32	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.200		0.200		mg/L		11/13/17 08:11	11/24/17 18:37	1
Calcium	**90.2**		0.200		mg/L		11/13/17 08:11	11/24/17 18:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**498**		30.0		mg/L			11/14/17 08:15	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-118606-1

Client Sample ID: MW4NC2
Date Collected: 11/08/17 09:32
Date Received: 11/10/17 09:43

Lab Sample ID: 310-118606-7
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			11/16/17 20:47	5
Fluoride	<0.500		0.500		mg/L			11/16/17 20:47	5
Sulfate	**43.5**		5.00		mg/L			11/16/17 20:47	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.200		0.200		mg/L		11/13/17 08:11	11/24/17 18:40	1
Calcium	**133**		0.200		mg/L		11/13/17 08:11	11/24/17 18:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**556**		30.0		mg/L			11/14/17 08:15	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-118606-1

Client Sample ID: DUP

Date Collected: 11/08/17 08:00
Date Received: 11/10/17 09:43

Lab Sample ID: 310-118606-8

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.98		5.00		mg/L			11/16/17 21:03	5
Fluoride	0.616		0.500		mg/L			11/16/17 21:03	5
Sulfate	332		10.0		mg/L			11/17/17 08:52	10

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.03		0.200		mg/L		11/13/17 08:11	11/24/17 18:43	1
Calcium	142		0.200		mg/L		11/13/17 08:11	11/24/17 18:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	976		30.0		mg/L			11/14/17 08:15	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.

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
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-186513/3
Matrix: Water
Analysis Batch: 186513

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			11/16/17 17:27	1
Fluoride	<0.100		0.100		mg/L			11/16/17 17:27	1
Sulfate	<1.00		1.00		mg/L			11/16/17 17:27	1

Lab Sample ID: LCS 310-186513/4
Matrix: Water
Analysis Batch: 186513

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	7.50	7.636		mg/L		102	90 - 110
Fluoride	1.50	1.547		mg/L		103	90 - 110
Sulfate	7.50	7.585		mg/L		101	90 - 110

Lab Sample ID: 310-118606-1 MS
Matrix: Ground Water
Analysis Batch: 186513

Client Sample ID: MW2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	<5.00		25.0	25.99		mg/L		104	80 - 120
Fluoride	0.550		5.00	5.533		mg/L		100	80 - 120
Sulfate	121		25.0	141.9	4	mg/L		83	80 - 120

Lab Sample ID: 310-118606-1 MSD
Matrix: Ground Water
Analysis Batch: 186513

Client Sample ID: MW2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	<5.00		25.0	25.86		mg/L		103	80 - 120	1	15
Fluoride	0.550		5.00	5.538		mg/L		100	80 - 120	0	15
Sulfate	121		25.0	141.8	4	mg/L		83	80 - 120	0	15

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 310-185824/1-A
Matrix: Water
Analysis Batch: 187022

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 185824

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.200		0.200		mg/L		11/13/17 08:11	11/22/17 23:37	1
Calcium	<0.200		0.200		mg/L		11/13/17 08:11	11/22/17 23:37	1

Lab Sample ID: LCS 310-185824/2-A
Matrix: Water
Analysis Batch: 187022

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 185824

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.880	0.7787		mg/L		88	80 - 120
Calcium	2.00	1.869		mg/L		93	80 - 120

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

Lab Sample ID: 310-118606-3 DU
Matrix: Ground Water
Analysis Batch: 187098

Client Sample ID: MW4
Prep Type: Total/NA
Prep Batch: 185824

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Boron	1.13			1.183		mg/L				5	20
Calcium	97.6			102.2		mg/L				5	20

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

Lab Sample ID: MB 310-185965/1
Matrix: Water
Analysis Batch: 185965

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	<30.0		30.0		mg/L			11/14/17 08:15	1

Lab Sample ID: LCS 310-185965/2
Matrix: Water
Analysis Batch: 185965

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	1088		mg/L		109	90 - 110		

HPLC/IC

Analysis Batch: 186513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-118606-1	MW2	Total/NA	Ground Water	9056A	
310-118606-2	MW3	Total/NA	Ground Water	9056A	
310-118606-2	MW3	Total/NA	Ground Water	9056A	
310-118606-3	MW4	Total/NA	Ground Water	9056A	
310-118606-4	MW9	Total/NA	Ground Water	9056A	
310-118606-4	MW9	Total/NA	Ground Water	9056A	
310-118606-5	MW11	Total/NA	Ground Water	9056A	
310-118606-6	MW13	Total/NA	Ground Water	9056A	
310-118606-7	MW4NC2	Total/NA	Ground Water	9056A	
310-118606-8	DUP	Total/NA	Ground Water	9056A	
310-118606-8	DUP	Total/NA	Ground Water	9056A	
MB 310-186513/3	Method Blank	Total/NA	Water	9056A	
LCS 310-186513/4	Lab Control Sample	Total/NA	Water	9056A	
310-118606-1 MS	MW2	Total/NA	Ground Water	9056A	
310-118606-1 MSD	MW2	Total/NA	Ground Water	9056A	

Metals

Prep Batch: 185824

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-118606-1	MW2	Total/NA	Ground Water	3010A	
310-118606-2	MW3	Total/NA	Ground Water	3010A	
310-118606-3	MW4	Total/NA	Ground Water	3010A	
310-118606-4	MW9	Total/NA	Ground Water	3010A	
310-118606-5	MW11	Total/NA	Ground Water	3010A	
310-118606-6	MW13	Total/NA	Ground Water	3010A	
310-118606-7	MW4NC2	Total/NA	Ground Water	3010A	
310-118606-8	DUP	Total/NA	Ground Water	3010A	
MB 310-185824/1-A	Method Blank	Total/NA	Water	3010A	
LCS 310-185824/2-A	Lab Control Sample	Total/NA	Water	3010A	
310-118606-3 DU	MW4	Total/NA	Ground Water	3010A	

Analysis Batch: 187022

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-185824/1-A	Method Blank	Total/NA	Water	6020A	185824
LCS 310-185824/2-A	Lab Control Sample	Total/NA	Water	6020A	185824

Analysis Batch: 187098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-118606-1	MW2	Total/NA	Ground Water	6020A	185824
310-118606-2	MW3	Total/NA	Ground Water	6020A	185824
310-118606-3	MW4	Total/NA	Ground Water	6020A	185824
310-118606-4	MW9	Total/NA	Ground Water	6020A	185824
310-118606-5	MW11	Total/NA	Ground Water	6020A	185824
310-118606-6	MW13	Total/NA	Ground Water	6020A	185824
310-118606-7	MW4NC2	Total/NA	Ground Water	6020A	185824
310-118606-8	DUP	Total/NA	Ground Water	6020A	185824
310-118606-3 DU	MW4	Total/NA	Ground Water	6020A	185824

QC Association Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-118606-1

General Chemistry

Analysis Batch: 185965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-118606-1	MW2	Total/NA	Ground Water	SM 2540C	
310-118606-2	MW3	Total/NA	Ground Water	SM 2540C	
310-118606-3	MW4	Total/NA	Ground Water	SM 2540C	
310-118606-4	MW9	Total/NA	Ground Water	SM 2540C	
310-118606-5	MW11	Total/NA	Ground Water	SM 2540C	
310-118606-6	MW13	Total/NA	Ground Water	SM 2540C	
310-118606-7	MW4NC2	Total/NA	Ground Water	SM 2540C	
310-118606-8	DUP	Total/NA	Ground Water	SM 2540C	
MB 310-185965/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-185965/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-118606-1

Client Sample ID: MW2

Date Collected: 11/08/17 10:56
Date Received: 11/10/17 09:43

Lab Sample ID: 310-118606-1
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	186513	11/16/17 17:58	SAD	TAL CF
Total/NA	Prep	3010A			185824	11/13/17 08:11	JNR	TAL CF
Total/NA	Analysis	6020A		1	187098	11/24/17 18:09	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	185965	11/14/17 08:15	SAS	TAL CF

Client Sample ID: MW3

Date Collected: 11/08/17 11:44
Date Received: 11/10/17 09:43

Lab Sample ID: 310-118606-2
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	186513	11/16/17 18:44	SAD	TAL CF
Total/NA	Analysis	9056A		10	186513	11/16/17 19:00	SAD	TAL CF
Total/NA	Prep	3010A			185824	11/13/17 08:11	JNR	TAL CF
Total/NA	Analysis	6020A		1	187098	11/24/17 18:12	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	185965	11/14/17 08:15	SAS	TAL CF

Client Sample ID: MW4

Date Collected: 11/08/17 11:22
Date Received: 11/10/17 09:43

Lab Sample ID: 310-118606-3
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	186513	11/16/17 19:15	SAD	TAL CF
Total/NA	Prep	3010A			185824	11/13/17 08:11	JNR	TAL CF
Total/NA	Analysis	6020A		1	187098	11/24/17 18:15	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	185965	11/14/17 08:15	SAS	TAL CF

Client Sample ID: MW9

Date Collected: 11/08/17 12:14
Date Received: 11/10/17 09:43

Lab Sample ID: 310-118606-4
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	186513	11/16/17 19:30	SAD	TAL CF
Total/NA	Analysis	9056A		10	186513	11/17/17 08:36	SAD	TAL CF
Total/NA	Prep	3010A			185824	11/13/17 08:11	JNR	TAL CF
Total/NA	Analysis	6020A		1	187098	11/24/17 18:31	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	185965	11/14/17 08:15	SAS	TAL CF

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-118606-1

Client Sample ID: MW11

Date Collected: 11/08/17 10:28
Date Received: 11/10/17 09:43

Lab Sample ID: 310-118606-5
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	186513	11/16/17 19:46	SAD	TAL CF
Total/NA	Prep	3010A			185824	11/13/17 08:11	JNR	TAL CF
Total/NA	Analysis	6020A		1	187098	11/24/17 18:34	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	185965	11/14/17 08:15	SAS	TAL CF

Client Sample ID: MW13

Date Collected: 11/08/17 10:02
Date Received: 11/10/17 09:43

Lab Sample ID: 310-118606-6
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	186513	11/16/17 20:32	SAD	TAL CF
Total/NA	Prep	3010A			185824	11/13/17 08:11	JNR	TAL CF
Total/NA	Analysis	6020A		1	187098	11/24/17 18:37	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	185965	11/14/17 08:15	SAS	TAL CF

Client Sample ID: MW4NC2

Date Collected: 11/08/17 09:32
Date Received: 11/10/17 09:43

Lab Sample ID: 310-118606-7
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	186513	11/16/17 20:47	SAD	TAL CF
Total/NA	Prep	3010A			185824	11/13/17 08:11	JNR	TAL CF
Total/NA	Analysis	6020A		1	187098	11/24/17 18:40	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	185965	11/14/17 08:15	SAS	TAL CF

Client Sample ID: DUP

Date Collected: 11/08/17 08:00
Date Received: 11/10/17 09:43

Lab Sample ID: 310-118606-8
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	186513	11/16/17 21:03	SAD	TAL CF
Total/NA	Analysis	9056A		10	186513	11/17/17 08:52	SAD	TAL CF
Total/NA	Prep	3010A			185824	11/13/17 08:11	JNR	TAL CF
Total/NA	Analysis	6020A		1	187098	11/24/17 18:43	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	185965	11/14/17 08:15	SAS	TAL CF

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401

Accreditation/Certification Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-118606-1

Laboratory: TestAmerica Cedar Falls

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
AIHA-LAP, LLC	IHLAP		101044	11-01-18
Georgia	State Program	4	IA100001 (OR)	09-29-18
Illinois	NELAP	5	200024	11-29-17
Iowa	State Program	7	007	12-01-17
Kansas	NELAP	7	E-10341	01-31-18
Minnesota	NELAP	5	019-999-319	12-31-17
Minnesota (Petrofund)	State Program	1	3349	08-22-18
North Dakota	State Program	8	R-186	09-29-18
Oregon	NELAP	10	IA100001	09-29-18

Method Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 1

TestAmerica Job ID: 310-118606-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	TAL CF
6020A	Metals (ICP/MS)	SW846	TAL CF
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL 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:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

310-118606 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Omaha Public Power District

City/State: Omaha NE | Project: Nebraska City Unit 1 Landfill

Receipt Information

Date/Time Received: 11-10-17 0943 | Received By: JD

Delivery Type: ☐ UPS ☒ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ TA Courier ☐ TA Field Services ☐ Client Drop-off ☐ Other: _____

Condition of Cooler/Containers

Sample(s) received in Cooler? ☒ Yes ☐ No *If yes:* Cooler ID: 309

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: H | Correction Factor (°C): +0.0

• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 2.3 | Corrected Temp (°C): 2.3

• Sample Container Temperature

Sample ID(s) & bottle type used: CONTAINER 1 | CONTAINER 2

Uncorrected Temp (°C): TEMP 1 TEMP 2 | Corrected Temp (°C): TEMP 1 TEMP 2

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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Phone (319) 277-2401 Fax (319) 277-2425

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Brad Sojka	Lab PM: Hayes, Shawn M	Carrier Tracking No(s):	COC No:
Client Contact: Brad Sojka	Phone: 402-636-2515	E-Mail: shawn.hayes@testamericainc.com		Page:
Company: Omaha Public Power District				Job #:

Address: 444 South 16th Street Mall 9E/EP1	Due Date Requested:
City: Omaha	TAT Requested (days):
State, Zip: NE, 68102-2247	PO #:
Phone: 402-636-2515(Tel)	WO #:
Email: bsojka@oppd.com	TestAmerica Project #: 31007558
Project Name: Nebraska City Unit 1 Landfill CCR Appendix III	SSOW#:
Site:	

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A Boron and Calcium	2540C TDS, 9056A Chloride, Fluoride, Sulfate	Total Number of containers	Special Instructions/Note:
		Preservation Code:					D	N		
MW2	11/8/17	1056	G	GW			X	X		
MW3		1144	G	GW			X	X		
MW4		1122	G	GW			X	X		
MW9		1214	G	GW			X	X		
MW11		1028	G	GW			X	X		
MW13		1002	G	GW			X	X		
MW4NC2		0932	G	GW			X	X		
DUP	✓	0800	G	GW			X	X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by: Kathy Patton	Date/Time: 11-10-17 9413	Company TAL-F
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MW2	310-118606-A-1	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW3	310-118606-A-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW4	310-118606-A-3	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW9	310-118606-A-4	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW11	310-118606-A-5	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW13	310-118606-A-6	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW4NC2	310-118606-A-7	Plastic 250ml - with Nitric Acid	<2	_____	_____
DUP	310-118606-A-8	Plastic 250ml - with Nitric Acid	<2	_____	_____

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-118606-1

Login Number: 118606

List Source: TestAmerica Cedar Falls

List Number: 1

Creator: Patrick, Kathryn E

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

APPENDIX D

Terracon
25809 Interstate 30 South
Bryant, Arkansas 72022
Phone 501.847.9292
Fax 501.847.9210

January 30, 2018

Omaha Public Power District
444 South 16th St. Mall 9E/EP1
Omaha, NE 68102

Re: November 2017 Statistical Analyses
Omaha Public Power District Nebraska City Station Unit 1
Project No. 05027041A

Terracon Consultants, Inc. (Terracon) is pleased to present you with the statistical results for the November 2017 sampling event conducted at the Omaha Public Power District (OPPD) Nebraska City Station Unit 1 Ash Disposal Area.

The statistical methods used to evaluate whether there is a statistically significant increase (SSI) are outlined in the facility's *Coal Combustion Residuals (CCR) Groundwater Statistical Method Certification* dated June 2016. The *SANITAS™ For Groundwater* program was utilized to statistically evaluate the data for the November 2017 sampling event. The following is a brief description of the procedures that were used in the statistical evaluation.

STATISTICAL PROCEDURES

Initially, the data for each background (upgradient) and compliance (downgradient) well was entered into the existing database. Terracon then performed basic statistics for all wells for all of the constituents. This includes constituent specific values for all of the wells in the monitoring network (total observations, total non-detects, pooled mean, and background mean) and well specific values for each constituent (number of samples, number of non-detects, percent non-detects, and the mean). Terracon also prepared time series plots and box-plots for each constituent for each well to provide a general visual review of the data. Analysis of Variance tests were then performed as follows:

Analysis of Variance (ANOVA)

Analysis of variance (ANOVA) is the name given to a variety of similar statistical procedures. These similar procedures all compare the means or median values of different groups of observations (up versus downgradient monitoring wells) to determine if a statistical difference exists among groups. The procedure is an inter-well procedure that can be used to compare compliance well (downgradient) data to background well (upgradient) data. At least four observations should be present in each well.

Non-Parametric ANOVA

If the percent of non-detects is greater than 15% a non-parametric ANOVA is utilized to evaluate the data. The non-parametric ANOVA statistical procedure is an interwell test that compares the median values of background wells to the median values of compliance wells and determines if a significant difference exists among the groups. The assumption in non-parametric ANOVA is that the data from each well come from the same continuous distribution, and therefore have the same median concentrations of chemical constituents. Another assumption is that data independence exists. The Kruskal-Wallis test procedure is used to evaluate the data sets at the alpha = 0.05 significance level when there are two or more wells being compared. The null hypothesis to be tested is: $\mathbf{H_o}$ = the populations from which the data sets have been drawn have the same median concentrations. The calculated **H** value is compared to the tabulated chi-squared value with (k-1) degrees of freedom, where k is the number of groups. If the adjusted H statistic (H') exceeds the chi-squared value, then there is evidence of an SSI between the upgradient and downgradient well medians. If an SSI is identified, then individual well tests are performed to determine which compliance well's median differs significantly from the median of the pooled background observations.

Trend Analysis

Terracon conducted trend analysis testing using Sen's Slope/Mann-Kendall statistical analysis to determine if the identified SSI are increasing or decreasing trends over time. In addition to running the tests on the wells and constituents with the calculated SSIs, the upgradient background wells MW-4NC2, MW-11 and MW-13 were also tested for trends in the SSI constituents.

RESULTS

Terracon has completed statistical analysis as specified above on the available data through November 2017 Monitoring wells MW-4NC2, MW-11 and MW-13 were designated as the upgradient (background) wells and monitoring wells MW-2, MW-3, MW-4 and MW-9 were designated as downgradient (compliance) wells.

Output from the statistical analysis program is attached. ANOVA results indicate SSIs for the following constituents and wells.

- Boron in monitoring wells MW-3, MW-4 and MW-9
- Calcium in monitoring wells MW-3 and MW-9
- Chloride in monitoring well MW-3
- Sulfate in monitoring wells MW-3, MW-4 and MW-9
- Total Dissolved Solids in monitoring wells MW-3 and MW-9

It should be noted that there were no significant upward trends at the 98% Confidence Interval utilizing the Sen's Slope/Mann-Kendall trend analysis on the above identified SSIs.

Terracon appreciates the opportunity to provide environmental services for OPPD. If you have any questions or comments concerning the report, please contact me or David Jaros at your convenience.

Sincerely,
Terracon

Adam Hooper, P.G.
Staff Hydrogeologist

David Jaros, P.G.
Project Manager

Attachments: *Sanitas Report November 2017 ANOVA*
Sanitas Report November 2017 Time Series
Sanitas Report November 2017 Box Plots
Sanitas Report November 2017 Trend Analysis

ANALYSIS OF VARIANCE (ANOVA)

Analysis of Variance

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017) Printed 1/3/2018, 2:07 PM

Constituent	Well	Calc.	Crit.	Sig.	Alpha	Transform	ANOVA Sig.	Alpha	Method
Boron (mg/L)	MW2	2.926	15.92	No	0.0125	n/a	Yes	0.05	NP (normality)
Boron (mg/L)	**MW4**	**22.65**	**15.92**	**Yes**	**0.0125**	**n/a**	**Yes**	**0.05**	**NP (normality)**
Boron (mg/L)	**MW9**	**37.98**	**15.92**	**Yes**	**0.0125**	**n/a**	**Yes**	**0.05**	**NP (normality)**
Boron (mg/L)	**MW3**	**33.93**	**15.92**	**Yes**	**0.0125**	**n/a**	**Yes**	**0.05**	**NP (normality)**
Calcium (mg/L)	MW2	4.667	15.92	No	0.0125	n/a	Yes	0.05	NP (normality)
Calcium (mg/L)	MW4	5.389	15.92	No	0.0125	n/a	Yes	0.05	NP (normality)
Calcium (mg/L)	**MW9**	**27.94**	**15.92**	**Yes**	**0.0125**	**n/a**	**Yes**	**0.05**	**NP (normality)**
Calcium (mg/L)	**MW3**	**33.17**	**15.92**	**Yes**	**0.0125**	**n/a**	**Yes**	**0.05**	**NP (normality)**
Chloride (mg/L)	MW2	-15.56	15.92	No	0.0125	n/a	Yes	0.05	NP (normality)
Chloride (mg/L)	MW4	-6.944	15.92	No	0.0125	n/a	Yes	0.05	NP (normality)
Chloride (mg/L)	MW9	-3.5	15.92	No	0.0125	n/a	Yes	0.05	NP (normality)
Chloride (mg/L)	**MW3**	**18.61**	**15.92**	**Yes**	**0.0125**	**n/a**	**Yes**	**0.05**	**NP (normality)**
Fluoride (mg/L)	MW3	10.83	15.92	No	0.0125	n/a	Yes	0.05	NP (normality)
Fluoride (mg/L)	MW2	0.7778	15.92	No	0.0125	n/a	Yes	0.05	NP (normality)
Fluoride (mg/L)	MW4	-9.944	15.92	No	0.0125	n/a	Yes	0.05	NP (normality)
Fluoride (mg/L)	MW9	11.17	15.92	No	0.0125	n/a	Yes	0.05	NP (normality)
pH (SU)	MW3	6.093	17.5	No	0.00625	n/a	No	0.05	NP (normality)
pH (SU)	MW2	6.315	17.5	No	0.00625	n/a	No	0.05	NP (normality)
pH (SU)	MW9	3.759	17.5	No	0.00625	n/a	No	0.05	NP (normality)
pH (SU)	MW4	6.963	17.5	No	0.00625	n/a	No	0.05	NP (normality)
Sulfate (mg/L)	MW2	7.704	15.92	No	0.0125	n/a	Yes	0.05	NP (normality)
Sulfate (mg/L)	**MW9**	**29.54**	**15.92**	**Yes**	**0.0125**	**n/a**	**Yes**	**0.05**	**NP (normality)**
Sulfate (mg/L)	**MW3**	**38.43**	**15.92**	**Yes**	**0.0125**	**n/a**	**Yes**	**0.05**	**NP (normality)**
Sulfate (mg/L)	**MW4**	**32.31**	**15.92**	**Yes**	**0.0125**	**n/a**	**Yes**	**0.05**	**NP (normality)**
Total Dissolved Solids (mg/L)	MW2	-2.296	15.92	No	0.0125	n/a	Yes	0.05	NP (eq. var.)
Total Dissolved Solids (mg/L)	MW4	14.26	15.92	No	0.0125	n/a	Yes	0.05	NP (eq. var.)
Total Dissolved Solids (mg/L)	**MW9**	**30.04**	**15.92**	**Yes**	**0.0125**	**n/a**	**Yes**	**0.05**	**NP (eq. var.)**
Total Dissolved Solids (mg/L)	**MW3**	**34.87**	**15.92**	**Yes**	**0.0125**	**n/a**	**Yes**	**0.05**	**NP (eq. var.)**

Non-Parametric ANOVA

Constituent: Boron Analysis Run 1/3/2018 2:07 PM
OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

For observations made between 3/9/2016 and 11/8/2017, the non-parametric analysis of variance test indicates a DIFFERENCE between the medians of the groups tested at the 5% significance level. Because the calculated Kruskal-Wallis statistic is greater than the Chi-squared value, we conclude that at least one group has a significantly different median concentration of this constituent when compared to another group.

Calculated Kruskal-Wallis statistic = 58.16

Tabulated Chi-Squared value = 12.592 with 6 degrees of freedom at the 5% significance level.

There were 4 groups of ties in the data, consequently the Kruskal-Wallis statistic (H) was adjusted. The adjusted statistic (H') was utilized to determine if the medians were equal.
Kruskal-Wallis statistic (H) = 56.3
Adjusted Kruskal-Wallis statistic (H') = 58.16

The contrast test was performed to determine if any compliance group concentration was significantly higher than the background concentration. The contrast test indicates statistical significance in 3 of the compliance wells.

Contrast table:

Well	Difference	Contrast	Significant?
MW2	2.926	15.92	No
MW4	22.65	15.92	Yes
MW9	37.98	15.92	Yes
MW3	33.93	15.92	Yes

The critical (contrast) value was computed with 4 degrees of freedom and a 1.25% error level for each well comparison.

Non-parametric test used in lieu of parametric anova because the Shapiro Francia normality test showed the residuals to be non-normal at the 0.01 alpha level.

Non-Parametric ANOVA

Constituent: Calcium Analysis Run 1/3/2018 2:07 PM
OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

For observations made between 3/9/2016 and 11/8/2017, the non-parametric analysis of variance test indicates a DIFFERENCE between the medians of the groups tested at the 5% significance level. Because the calculated Kruskal-Wallis statistic is greater than the Chi-squared value, we conclude that at least one group has a significantly different median concentration of this constituent when compared to another group.

Calculated Kruskal-Wallis statistic = 44

Tabulated Chi-Squared value = 12.592 with 6 degrees of freedom at the 5% significance level.

There were 7 groups of ties in the data, consequently the Kruskal-Wallis statistic (H) was adjusted. The adjusted statistic (H') was utilized to determine if the medians were equal.
Kruskal-Wallis statistic (H) = 43.99
Adjusted Kruskal-Wallis statistic (H') = 44

The contrast test was performed to determine if any compliance group concentration was significantly higher than the background concentration. The contrast test indicates statistical significance in 2 of the compliance wells.

Contrast table:

Well	Difference	Contrast	Significant?
MW2	4.667	15.92	No
MW4	5.389	15.92	No
MW9	27.94	15.92	Yes
MW3	33.17	15.92	Yes

The critical (contrast) value was computed with 4 degrees of freedom and a 1.25% error level for each well comparison.

Non-parametric test used in lieu of parametric anova because the Shapiro Francia normality test showed the residuals to be non-normal at the 0.01 alpha level.

Non-Parametric ANOVA

Constituent: Chloride Analysis Run 1/3/2018 2:07 PM
OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

For observations made between 3/9/2016 and 11/8/2017, the non-parametric analysis of variance test indicates a DIFFERENCE between the medians of the groups tested at the 5% significance level. Because the calculated Kruskal-Wallis statistic is greater than the Chi-squared value, we conclude that at least one group has a significantly different median concentration of this constituent when compared to another group.

Calculated Kruskal-Wallis statistic = 47.62

Tabulated Chi-Squared value = 12.592 with 6 degrees of freedom at the 5% significance level.

There were 3 groups of ties in the data, consequently the Kruskal-Wallis statistic (H) was adjusted. The adjusted statistic (H') was utilized to determine if the medians were equal.
Kruskal-Wallis statistic (H) = 40.13
Adjusted Kruskal-Wallis statistic (H') = 47.62

The contrast test was performed to determine if any compliance group concentration was significantly higher than the background concentration. The contrast test indicates statistical significance in 1 of the compliance wells.

Contrast table:

Well	Difference	Contrast	Significant?
MW2	-15.56	15.92	No
MW4	-6.944	15.92	No
MW9	-3.5	15.92	No
MW3	18.61	15.92	Yes

The critical (contrast) value was computed with 4 degrees of freedom and a 1.25% error level for each well comparison.

Non-parametric test used in lieu of parametric anova because the Shapiro Francia normality test showed the residuals to be non-normal at the 0.01 alpha level.

Non-Parametric ANOVA

Constituent: Fluoride Analysis Run 1/3/2018 2:07 PM
OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

For observations made between 3/9/2016 and 11/8/2017, the non-parametric analysis of variance test indicates a DIFFERENCE between the medians of the groups tested at the 5% significance level. Because the calculated Kruskal-Wallis statistic is greater than the Chi-squared value, we conclude that at least one group has a significantly different median concentration of this constituent when compared to another group.

Calculated Kruskal-Wallis statistic = 14.23

Tabulated Chi-Squared value = 12.592 with 6 degrees of freedom at the 5% significance level.

There were 1 groups of ties in the data, consequently the Kruskal-Wallis statistic (H) was adjusted. The adjusted statistic (H') was utilized to determine if the medians were equal.
Kruskal-Wallis statistic (H) = 12.36
Adjusted Kruskal-Wallis statistic (H') = 14.23

The contrast test was performed to determine if any compliance group concentration was significantly higher than the background concentration. The contrast test indicates statistical significance in none of the compliance wells.

Contrast table:

Well	Difference	Contrast	Significant?
MW3	10.83	15.92	No
MW2	0.7778	15.92	No
MW4	-9.944	15.92	No
MW9	11.17	15.92	No

The critical (contrast) value was computed with 4 degrees of freedom and a 1.25% error level for each well comparison. (Note: this is a rare case, with Anova indicating significant differences that are not reflected in the contrast test. You may wish to consult a professional statistician.)

Non-parametric test used in lieu of parametric anova because the Shapiro Francia normality test showed the residuals to be non-normal at the 0.01 alpha level.

Non-Parametric ANOVA

Constituent: pH Analysis Run 1/3/2018 2:07 PM
OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

For observations made between 3/9/2016 and 11/8/2017, the non-parametric analysis of variance test indicates NO DIFFERENCE between the medians of the groups tested at the 5% significance level. Because the calculated Kruskal-Wallis statistic is less than or equal to the Chi-squared value, we conclude that no group has a significantly different median concentration of this constituent when compared to another group.

Calculated Kruskal-Wallis statistic = 3.488

Tabulated Chi-Squared value = 12.592 with 6 degrees of freedom at the 5% significance level.

There were 16 groups of ties in the data, consequently the Kruskal-Wallis statistic (H) was adjusted. The adjusted statistic (H') was utilized to determine if the medians were equal.
Kruskal-Wallis statistic (H) = 3.486
Adjusted Kruskal-Wallis statistic (H') = 3.488

The contrast test (2 tailed) was performed to determine if any compliance group concentration was significantly higher or lower than the background concentration. The contrast test indicates statistical significance in none of the compliance wells.

Contrast table:

Well	Difference	Contrast	Significant?
MW3	6.093	17.5	No
MW2	6.315	17.5	No
MW9	3.759	17.5	No
MW4	6.963	17.5	No

The critical (contrast) value was computed with 4 degrees of freedom and a 0.625% error level for each well comparison.

Non-parametric test used in lieu of parametric anova because the Shapiro Francia normality test showed the residuals to be non-normal at the 0.01 alpha level.

Non-Parametric ANOVA

Constituent: Sulfate Analysis Run 1/3/2018 2:07 PM
OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

For observations made between 3/9/2016 and 11/8/2017, the non-parametric analysis of variance test indicates a DIFFERENCE between the medians of the groups tested at the 5% significance level. Because the calculated Kruskal-Wallis statistic is greater than the Chi-squared value, we conclude that at least one group has a significantly different median concentration of this constituent when compared to another group.

Calculated Kruskal-Wallis statistic = 52.91

Tabulated Chi-Squared value = 12.592 with 6 degrees of freedom at the 5% significance level.

There were 4 groups of ties in the data, consequently the Kruskal-Wallis statistic (H) was adjusted. The adjusted statistic (H') was utilized to determine if the medians were equal.
Kruskal-Wallis statistic (H) = 52.91
Adjusted Kruskal-Wallis statistic (H') = 52.91

The contrast test was performed to determine if any compliance group concentration was significantly higher than the background concentration. The contrast test indicates statistical significance in 3 of the compliance wells.

Contrast table:

Well	Difference	Contrast	Significant?
MW2	7.704	15.92	No
MW9	29.54	15.92	Yes
MW3	38.43	15.92	Yes
MW4	32.31	15.92	Yes

The critical (contrast) value was computed with 4 degrees of freedom and a 1.25% error level for each well comparison.

Non-parametric test used in lieu of parametric anova because the Shapiro Francia normality test showed the residuals to be non-normal at the 0.01 alpha level.

Non-Parametric ANOVA

Constituent: Total Dissolved Solids Analysis Run 1/3/2018 2:07 PM
OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

For observations made between 3/9/2016 and 11/8/2017, the non-parametric analysis of variance test indicates a DIFFERENCE between the medians of the groups tested at the 5% significance level. Because the calculated Kruskal-Wallis statistic is greater than the Chi-squared value, we conclude that at least one group has a significantly different median concentration of this constituent when compared to another group.

Calculated Kruskal-Wallis statistic = 46.13

Tabulated Chi-Squared value = 12.592 with 6 degrees of freedom at the 5% significance level.

There were 6 groups of ties in the data, consequently the Kruskal-Wallis statistic (H) was adjusted. The adjusted statistic (H') was utilized to determine if the medians were equal.
Kruskal-Wallis statistic (H) = 46.12
Adjusted Kruskal-Wallis statistic (H') = 46.13

The contrast test was performed to determine if any compliance group concentration was significantly higher than the background concentration. The contrast test indicates statistical significance in 2 of the compliance wells.

Contrast table:

Well	Difference	Contrast	Significant?
MW2	-2.296	15.92	No
MW4	14.26	15.92	No
MW9	30.04	15.92	Yes
MW3	34.87	15.92	Yes

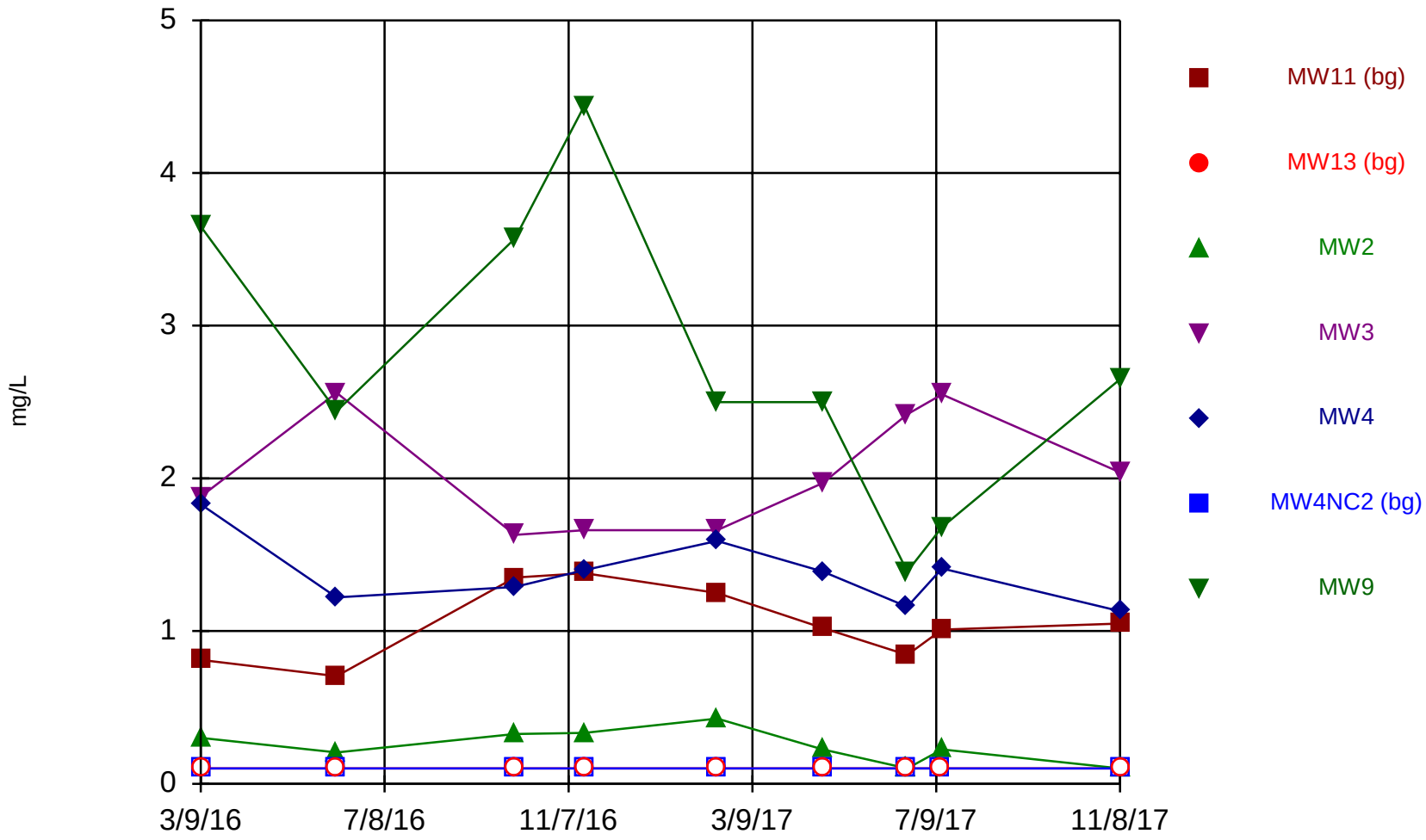
The critical (contrast) value was computed with 4 degrees of freedom and a 1.25% error level for each well comparison.

Non-parametric test used in lieu of parametric anova because Levene's Equality of Variance test failed at the 0.05 alpha level.

TIME SERIES

Hollow symbols indicate censored values.

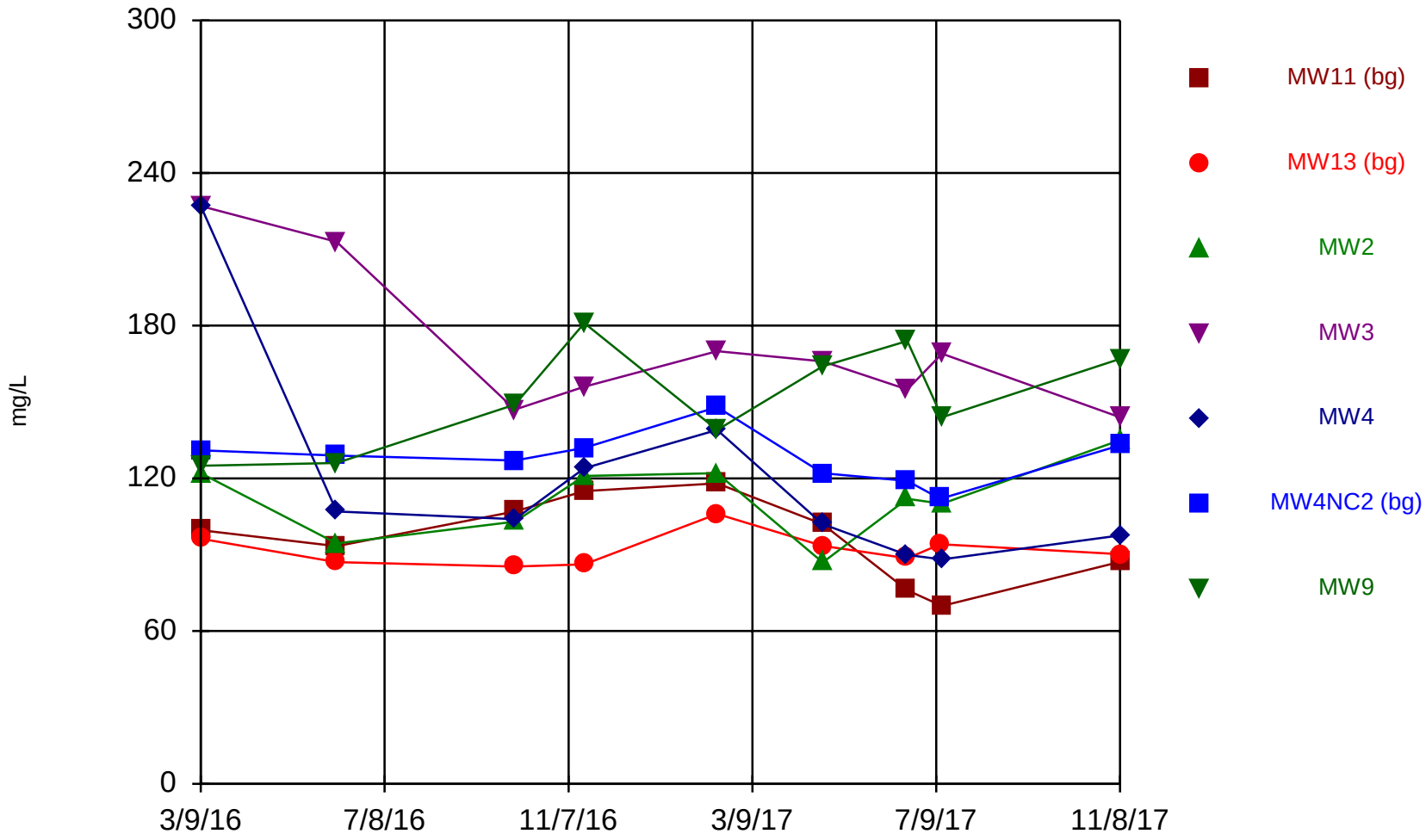
Time Series



Constituent: Boron Analysis Run 1/4/2018 8:33 AM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Time Series

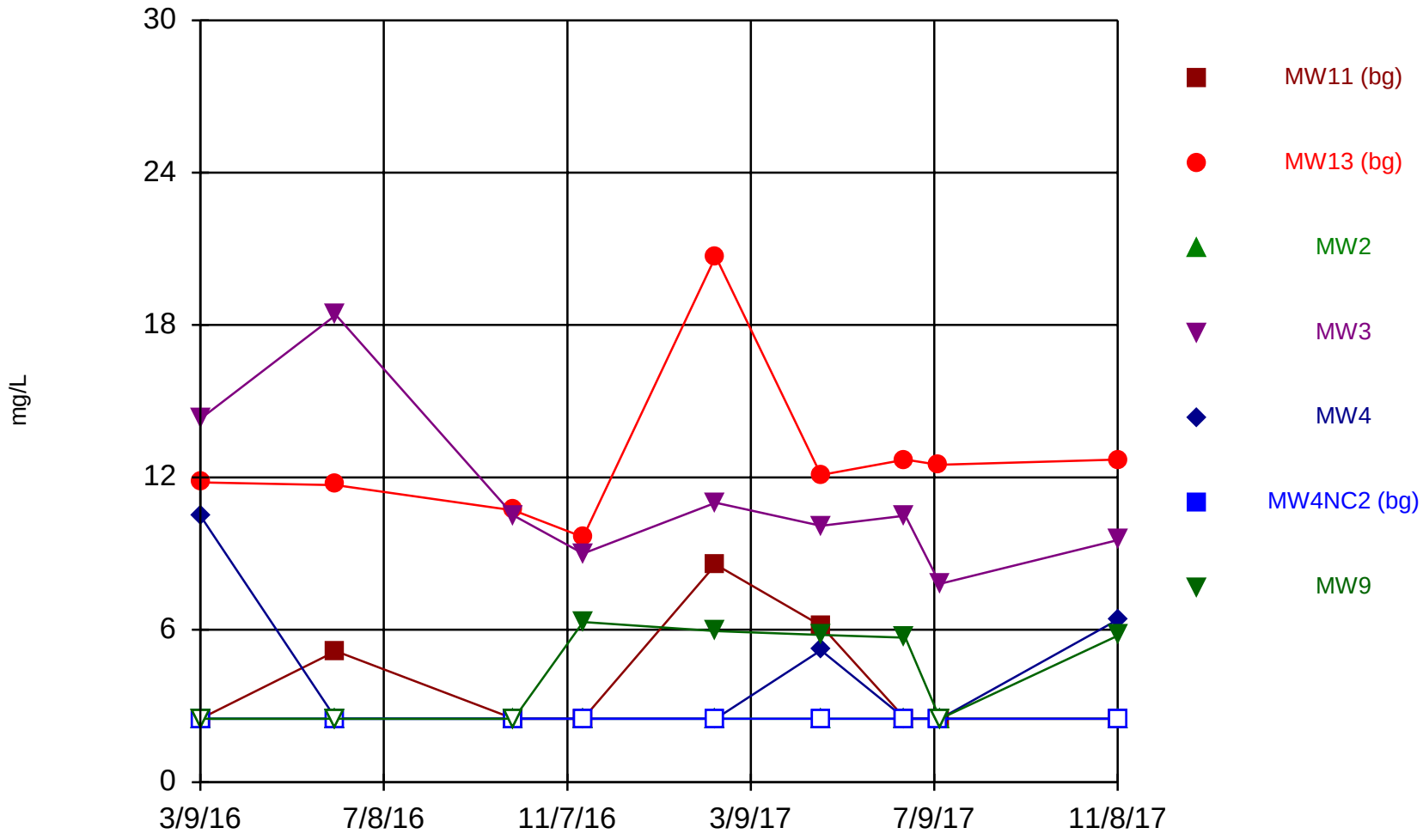


Constituent: Calcium Analysis Run 1/4/2018 8:33 AM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

Time Series

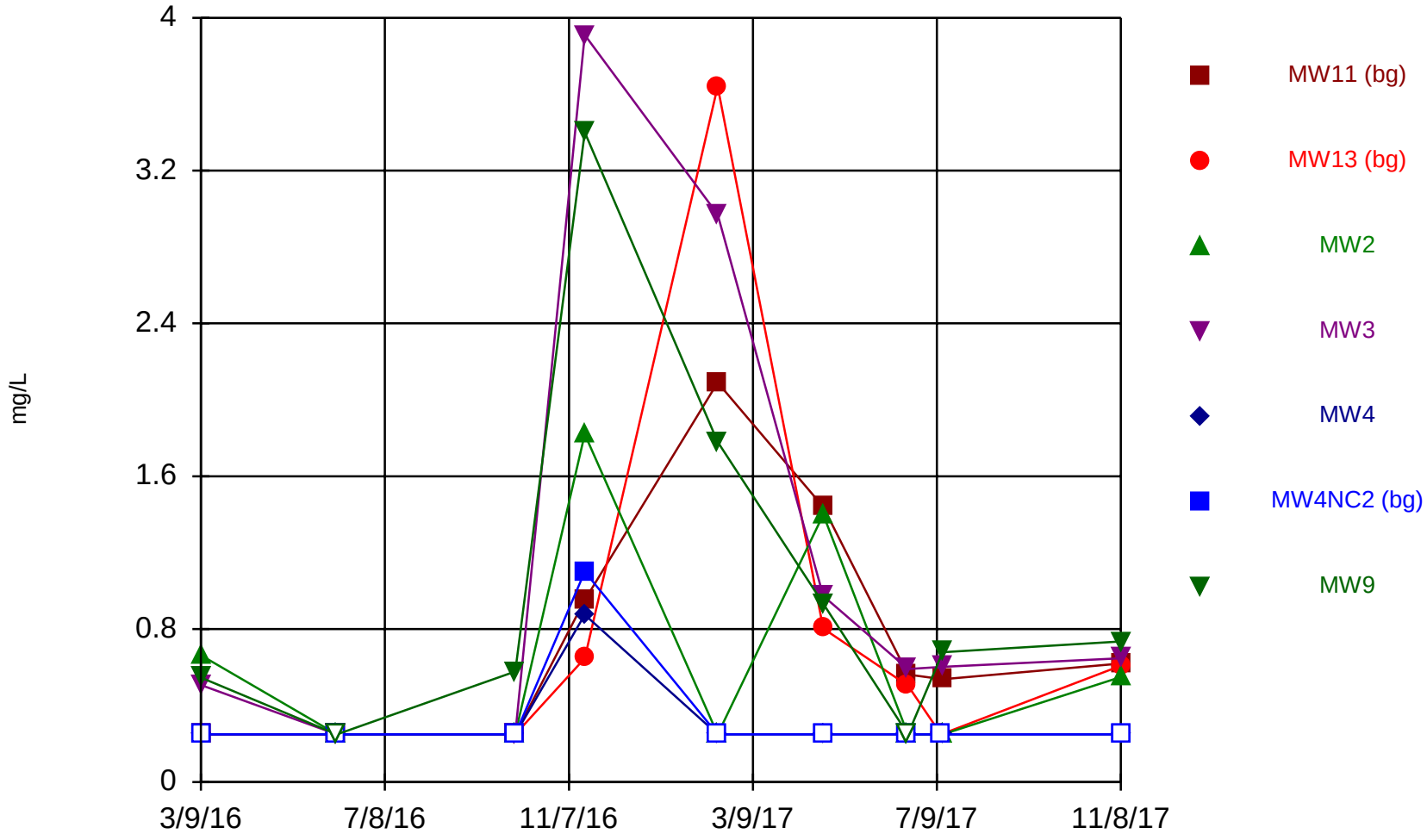


Constituent: Chloride Analysis Run 1/4/2018 8:33 AM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

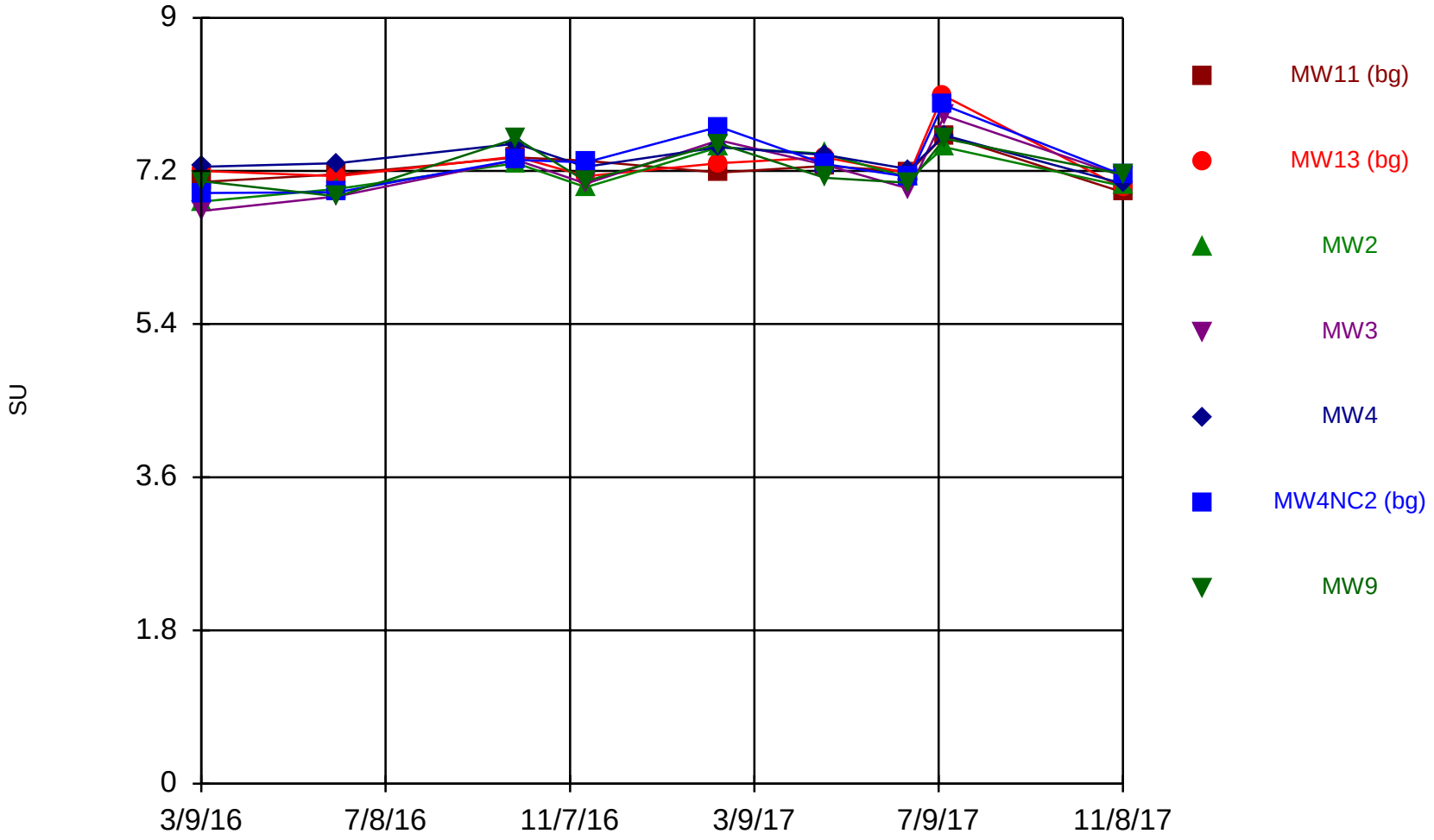
Time Series



Constituent: Fluoride Analysis Run 1/4/2018 8:33 AM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

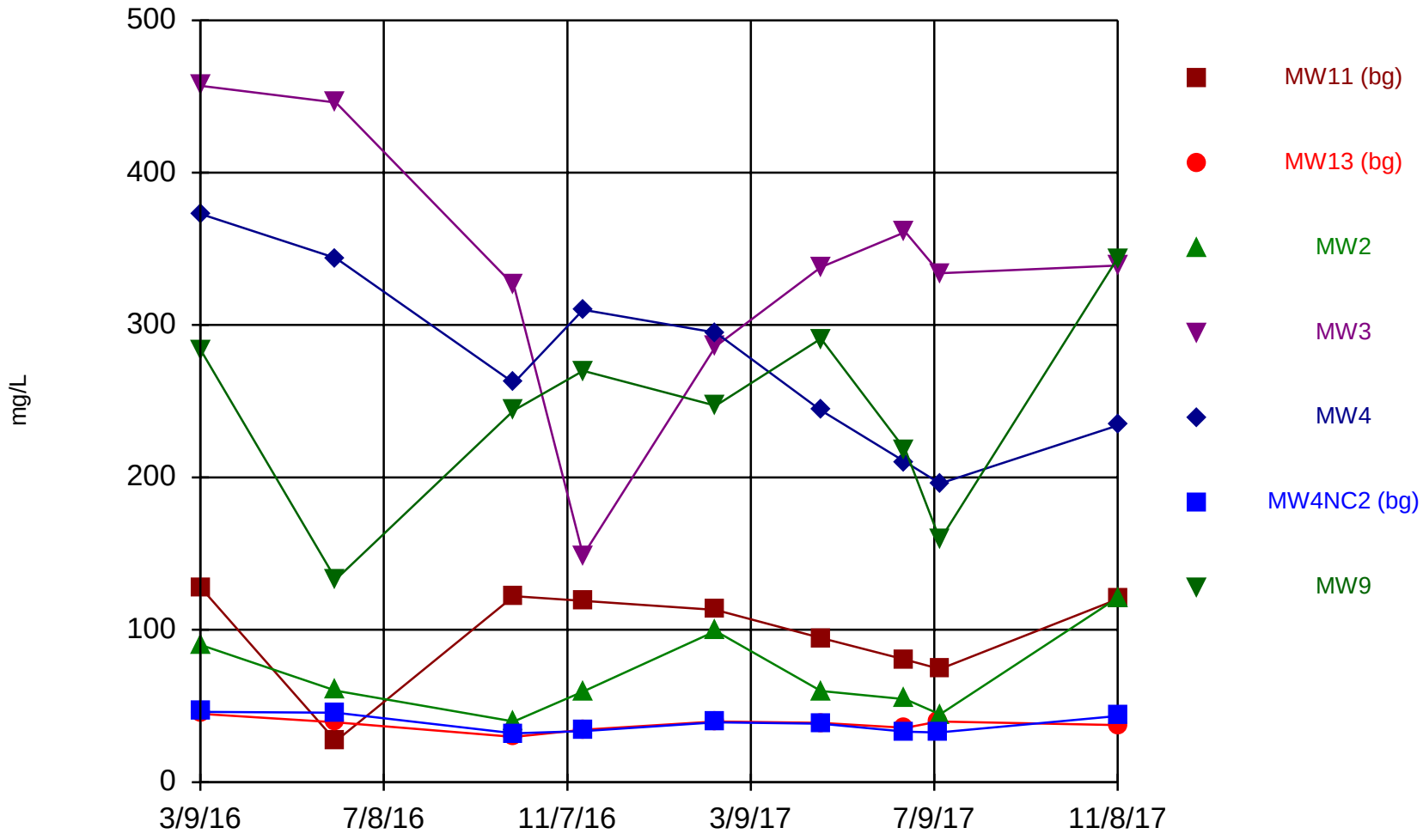
Time Series



Constituent: pH Analysis Run 1/4/2018 8:33 AM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

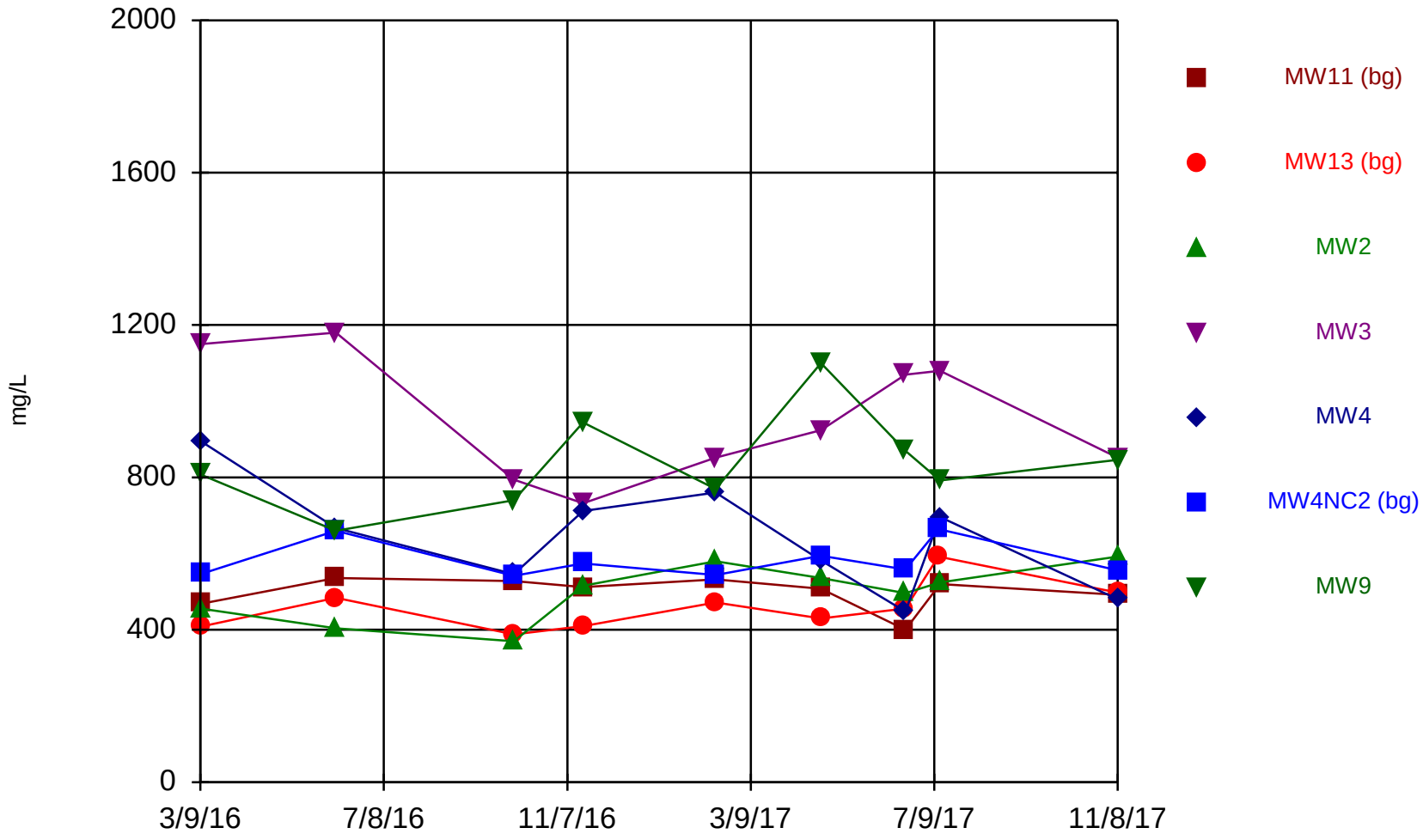
Time Series



Constituent: Sulfate Analysis Run 1/4/2018 8:33 AM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Time Series



Constituent: Total Dissolved Solids Analysis Run 1/4/2018 8:33 AM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

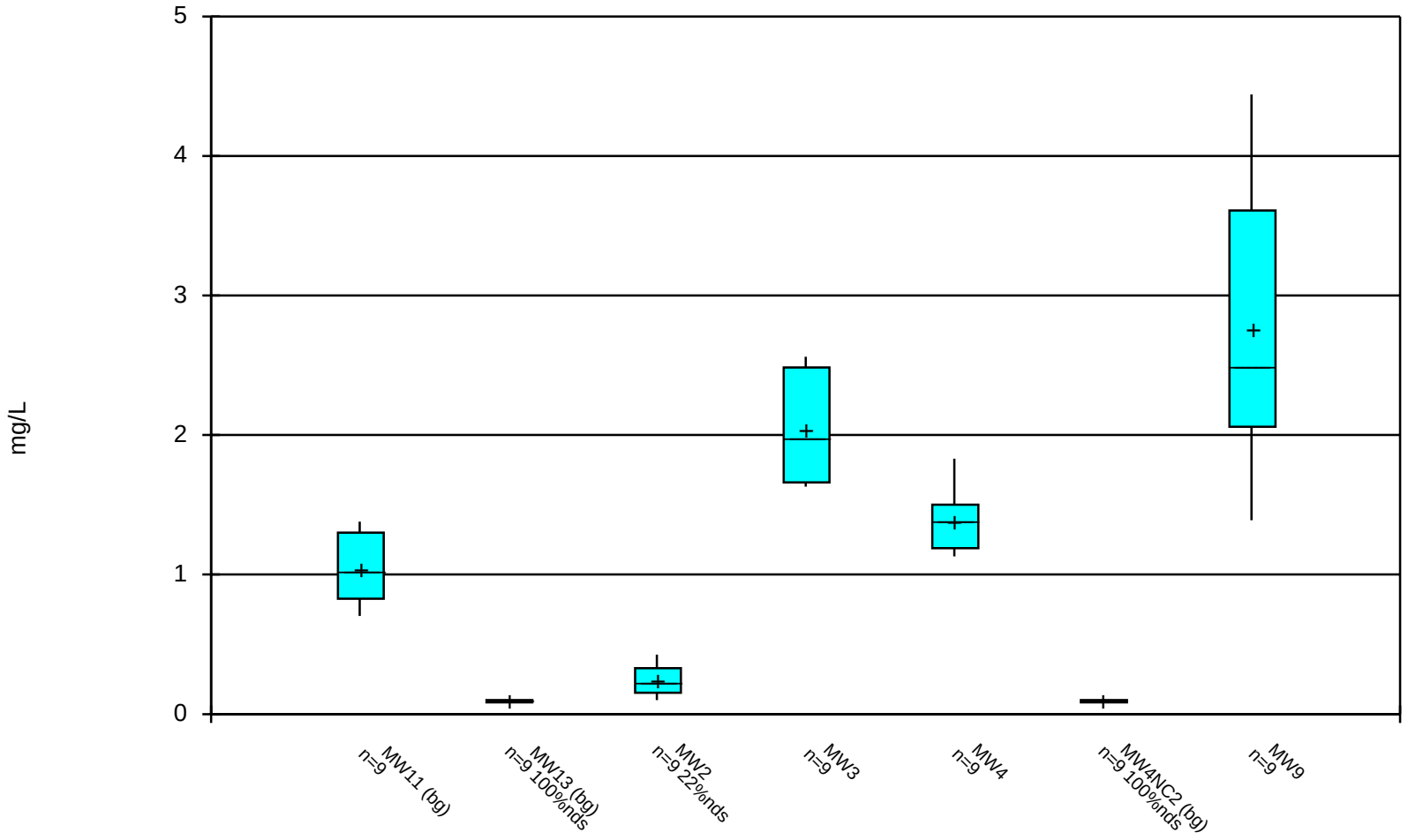
BOX PLOTS

Box & Whiskers Plot

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017) Printed 1/4/2018, 8:35 AM

Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Boron (mg/L)	MW11 (bg)	9	1.046	0.24	0.08001	1.02	0.704	1.38	0
Boron (mg/L)	MW13 (bg)	9	0.1	0	0	0.1	0.1	0.1	100
Boron (mg/L)	MW2	9	0.2493	0.109	0.03632	0.226	0.1	0.427	22.22
Boron (mg/L)	MW3	9	2.041	0.3812	0.1271	1.97	1.63	2.56	0
Boron (mg/L)	MW4	9	1.38	0.2215	0.07384	1.39	1.13	1.83	0
Boron (mg/L)	MW4NC2 (bg)	9	0.1	0	0	0.1	0.1	0.1	100
Boron (mg/L)	MW9	9	2.758	0.9723	0.3241	2.5	1.39	4.44	0
Calcium (mg/L)	MW11 (bg)	9	96.47	16.49	5.495	99.6	69.9	118	0
Calcium (mg/L)	MW13 (bg)	9	91.93	6.492	2.164	90.2	85.4	106	0
Calcium (mg/L)	MW2	9	111.8	15.12	5.041	112	87	135	0
Calcium (mg/L)	MW3	9	171.9	28.96	9.653	166	144	227	0
Calcium (mg/L)	MW4	9	119.9	43.29	14.43	104	88.2	227	0
Calcium (mg/L)	MW4NC2 (bg)	9	128.1	10.15	3.385	129	112	148	0
Calcium (mg/L)	MW9	9	152.1	20.44	6.812	149	125	181	0
Chloride (mg/L)	MW11 (bg)	9	3.878	2.245	0.7482	2.5	2.5	8.57	66.67
Chloride (mg/L)	MW13 (bg)	9	12.73	3.152	1.051	12.1	9.65	20.7	0
Chloride (mg/L)	MW2	9	2.5	0	0	2.5	2.5	2.5	100
Chloride (mg/L)	MW3	9	11.24	3.217	1.072	10.5	7.81	18.4	0
Chloride (mg/L)	MW4	9	4.12	2.801	0.9335	2.5	2.5	10.5	66.67
Chloride (mg/L)	MW4NC2 (bg)	9	2.5	0	0	2.5	2.5	2.5	100
Chloride (mg/L)	MW9	9	4.391	1.802	0.6008	5.69	2.5	6.31	44.44
Fluoride (mg/L)	MW11 (bg)	9	0.7724	0.628	0.2093	0.562	0.25	2.09	33.33
Fluoride (mg/L)	MW13 (bg)	9	0.8003	1.085	0.3618	0.505	0.25	3.64	44.44
Fluoride (mg/L)	MW2	9	0.6316	0.5851	0.195	0.25	0.25	1.82	55.56
Fluoride (mg/L)	MW3	9	1.189	1.315	0.4385	0.603	0.25	3.91	22.22
Fluoride (mg/L)	MW4	9	0.3196	0.2087	0.06956	0.25	0.25	0.876	88.89
Fluoride (mg/L)	MW4NC2 (bg)	9	0.3444	0.2833	0.09444	0.25	0.25	1.1	88.89
Fluoride (mg/L)	MW9	9	1.017	1.003	0.3344	0.68	0.25	3.4	22.22
pH (SU)	MW11 (bg)	9	7.234	0.1907	0.06355	7.19	6.95	7.62	0
pH (SU)	MW13 (bg)	9	7.307	0.3163	0.1054	7.2	7	8.09	0
pH (SU)	MW2	9	7.181	0.2372	0.07908	7.12	6.84	7.48	0
pH (SU)	MW3	9	7.202	0.3455	0.1152	7.14	6.73	7.85	0
pH (SU)	MW4	9	7.341	0.1768	0.05894	7.29	7.05	7.62	0
pH (SU)	MW4NC2 (bg)	9	7.309	0.3433	0.1144	7.28	6.94	7.98	0
pH (SU)	MW9	9	7.231	0.2571	0.08571	7.12	6.9	7.58	0
Sulfate (mg/L)	MW11 (bg)	9	97.6	32.67	10.89	113	27.1	128	0
Sulfate (mg/L)	MW13 (bg)	9	37.76	4.228	1.409	38.9	29.7	44.8	0
Sulfate (mg/L)	MW2	9	69.82	27.33	9.109	59.8	39.8	121	0
Sulfate (mg/L)	MW3	9	337.3	90.09	30.03	338	149	457	0
Sulfate (mg/L)	MW4	9	274.2	60.48	20.16	262	196	373	0
Sulfate (mg/L)	MW4NC2 (bg)	9	38.26	5.743	1.914	38.3	32	46.2	0
Sulfate (mg/L)	MW9	9	243.3	65.87	21.96	247	133	344	0
Total Dissolved Solids (mg/L)	MW11 (bg)	9	499.6	43.01	14.34	512	400	536	0
Total Dissolved Solids (mg/L)	MW13 (bg)	9	459.8	62.14	20.71	456	388	592	0
Total Dissolved Solids (mg/L)	MW2	9	497.1	74.99	25	516	370	592	0
Total Dissolved Solids (mg/L)	MW3	9	959.3	164	54.67	924	732	1180	0
Total Dissolved Solids (mg/L)	MW4	9	643	143	47.66	667	448	896	0
Total Dissolved Solids (mg/L)	MW4NC2 (bg)	9	582	48.23	16.08	558	542	664	0
Total Dissolved Solids (mg/L)	MW9	9	836.7	127.4	42.47	808	660	1100	0

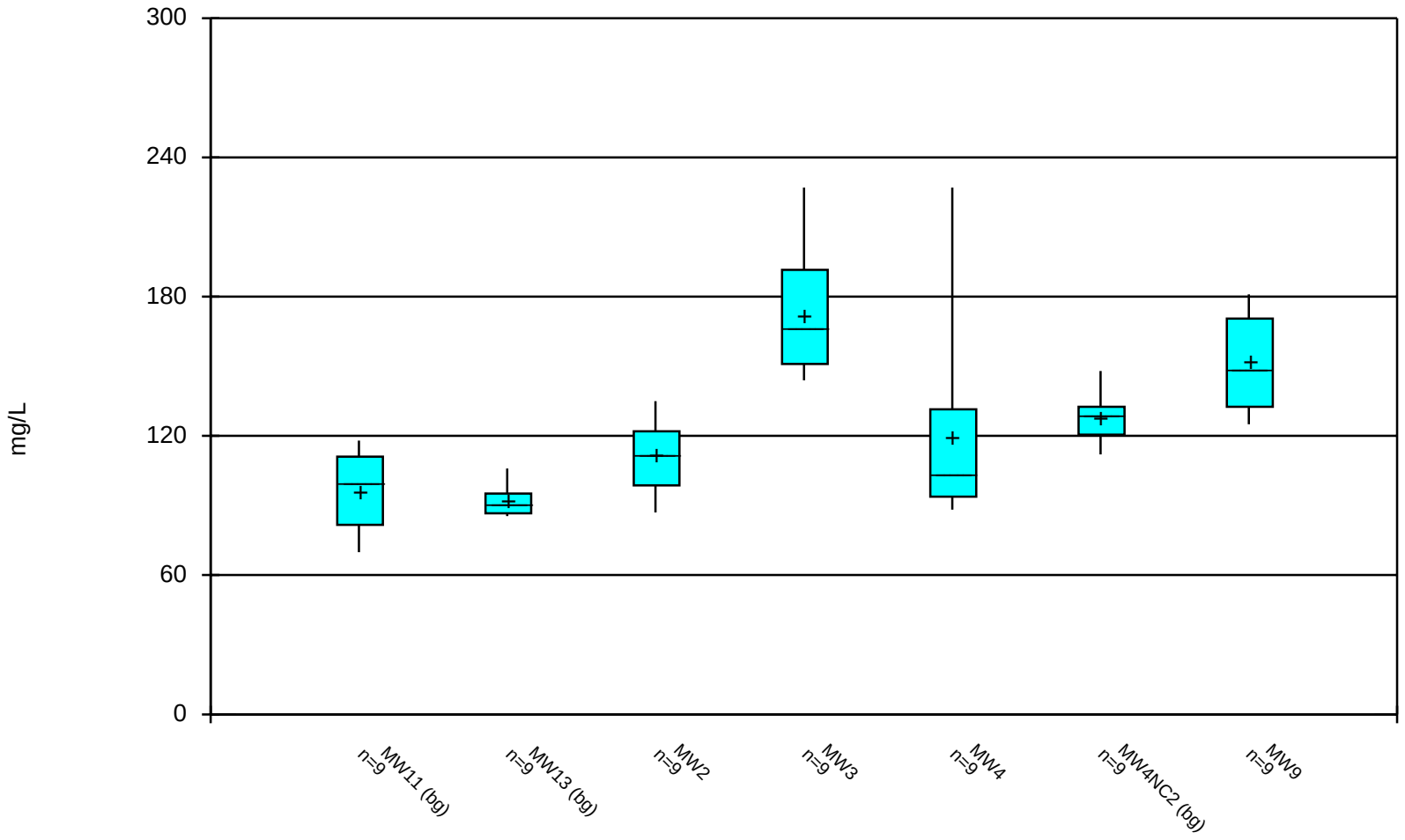
Box & Whiskers Plot



Constituent: Boron Analysis Run 1/4/2018 8:34 AM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

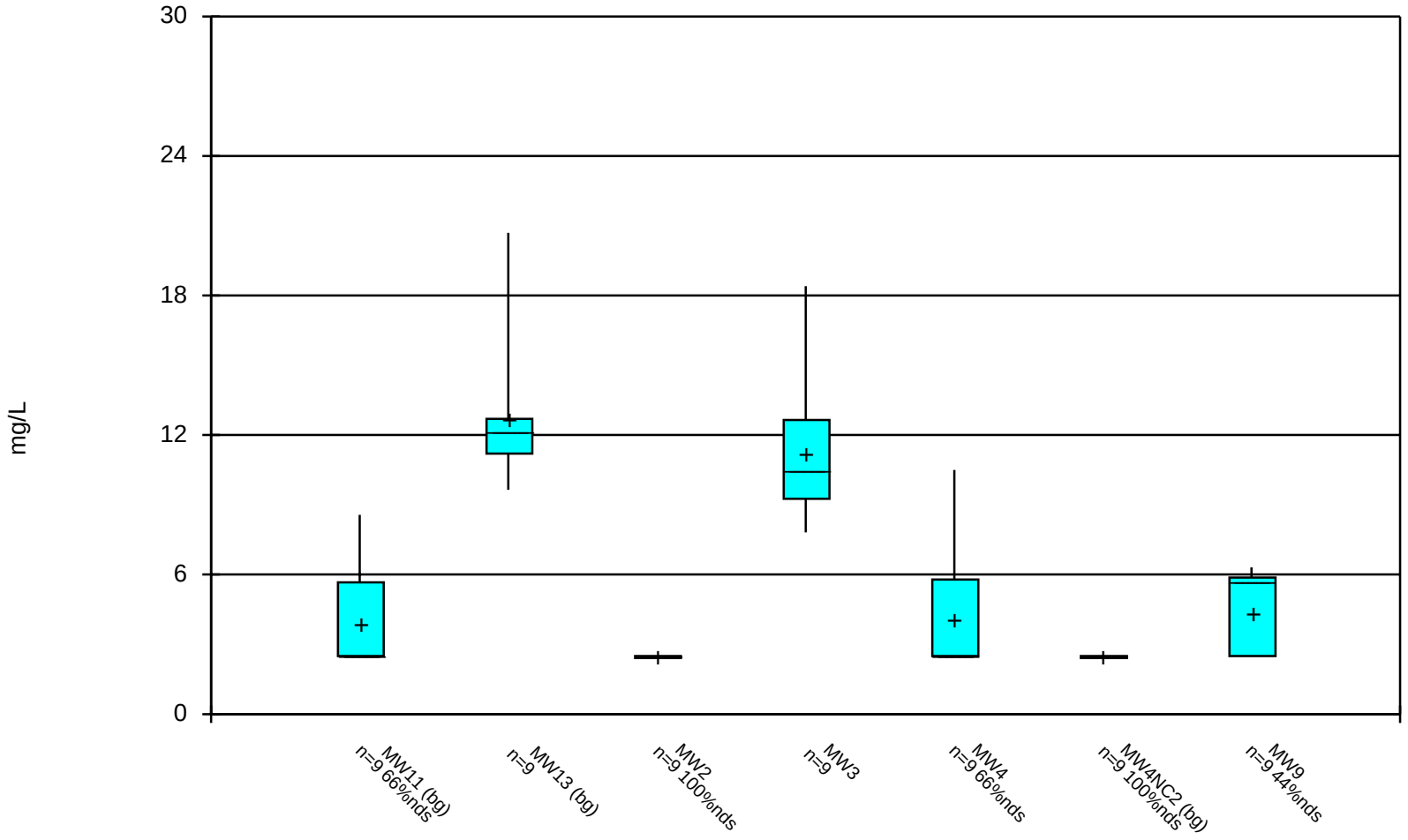
Box & Whiskers Plot



Constituent: Calcium Analysis Run 1/4/2018 8:34 AM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

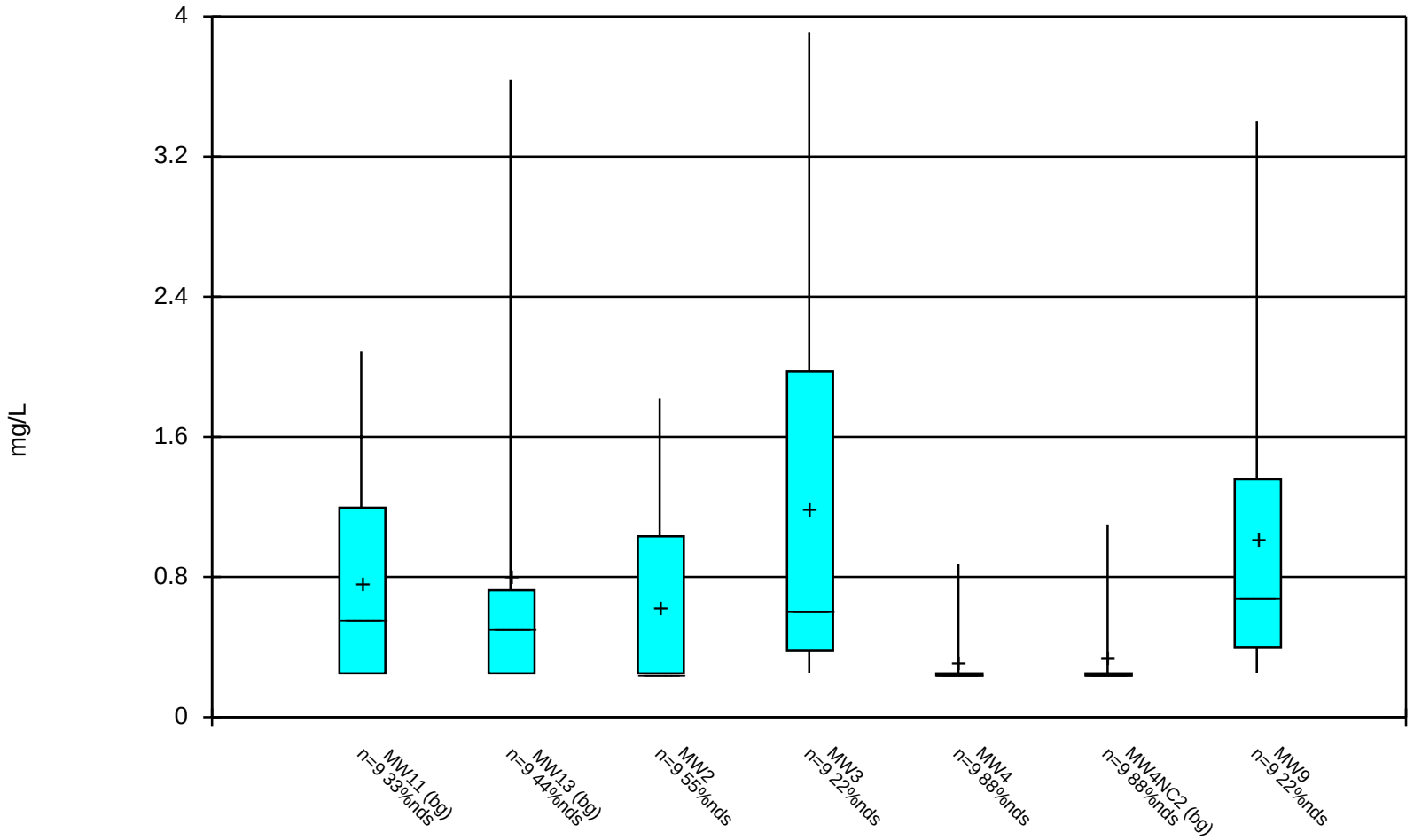
Box & Whiskers Plot



Constituent: Chloride Analysis Run 1/4/2018 8:34 AM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

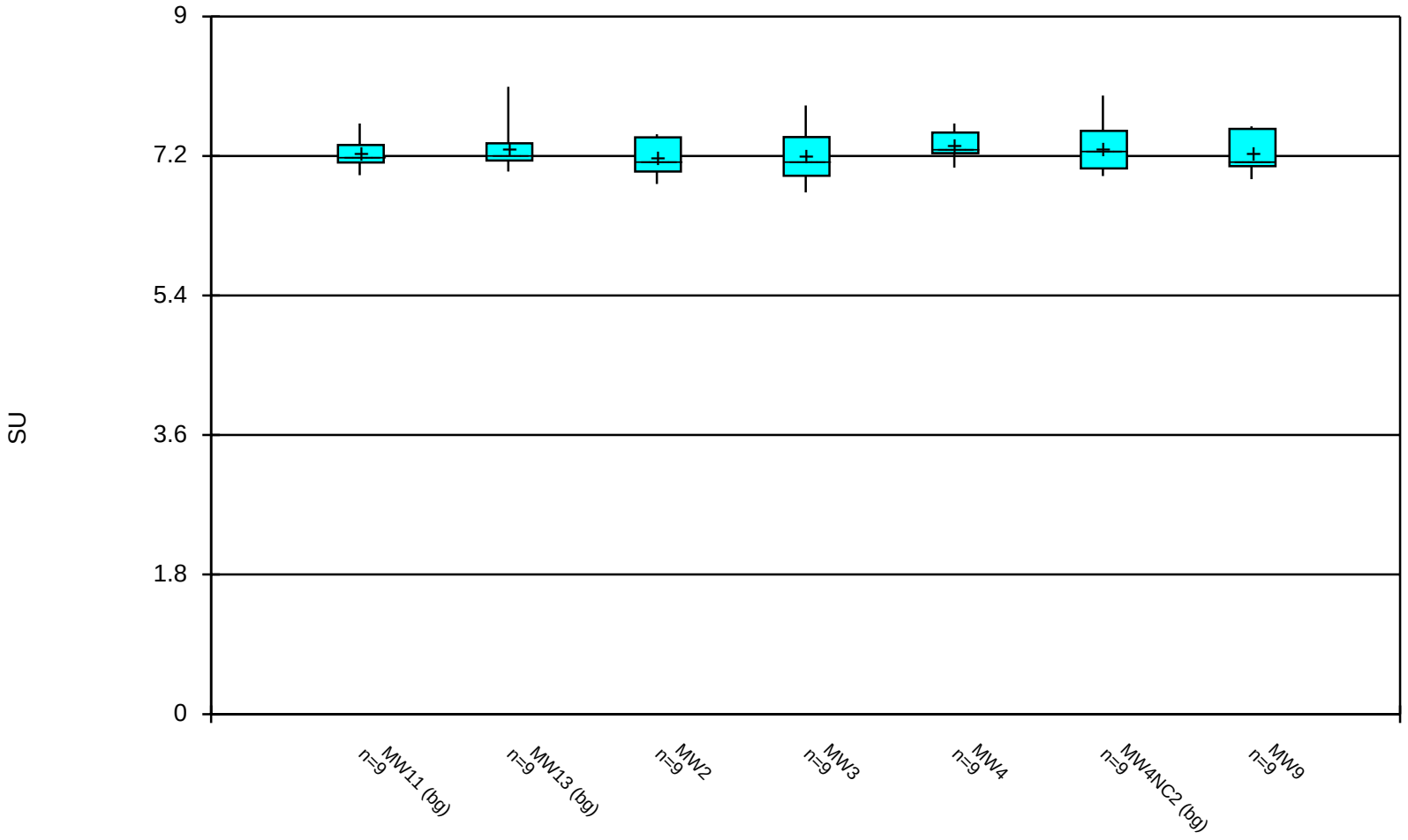
Box & Whiskers Plot



Constituent: Fluoride Analysis Run 1/4/2018 8:34 AM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

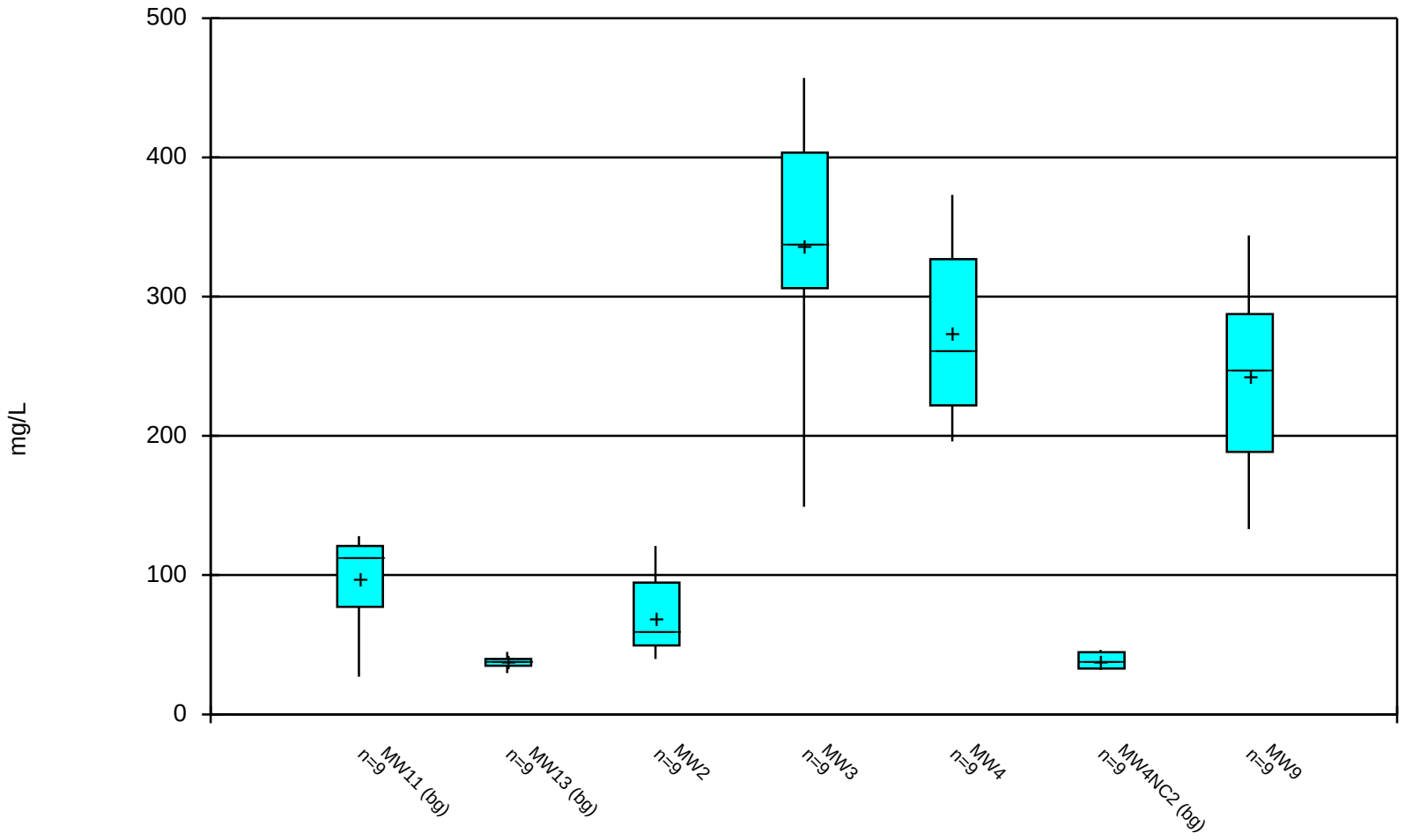
Box & Whiskers Plot



Constituent: pH Analysis Run 1/4/2018 8:34 AM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

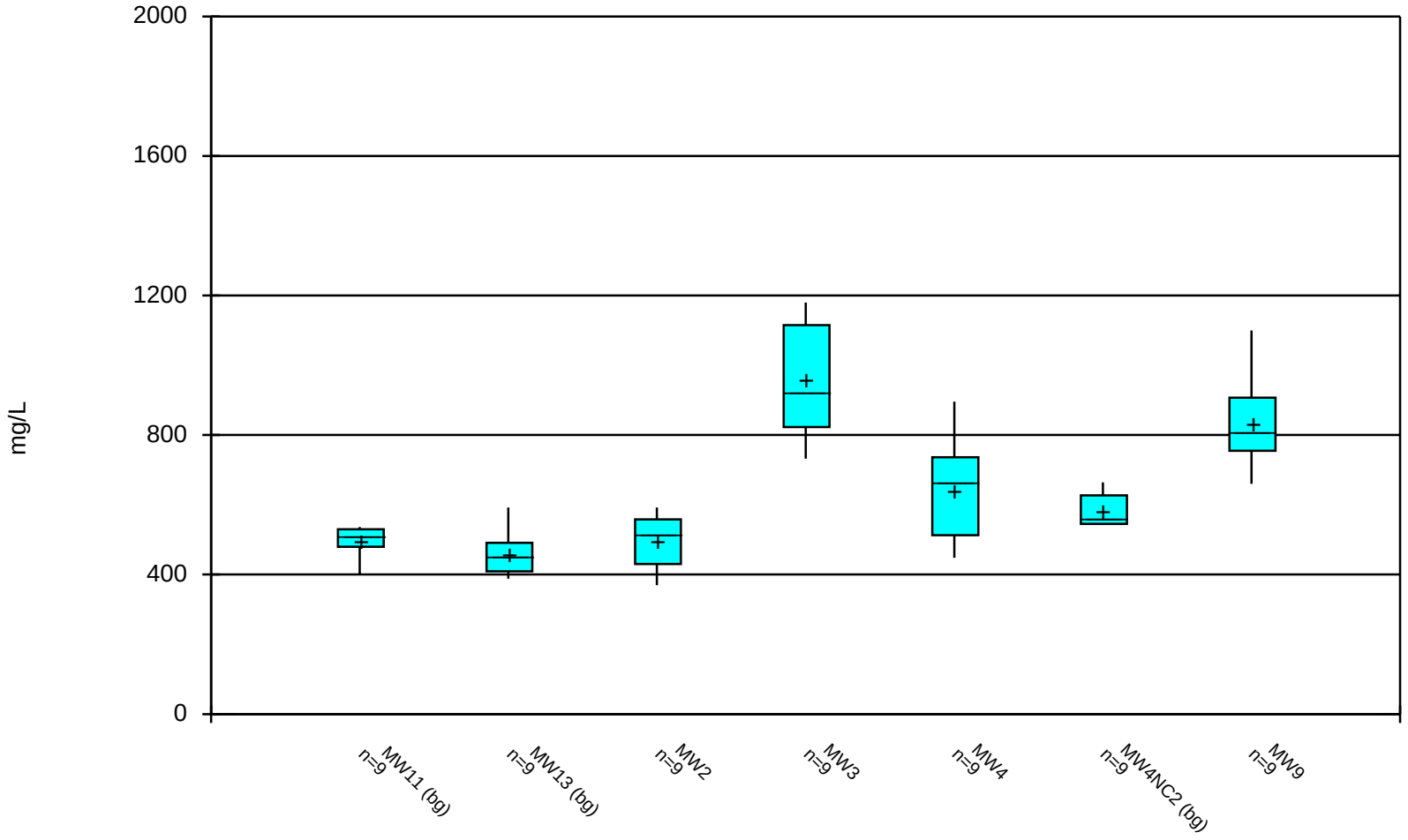
Box & Whiskers Plot



Constituent: Sulfate Analysis Run 1/4/2018 8:34 AM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 1/4/2018 8:34 AM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

TREND ANALYSES

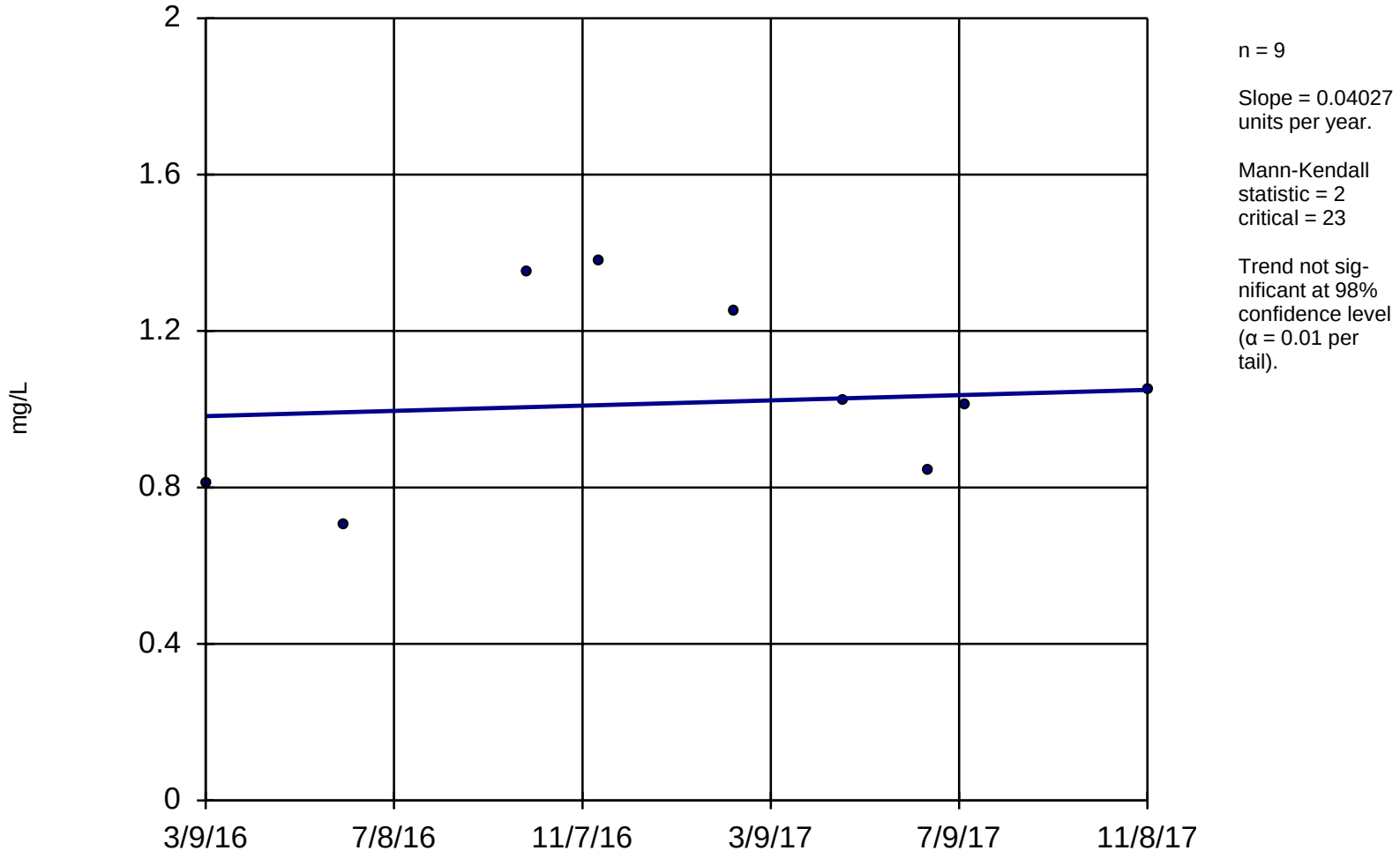
Trend Test

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017) Printed 1/3/2018, 3:06 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	MW11 (bg)	0.04027	2	23	No	9	0	n/a	n/a	0.02	NP
Boron (mg/L)	MW13 (bg)	0	0	23	No	9	100	n/a	n/a	0.02	NP
Boron (mg/L)	MW2	-0.1109	-11	-23	No	9	22.22	n/a	n/a	0.02	NP
Boron (mg/L)	MW3	0.3056	11	23	No	9	0	n/a	n/a	0.02	NP
Boron (mg/L)	MW4	-0.1641	-10	-23	No	9	0	n/a	n/a	0.02	NP
Boron (mg/L)	MW4NC2 (bg)	0	0	23	No	9	100	n/a	n/a	0.02	NP
Boron (mg/L)	MW9	-1.016	-11	-23	No	9	0	n/a	n/a	0.02	NP
Calcium (mg/L)	MW11 (bg)	-18.18	-10	-23	No	9	0	n/a	n/a	0.02	NP
Calcium (mg/L)	MW13 (bg)	2.494	4	23	No	9	0	n/a	n/a	0.02	NP
Calcium (mg/L)	MW2	8.41	5	23	No	9	0	n/a	n/a	0.02	NP
Calcium (mg/L)	MW3	-40.41	-16	-23	No	9	0	n/a	n/a	0.02	NP
Calcium (mg/L)	MW4	-27.06	-22	-23	No	9	0	n/a	n/a	0.02	NP
Calcium (mg/L)	MW4NC2 (bg)	-8.042	-8	-23	No	9	0	n/a	n/a	0.02	NP
Calcium (mg/L)	MW9	22	16	23	No	9	0	n/a	n/a	0.02	NP
Chloride (mg/L)	MW11 (bg)	0	-3	-23	No	9	66.67	n/a	n/a	0.02	NP
Chloride (mg/L)	MW13 (bg)	0.7026	13	23	No	9	0	n/a	n/a	0.02	NP
Chloride (mg/L)	MW2	0	0	23	No	9	100	n/a	n/a	0.02	NP
Chloride (mg/L)	MW3	-3.217	-19	-23	No	9	0	n/a	n/a	0.02	NP
Chloride (mg/L)	MW4	0	1	23	No	9	66.67	n/a	n/a	0.02	NP
Chloride (mg/L)	MW4NC2 (bg)	0	0	23	No	9	100	n/a	n/a	0.02	NP
Chloride (mg/L)	MW9	0	4	23	No	9	44.44	n/a	n/a	0.02	NP
Fluoride (mg/L)	MW11 (bg)	0.2485	11	23	No	9	33.33	n/a	n/a	0.02	NP
Fluoride (mg/L)	MW13 (bg)	0.2067	8	23	No	9	44.44	n/a	n/a	0.02	NP
Fluoride (mg/L)	MW2	0	-2	-23	No	9	55.56	n/a	n/a	0.02	NP
Fluoride (mg/L)	MW3	0.1116	7	23	No	9	22.22	n/a	n/a	0.02	NP
Fluoride (mg/L)	MW4	0	-2	-23	No	9	88.89	n/a	n/a	0.02	NP
Fluoride (mg/L)	MW4NC2 (bg)	0	-2	-23	No	9	88.89	n/a	n/a	0.02	NP
Fluoride (mg/L)	MW9	0.1058	5	23	No	9	22.22	n/a	n/a	0.02	NP
pH (SU)	MW11 (bg)	0.02897	4	23	No	9	0	n/a	n/a	0.02	NP
pH (SU)	MW13 (bg)	0.01448	1	23	No	9	0	n/a	n/a	0.02	NP
pH (SU)	MW2	0.2076	15	23	No	9	0	n/a	n/a	0.02	NP
pH (SU)	MW3	0.4039	14	23	No	9	0	n/a	n/a	0.02	NP
pH (SU)	MW4	-0.03728	-3	-23	No	9	0	n/a	n/a	0.02	NP
pH (SU)	MW4NC2 (bg)	0.161	10	23	No	9	0	n/a	n/a	0.02	NP
pH (SU)	MW9	0.07818	8	23	No	9	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	MW11 (bg)	-24.16	-12	-23	No	9	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	MW13 (bg)	-0.8948	-4	-23	No	9	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	MW2	-0.8377	-2	-23	No	9	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	MW3	-50.78	-4	-23	No	9	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	**MW4**	**-101.9**	**-28**	**-23**	**Yes**	**9**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Sulfate (mg/L)	MW4NC2 (bg)	-3.824	-10	-23	No	9	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	MW9	15.92	4	23	No	9	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	MW11 (bg)	-22.65	-10	-23	No	9	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	MW13 (bg)	76.8	18	23	No	9	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	MW2	87.53	18	23	No	9	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	MW3	-26.02	-1	-23	No	9	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	MW4	-152.7	-14	-23	No	9	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	MW4NC2 (bg)	7.676	6	23	No	9	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	MW9	89.1	10	23	No	9	0	n/a	n/a	0.02	NP

Sen's Slope Estimator

MW11 (bg)



n = 9

Slope = 0.04027 units per year.

Mann-Kendall statistic = 2
critical = 23

Trend not significant at 98% confidence level (α = 0.01 per tail).

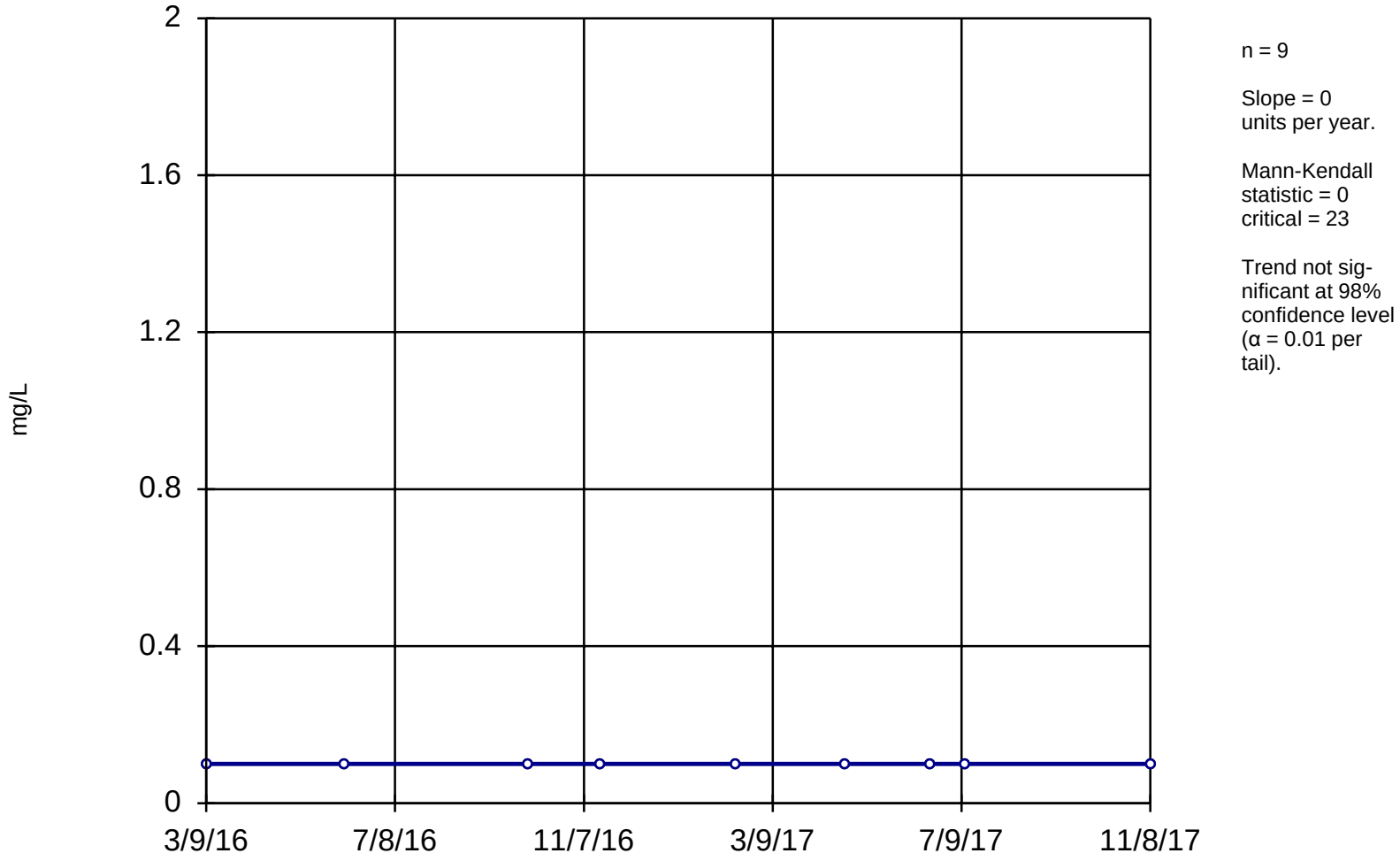
Constituent: Boron Analysis Run 1/3/2018 2:46 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW13 (bg)



n = 9

Slope = 0
units per year.

Mann-Kendall
statistic = 0
critical = 23

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

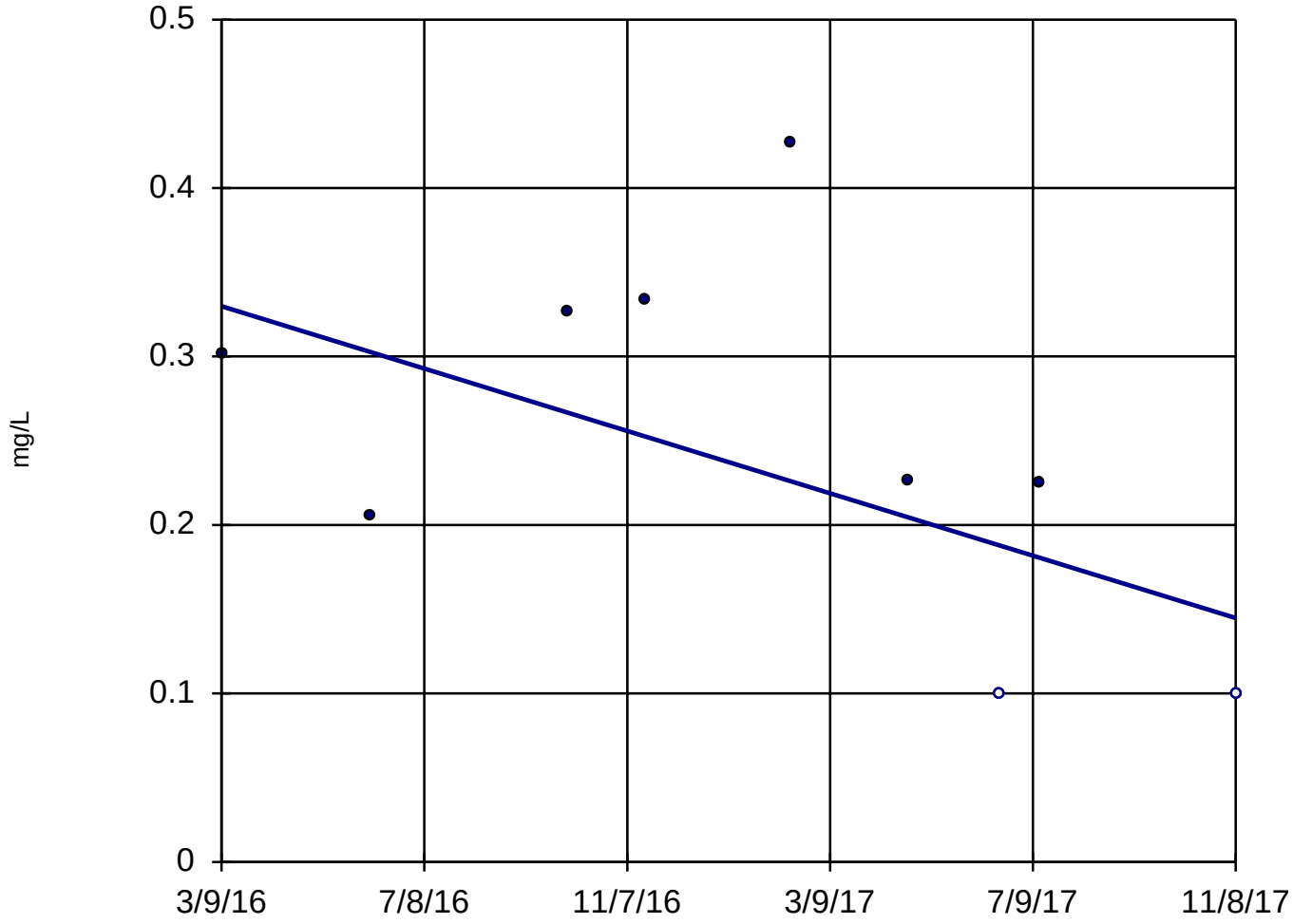
Constituent: Boron Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW2



n = 9

Slope = -0.1109 units per year.

Mann-Kendall statistic = -11
critical = -23

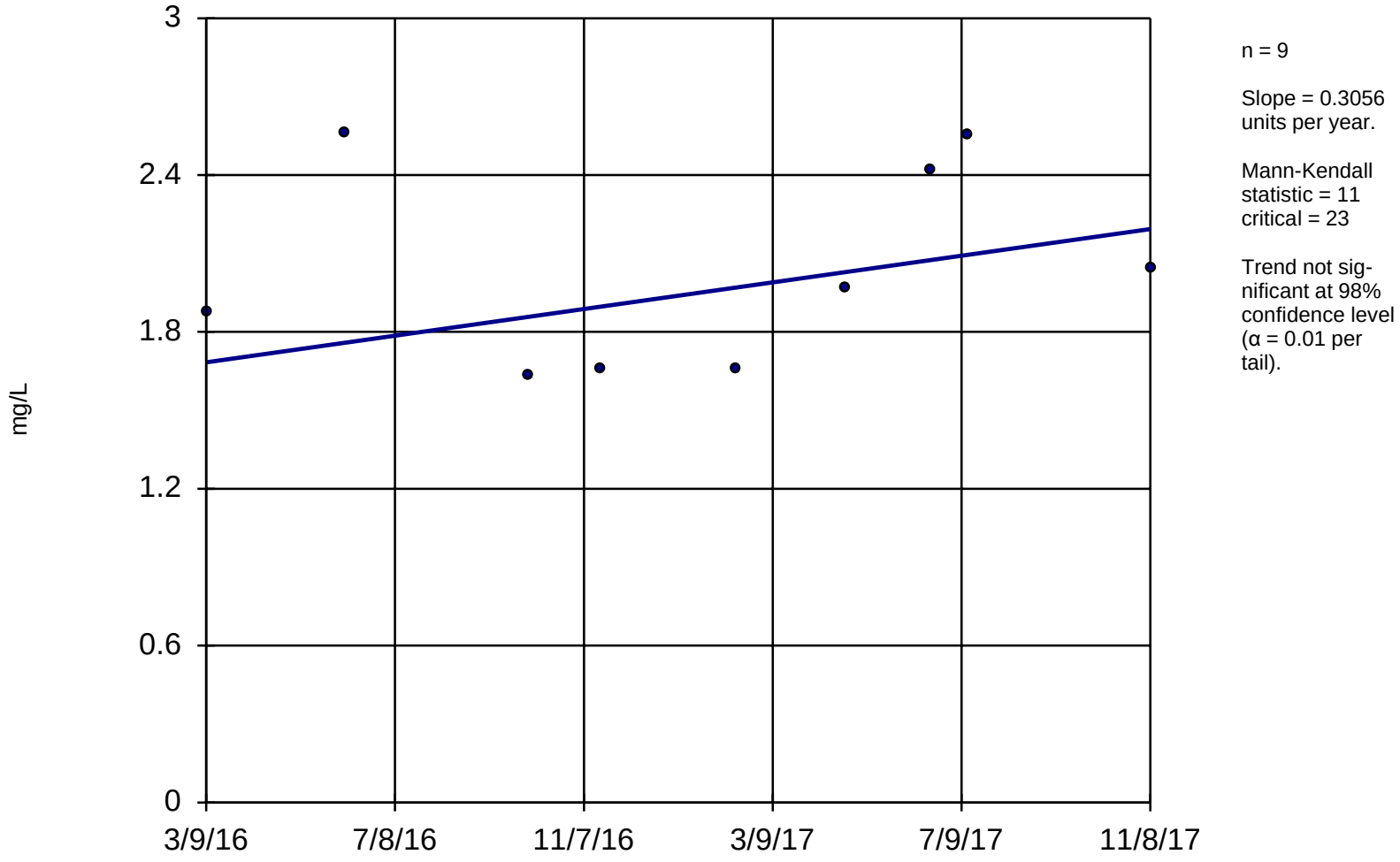
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Boron Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW3



n = 9

Slope = 0.3056 units per year.

Mann-Kendall statistic = 11
critical = 23

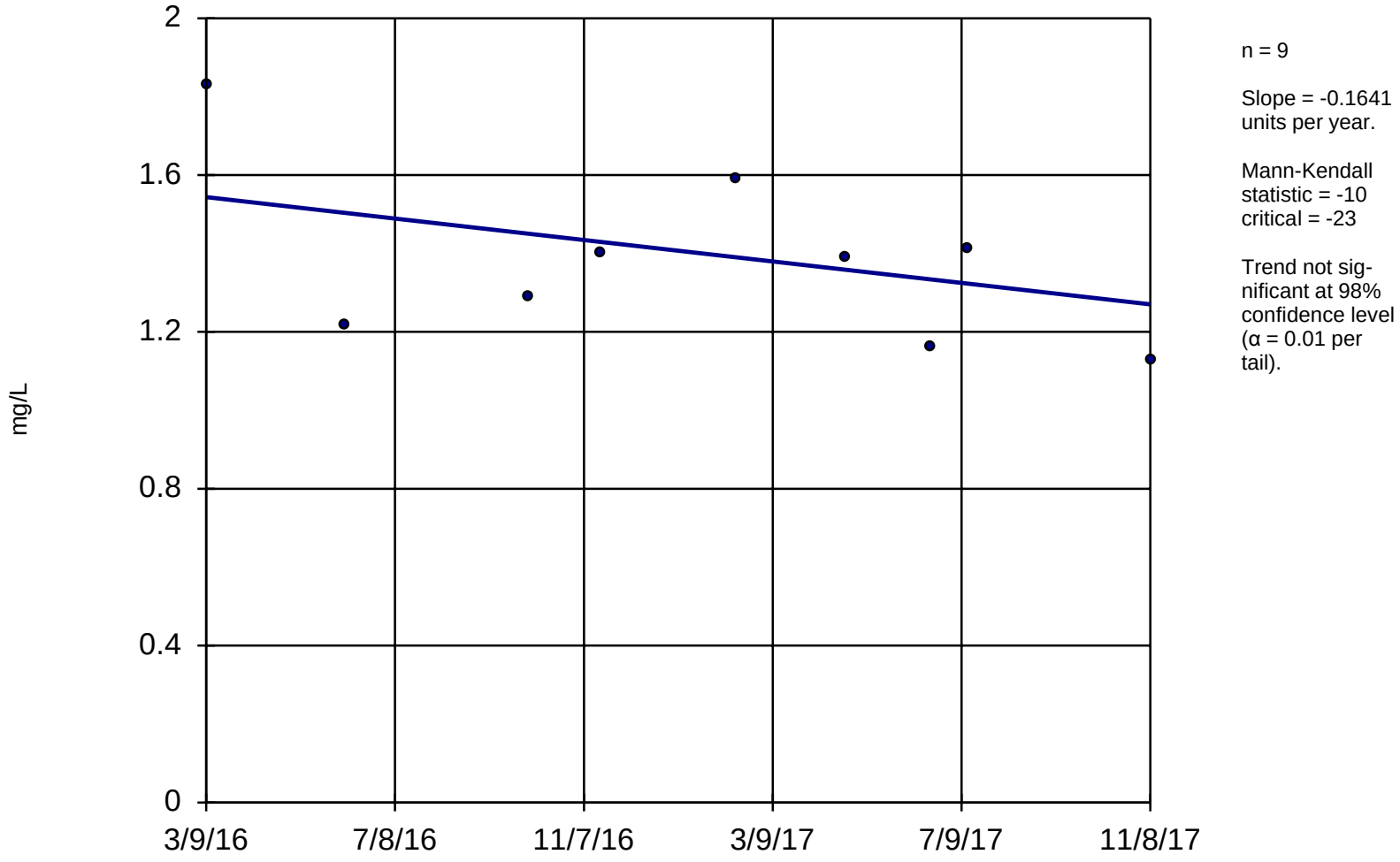
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Boron Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW4



n = 9

Slope = -0.1641 units per year.

Mann-Kendall statistic = -10
critical = -23

Trend not significant at 98% confidence level (α = 0.01 per tail).

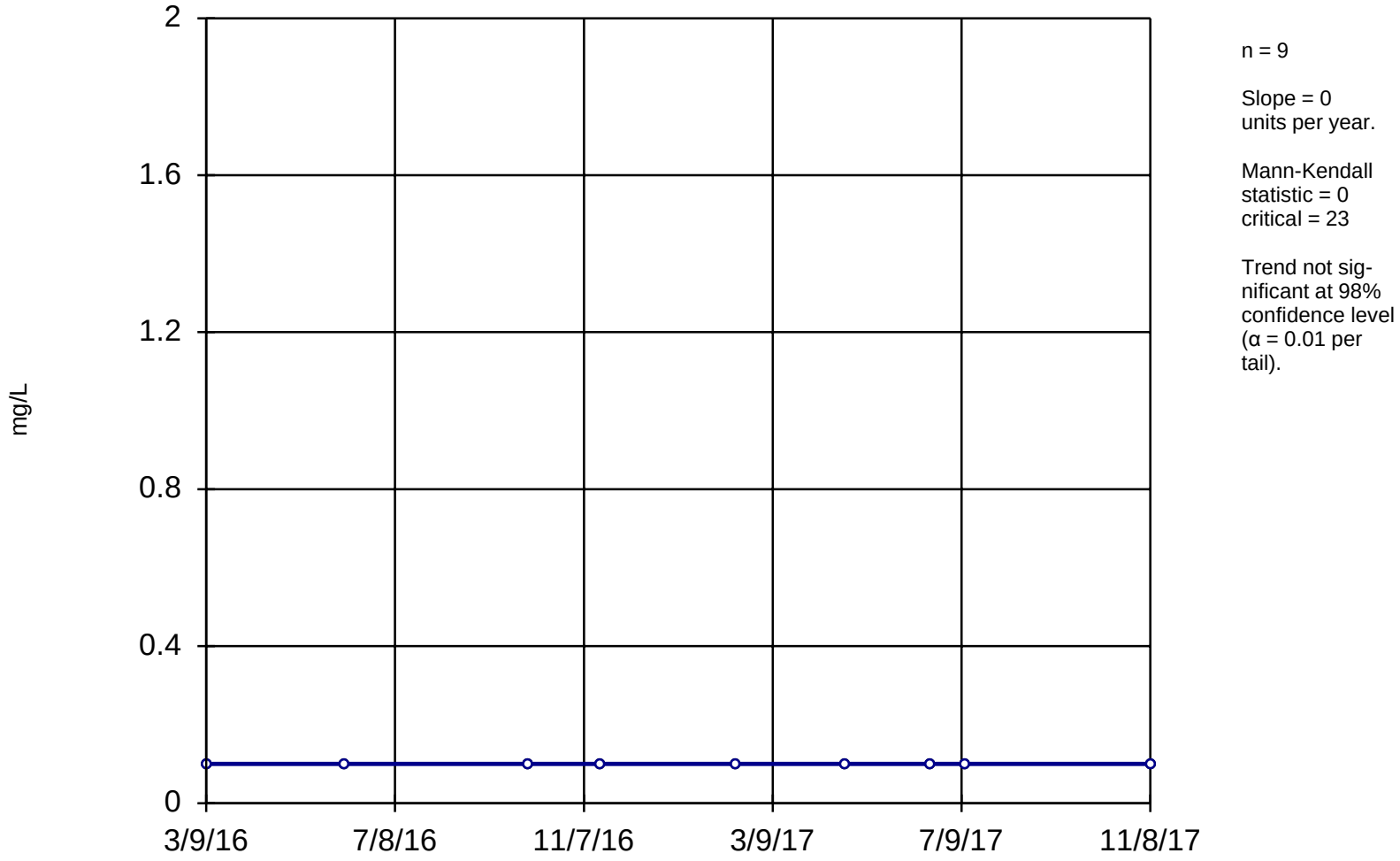
Constituent: Boron Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4NC2 (bg)



n = 9

Slope = 0
units per year.

Mann-Kendall
statistic = 0
critical = 23

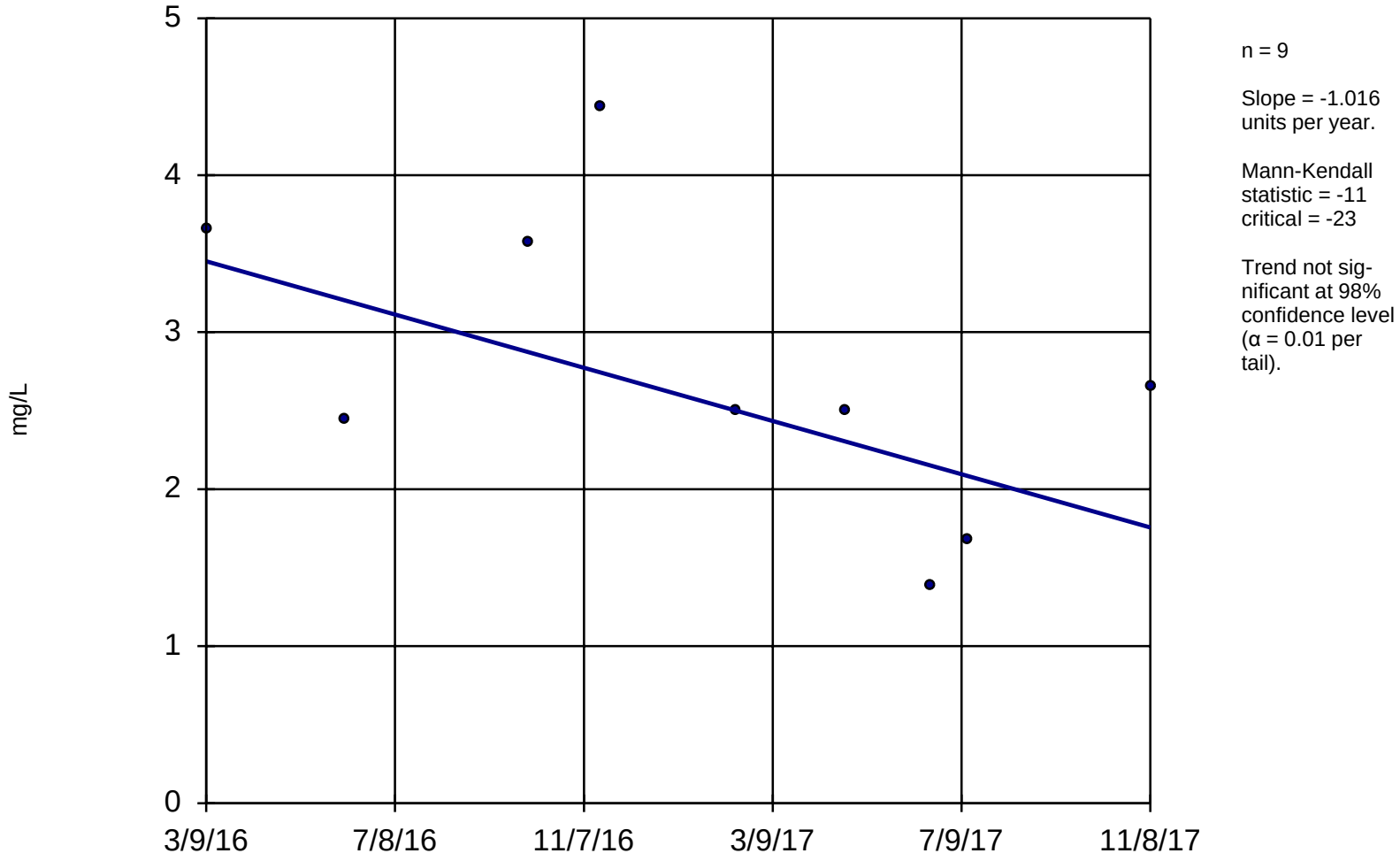
Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

Constituent: Boron Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW9



n = 9

Slope = -1.016 units per year.

Mann-Kendall statistic = -11
critical = -23

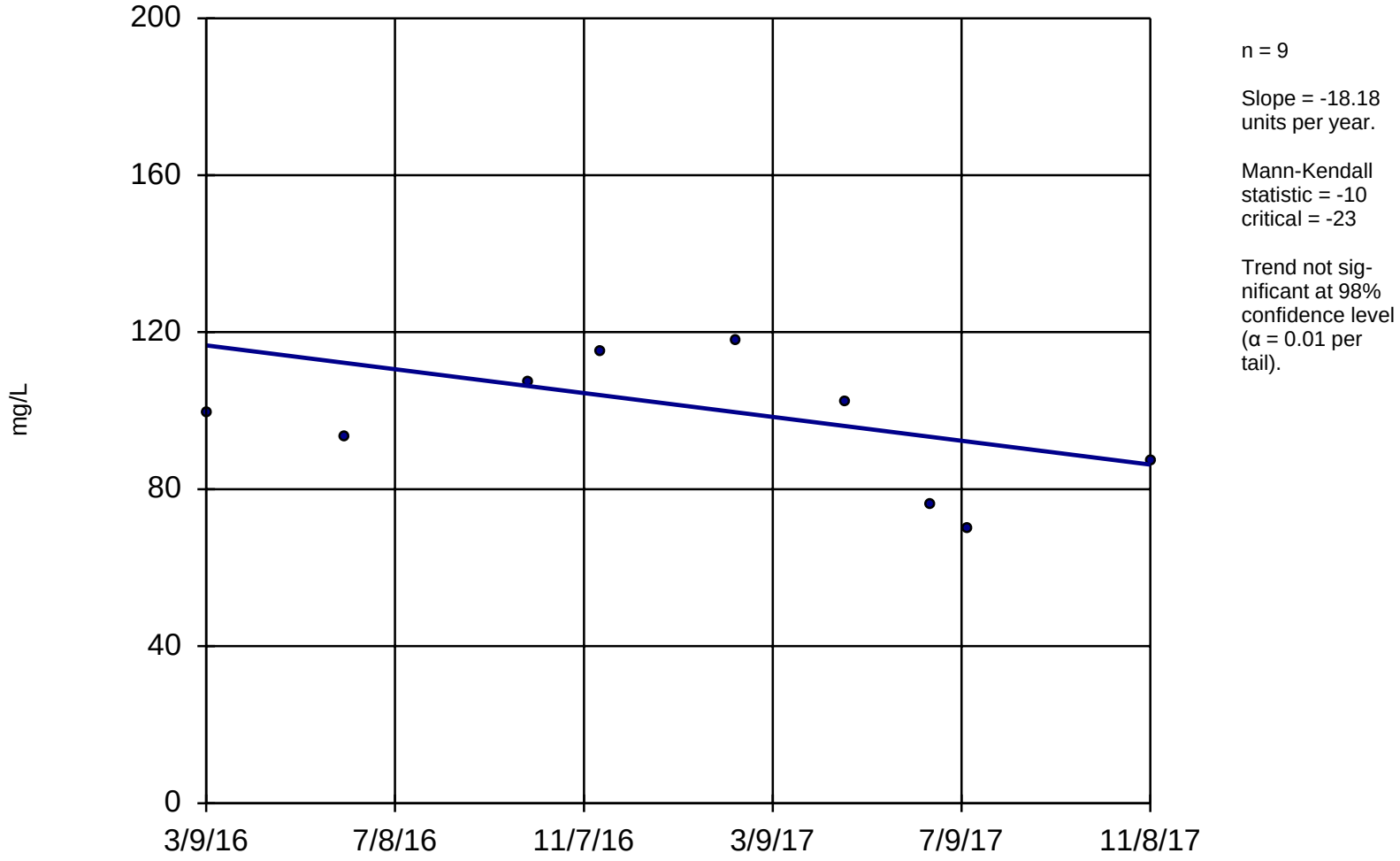
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Boron Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW11 (bg)



n = 9

Slope = -18.18 units per year.

Mann-Kendall statistic = -10
critical = -23

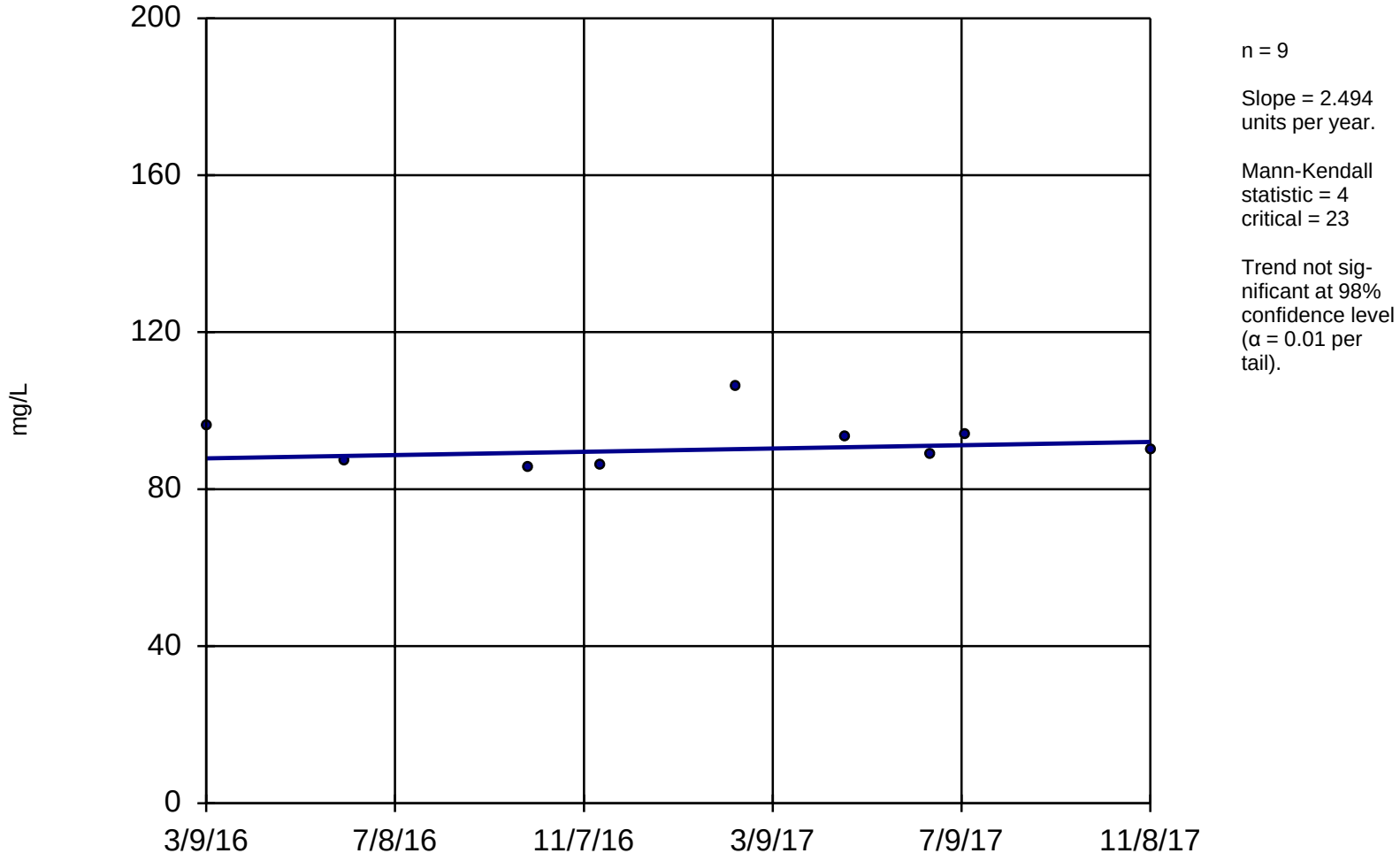
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Calcium Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW13 (bg)



n = 9

Slope = 2.494 units per year.

Mann-Kendall statistic = 4
critical = 23

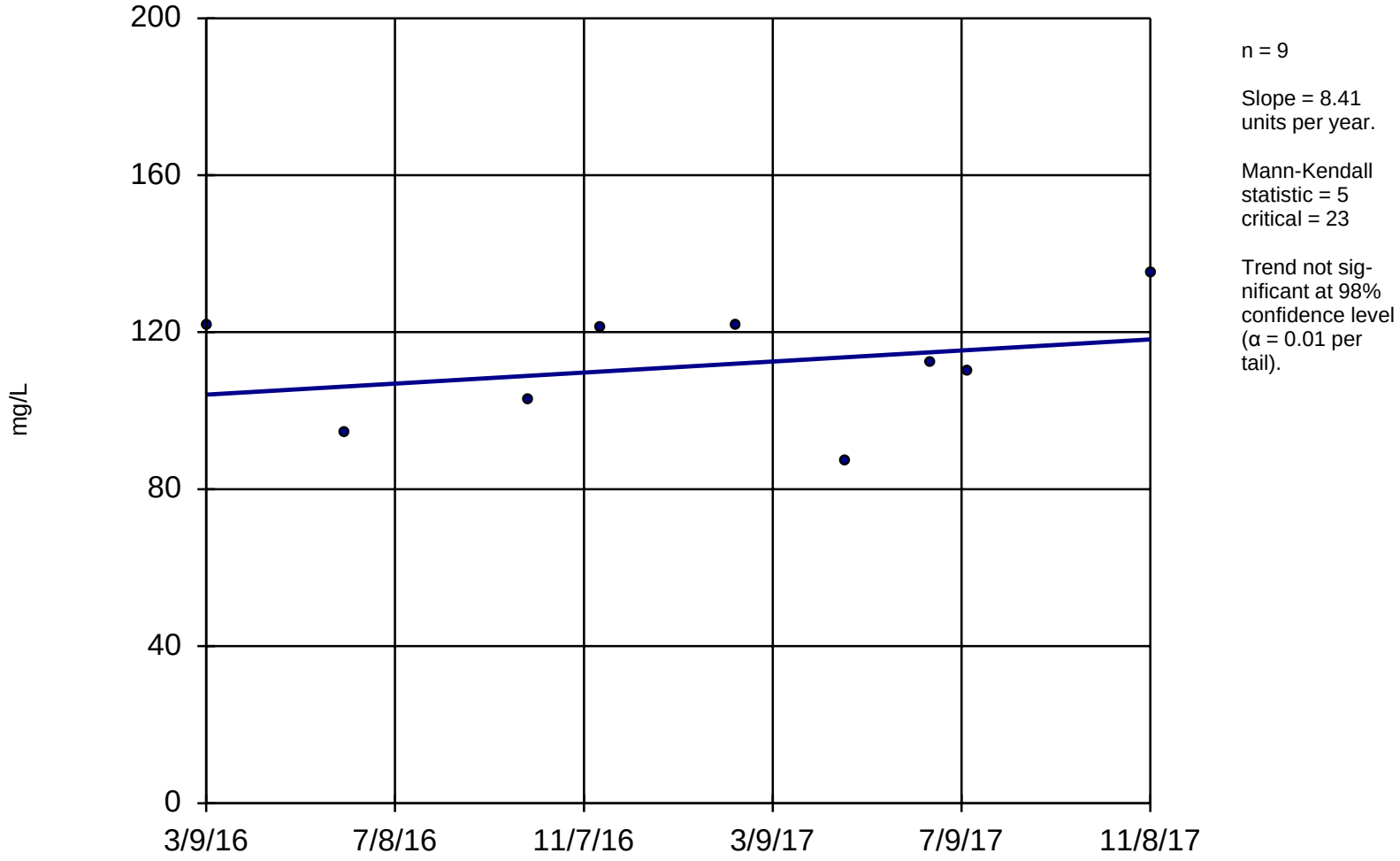
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Calcium Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW2



n = 9

Slope = 8.41 units per year.

Mann-Kendall statistic = 5
critical = 23

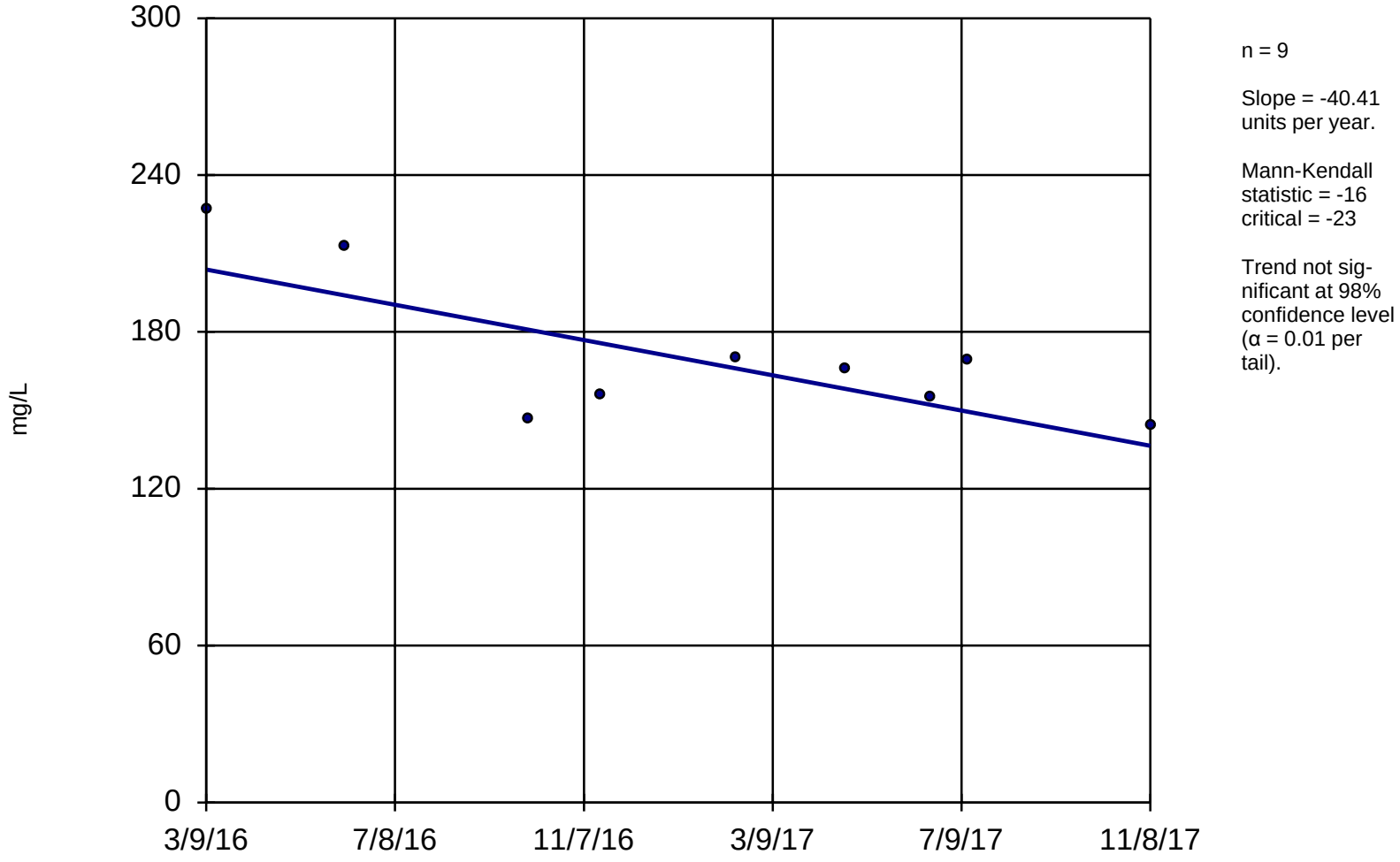
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Calcium Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW3



n = 9

Slope = -40.41 units per year.

Mann-Kendall statistic = -16
critical = -23

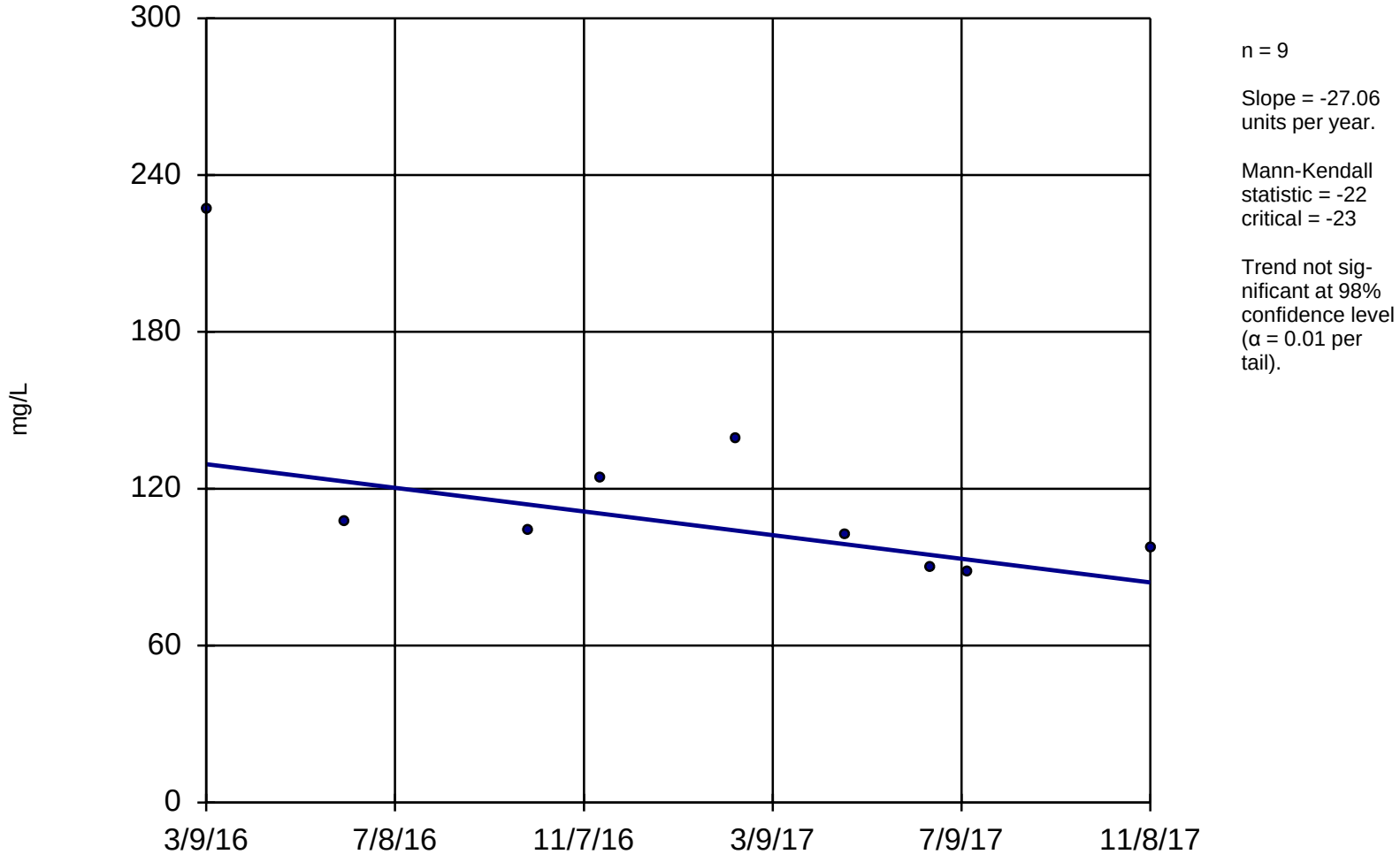
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Calcium Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW4



n = 9

Slope = -27.06 units per year.

Mann-Kendall statistic = -22
critical = -23

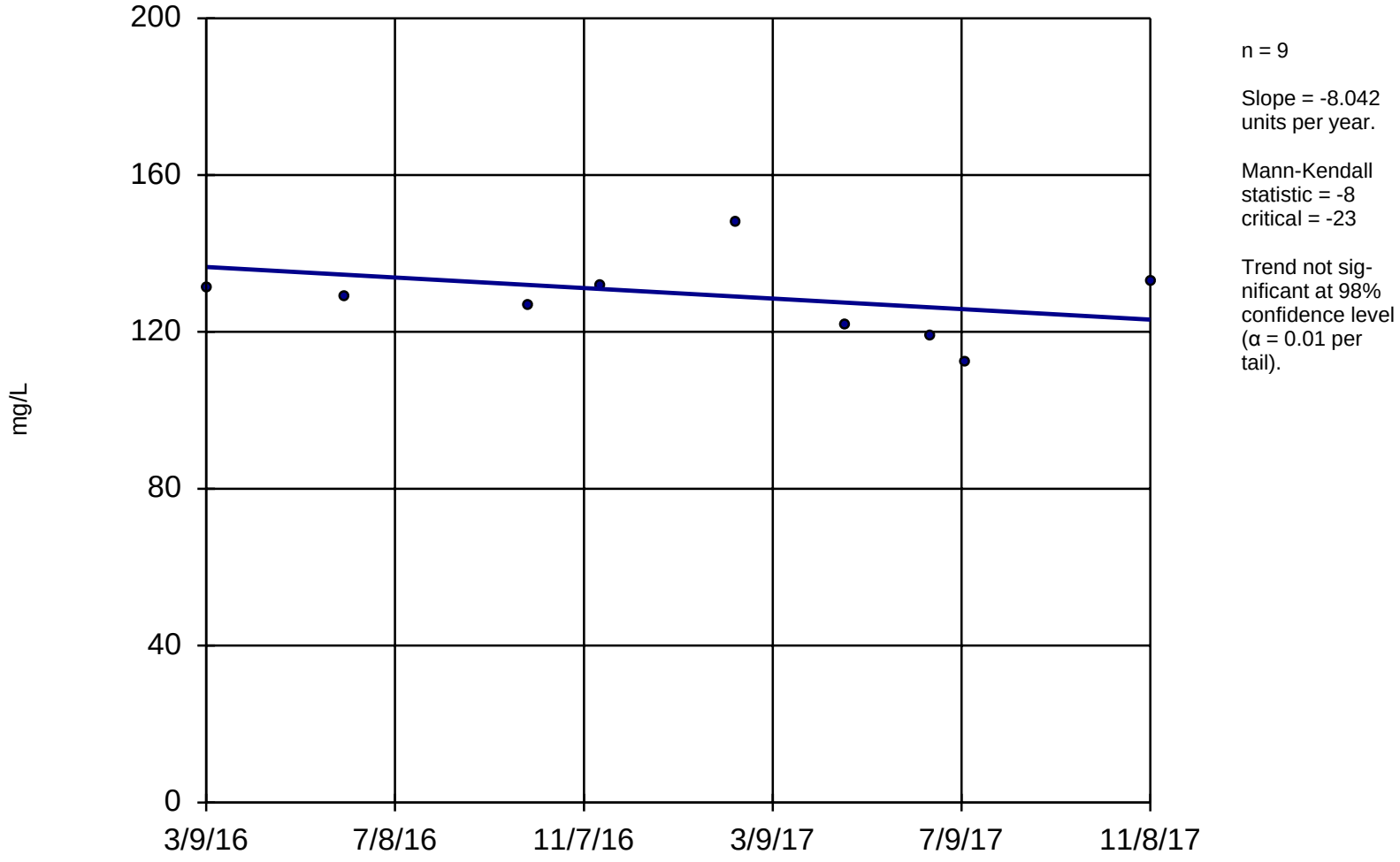
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Calcium Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW4NC2 (bg)



n = 9

Slope = -8.042 units per year.

Mann-Kendall statistic = -8
critical = -23

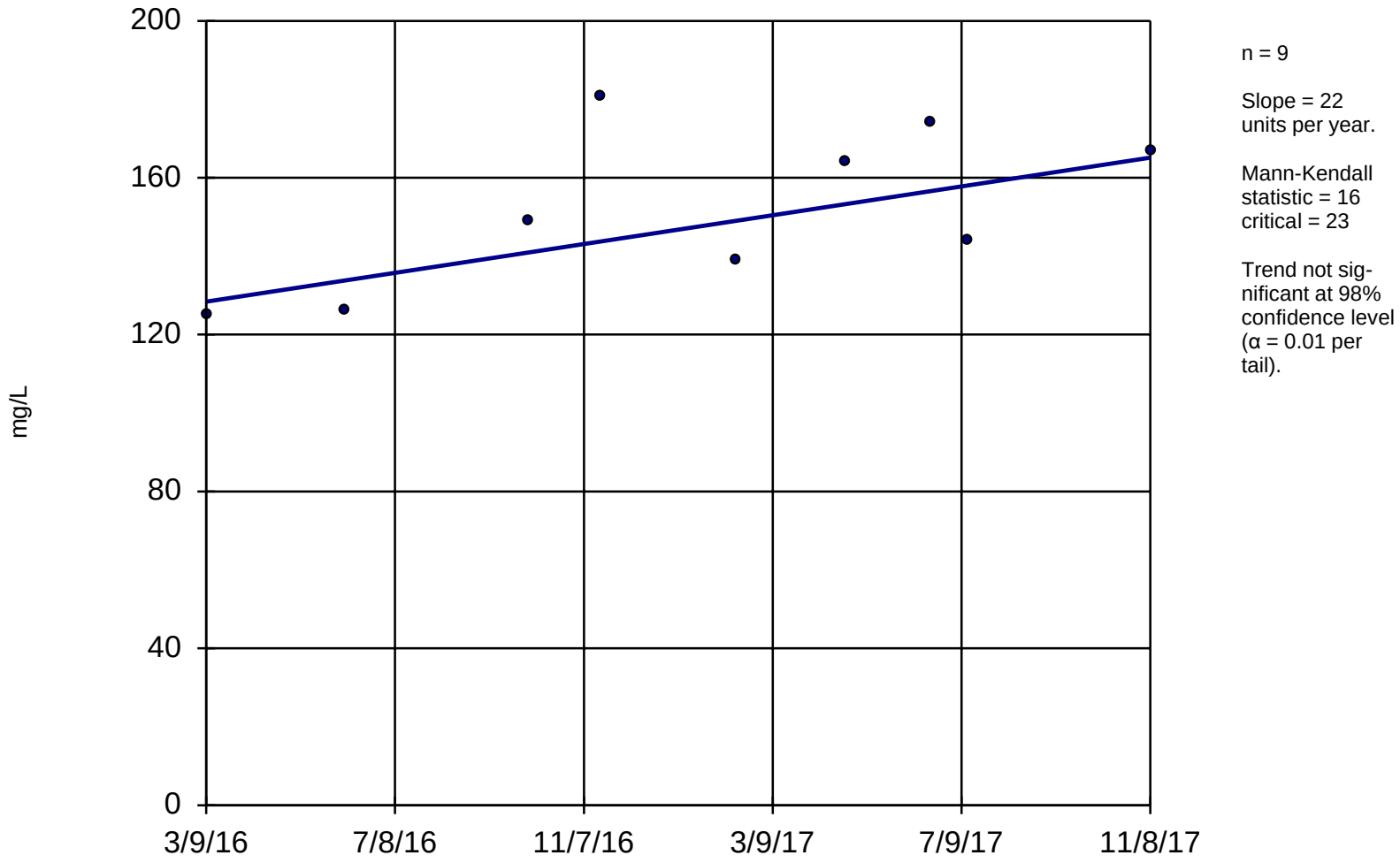
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Calcium Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW9



n = 9

Slope = 22 units per year.

Mann-Kendall statistic = 16 critical = 23

Trend not significant at 98% confidence level (α = 0.01 per tail).

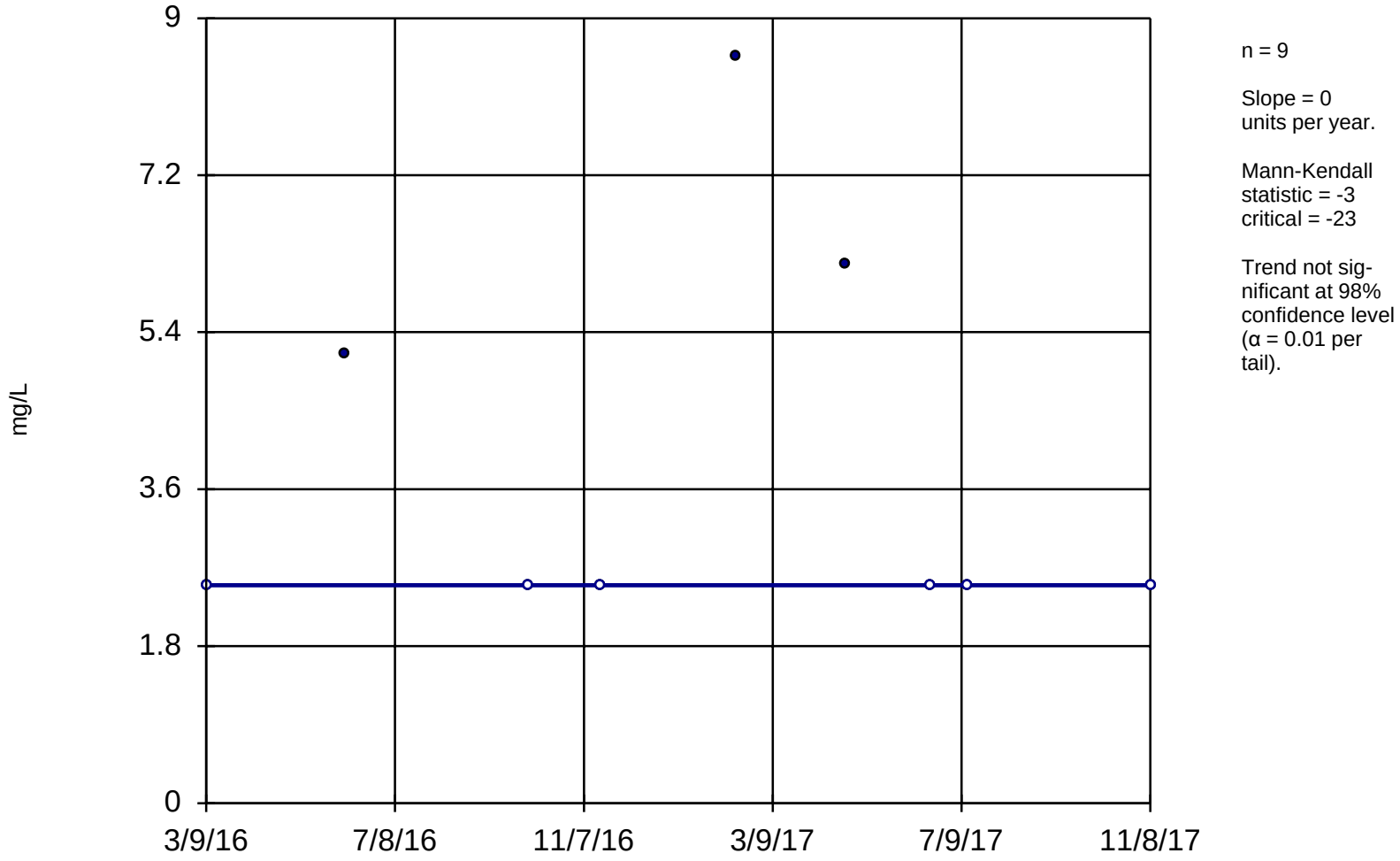
Constituent: Calcium Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW11 (bg)



n = 9

Slope = 0
units per year.

Mann-Kendall
statistic = -3
critical = -23

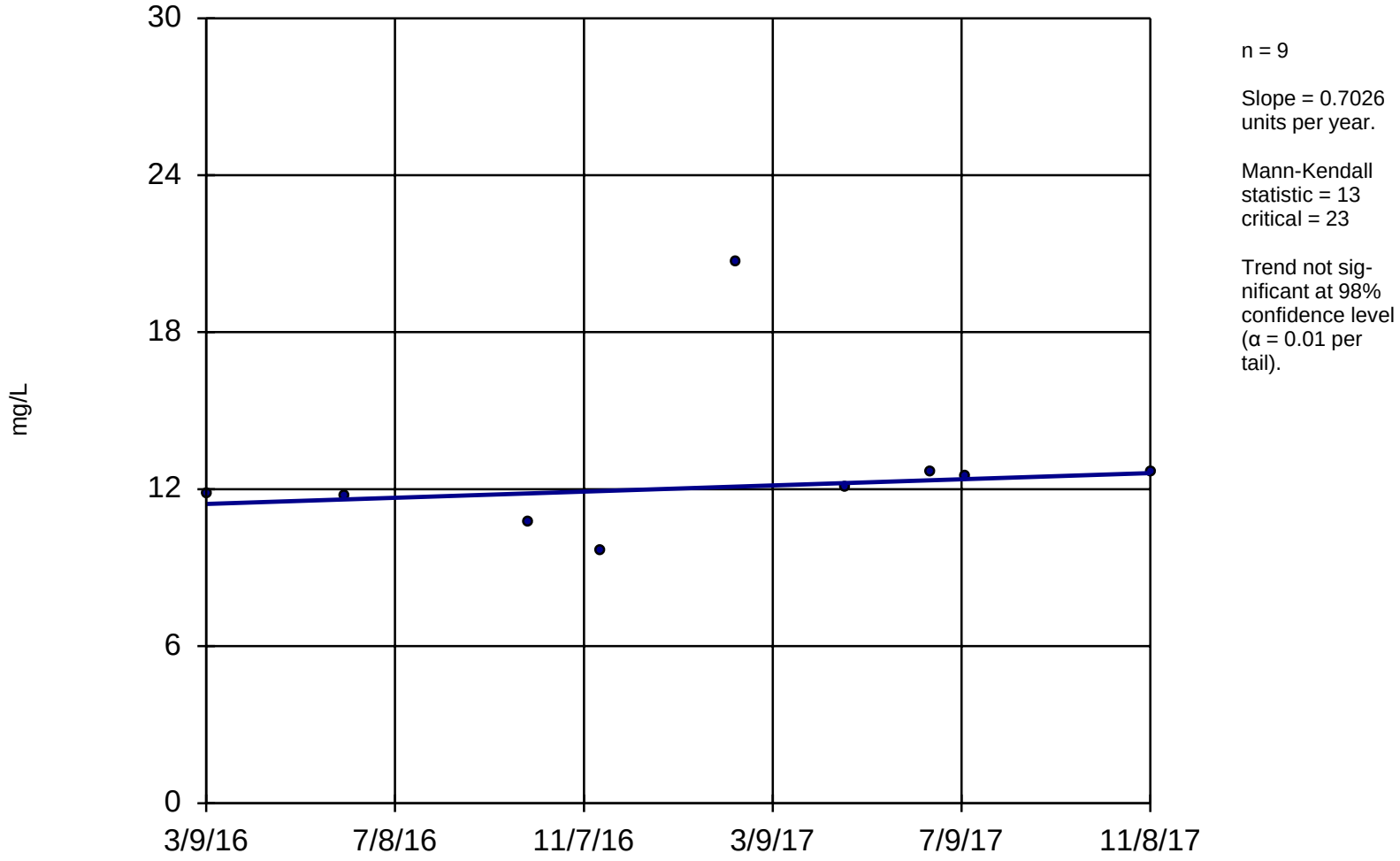
Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

Constituent: Chloride Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW13 (bg)



n = 9

Slope = 0.7026 units per year.

Mann-Kendall statistic = 13
critical = 23

Trend not significant at 98% confidence level (α = 0.01 per tail).

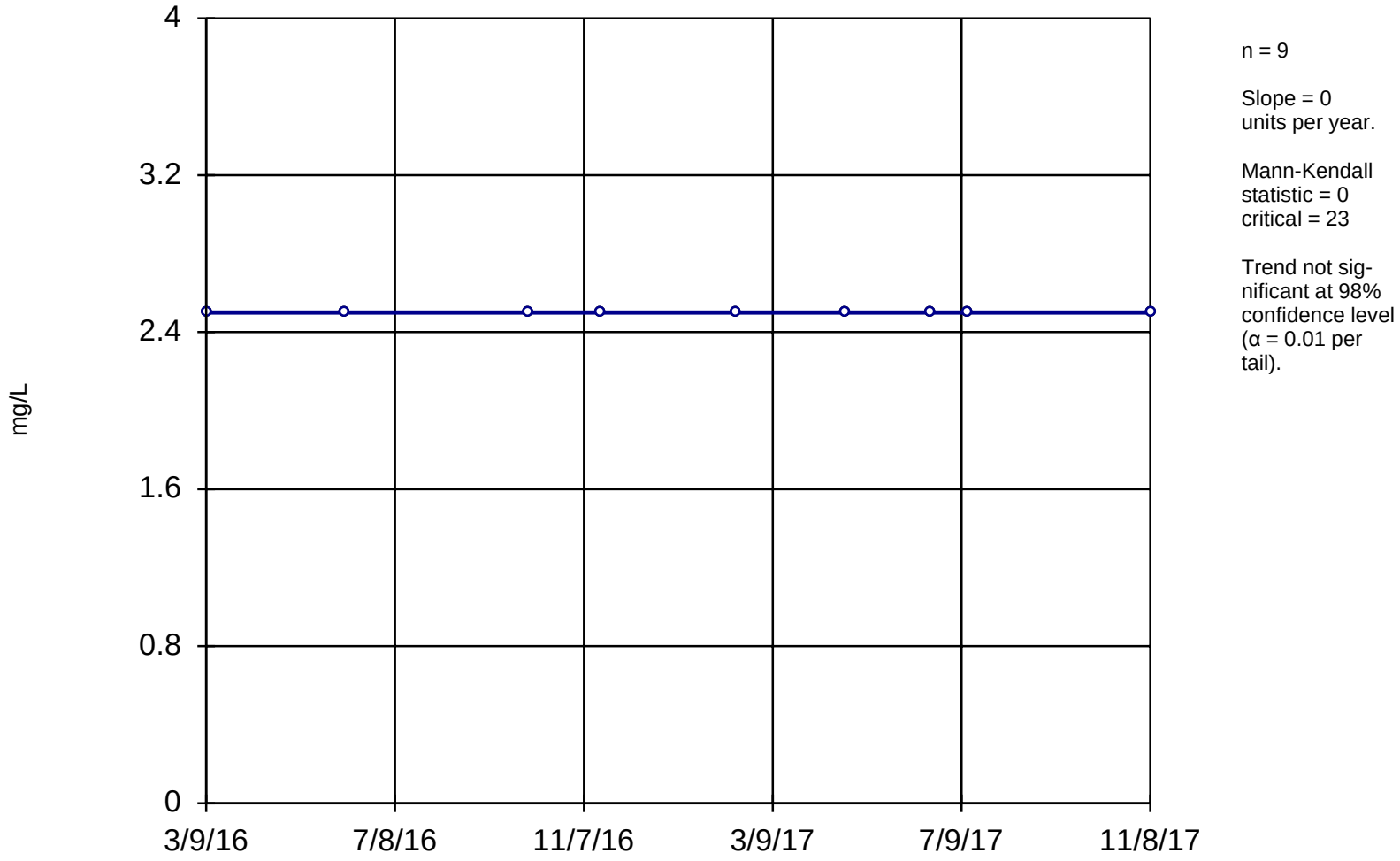
Constituent: Chloride Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW2



n = 9

Slope = 0
units per year.

Mann-Kendall
statistic = 0
critical = 23

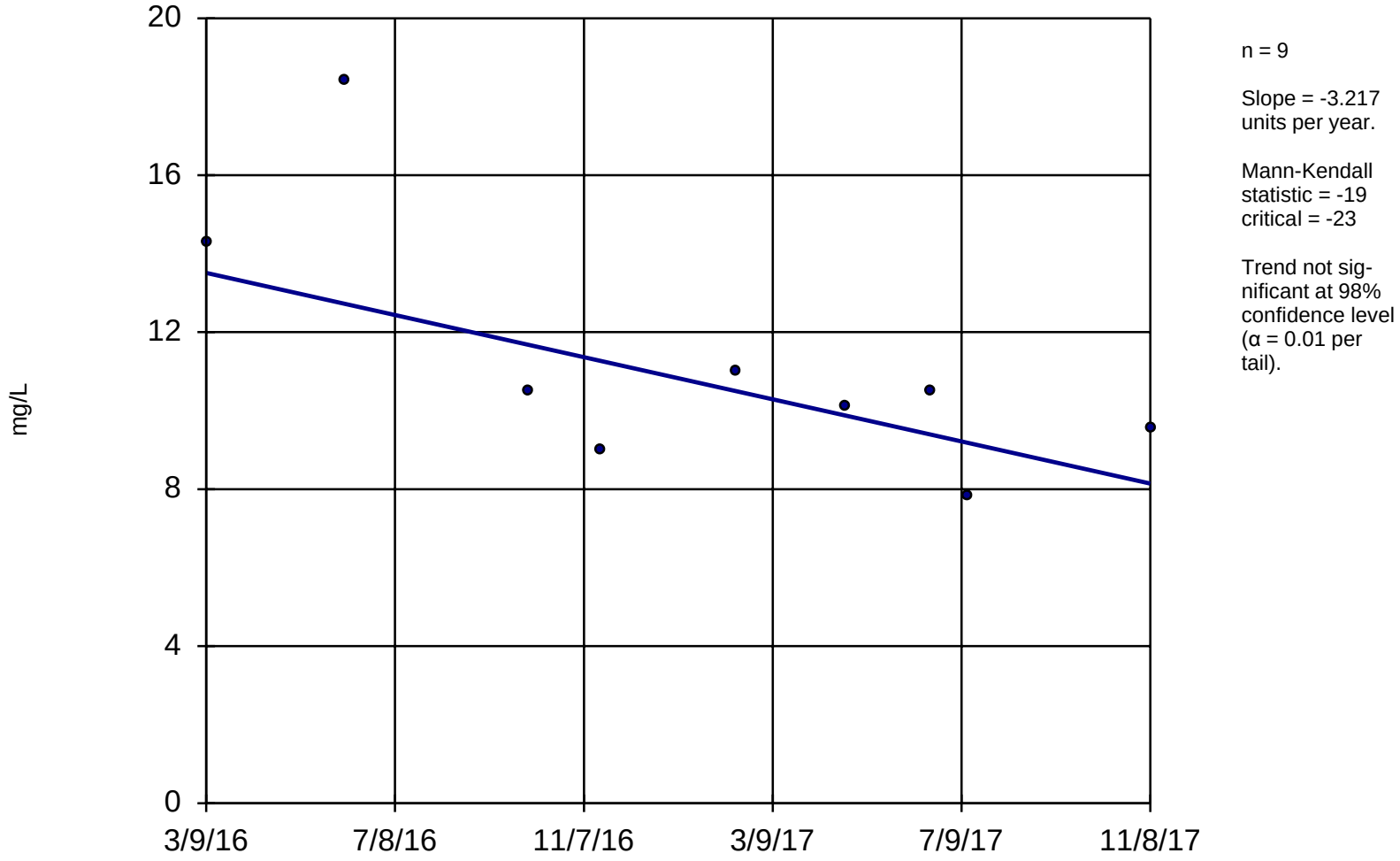
Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

Constituent: Chloride Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW3



n = 9

Slope = -3.217 units per year.

Mann-Kendall statistic = -19
critical = -23

Trend not significant at 98% confidence level (α = 0.01 per tail).

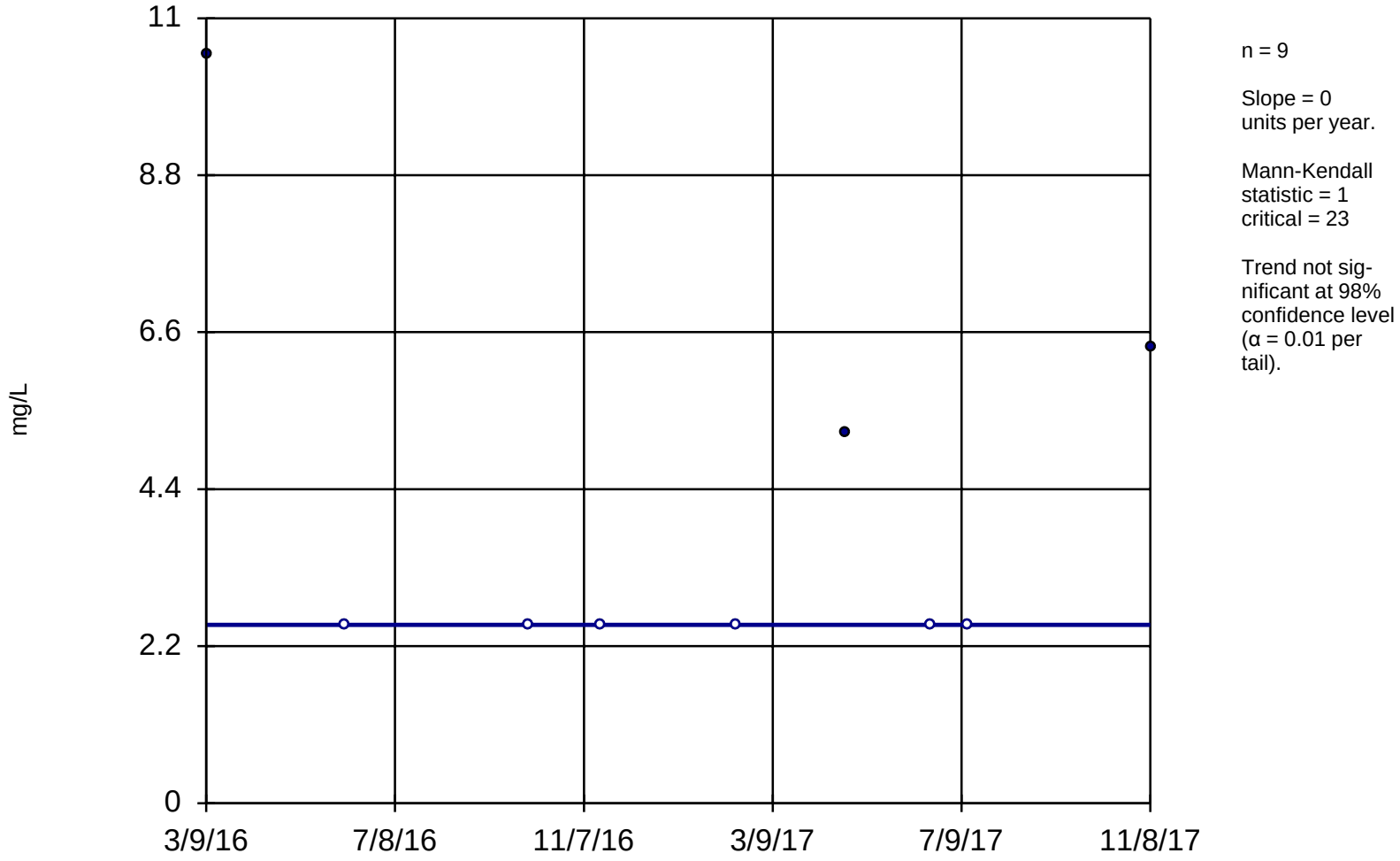
Constituent: Chloride Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4



n = 9

Slope = 0
units per year.

Mann-Kendall
statistic = 1
critical = 23

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

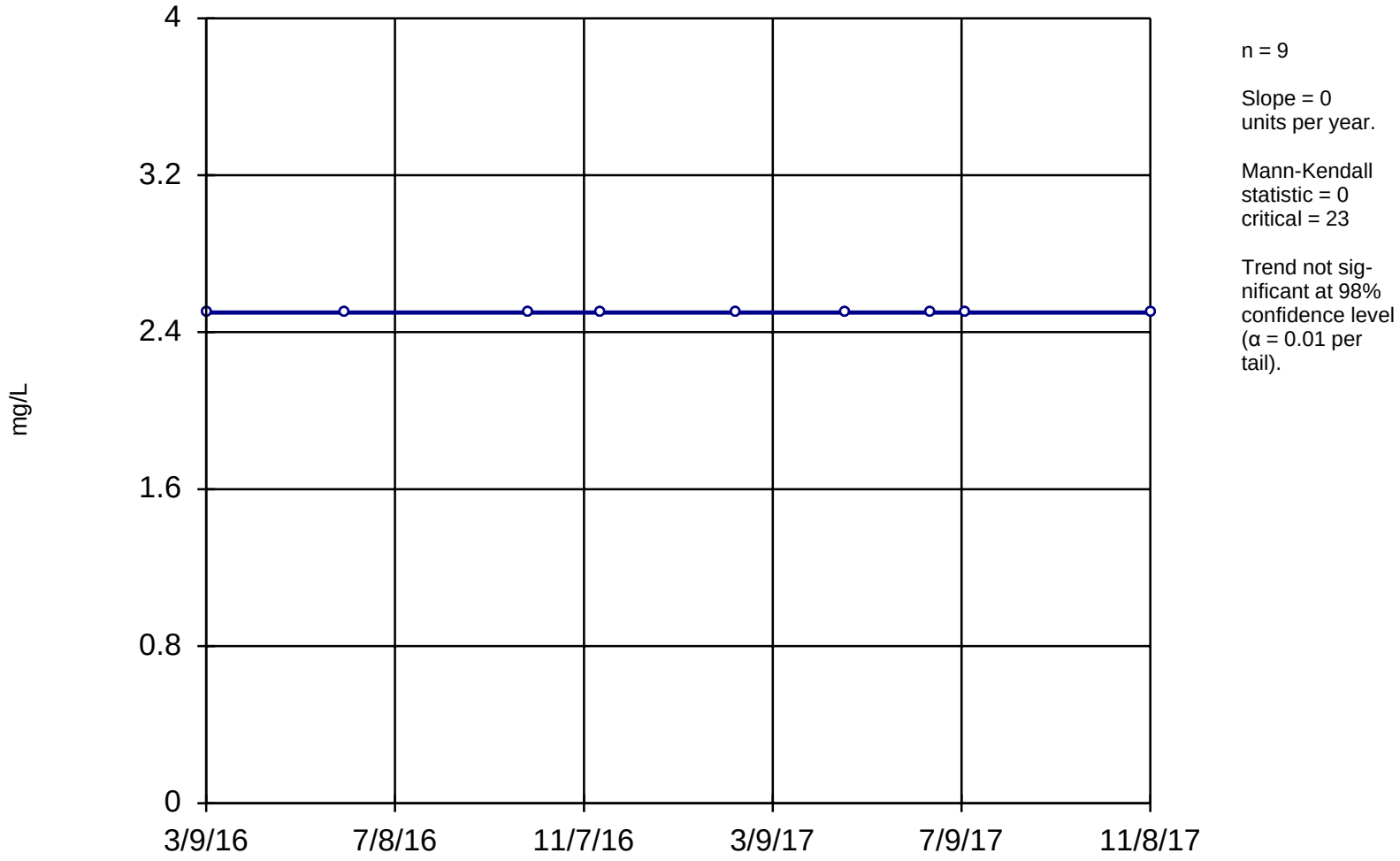
Constituent: Chloride Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4NC2 (bg)



n = 9

Slope = 0
units per year.

Mann-Kendall
statistic = 0
critical = 23

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

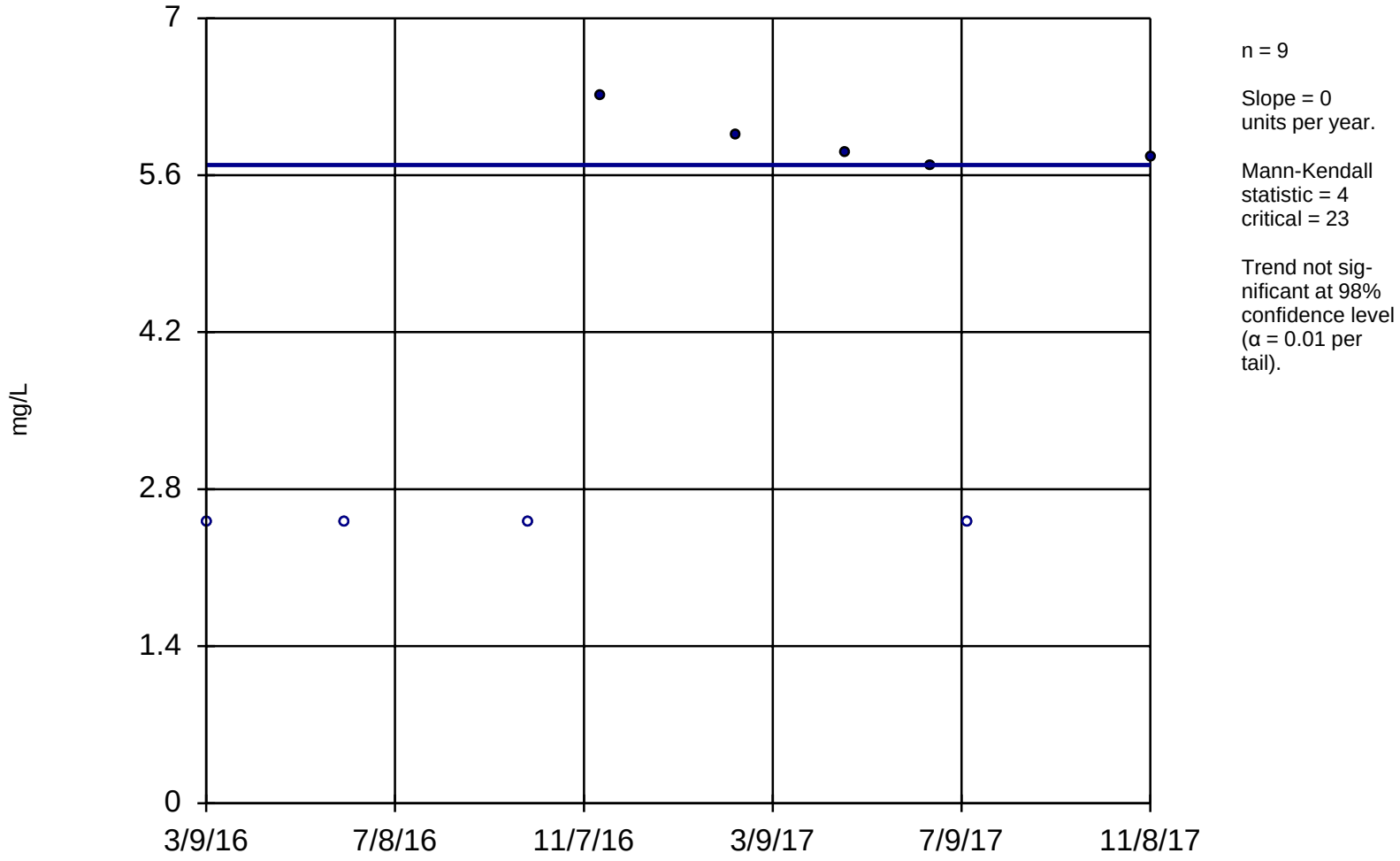
Constituent: Chloride Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW9



n = 9

Slope = 0
units per year.

Mann-Kendall
statistic = 4
critical = 23

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

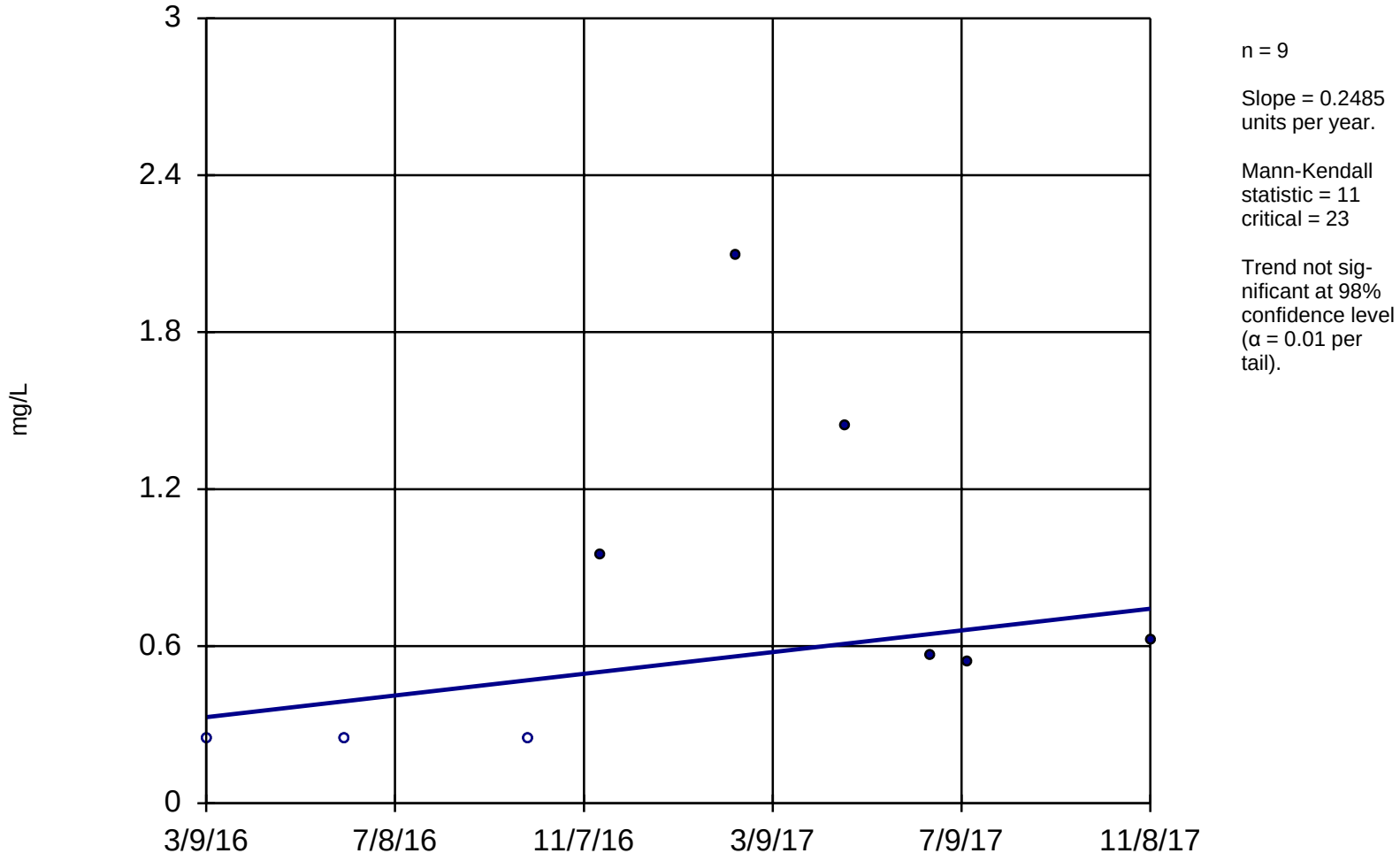
Constituent: Chloride Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW11 (bg)



n = 9

Slope = 0.2485 units per year.

Mann-Kendall statistic = 11
critical = 23

Trend not significant at 98% confidence level (α = 0.01 per tail).

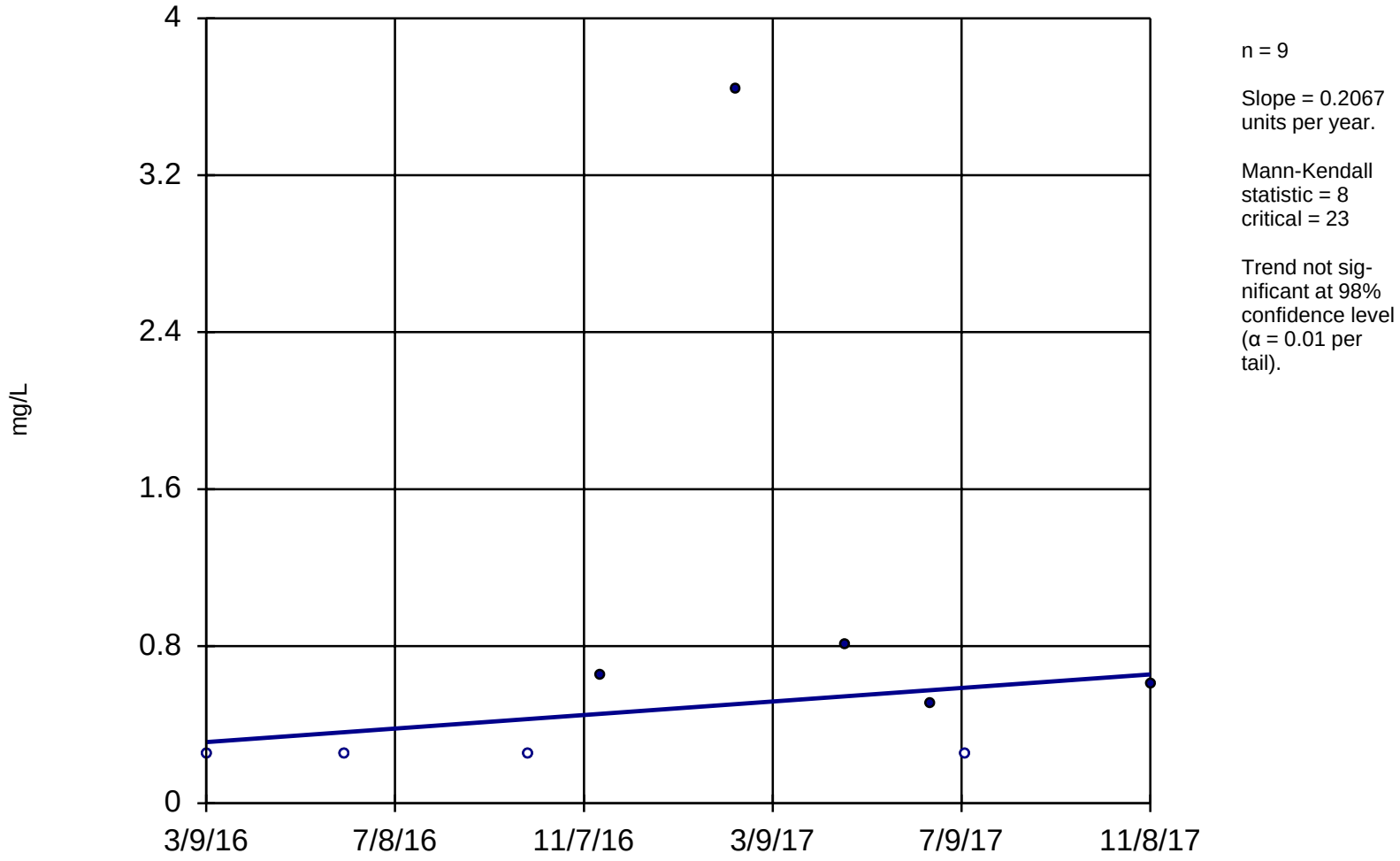
Constituent: Fluoride Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW13 (bg)



n = 9

Slope = 0.2067 units per year.

Mann-Kendall statistic = 8
critical = 23

Trend not significant at 98% confidence level (α = 0.01 per tail).

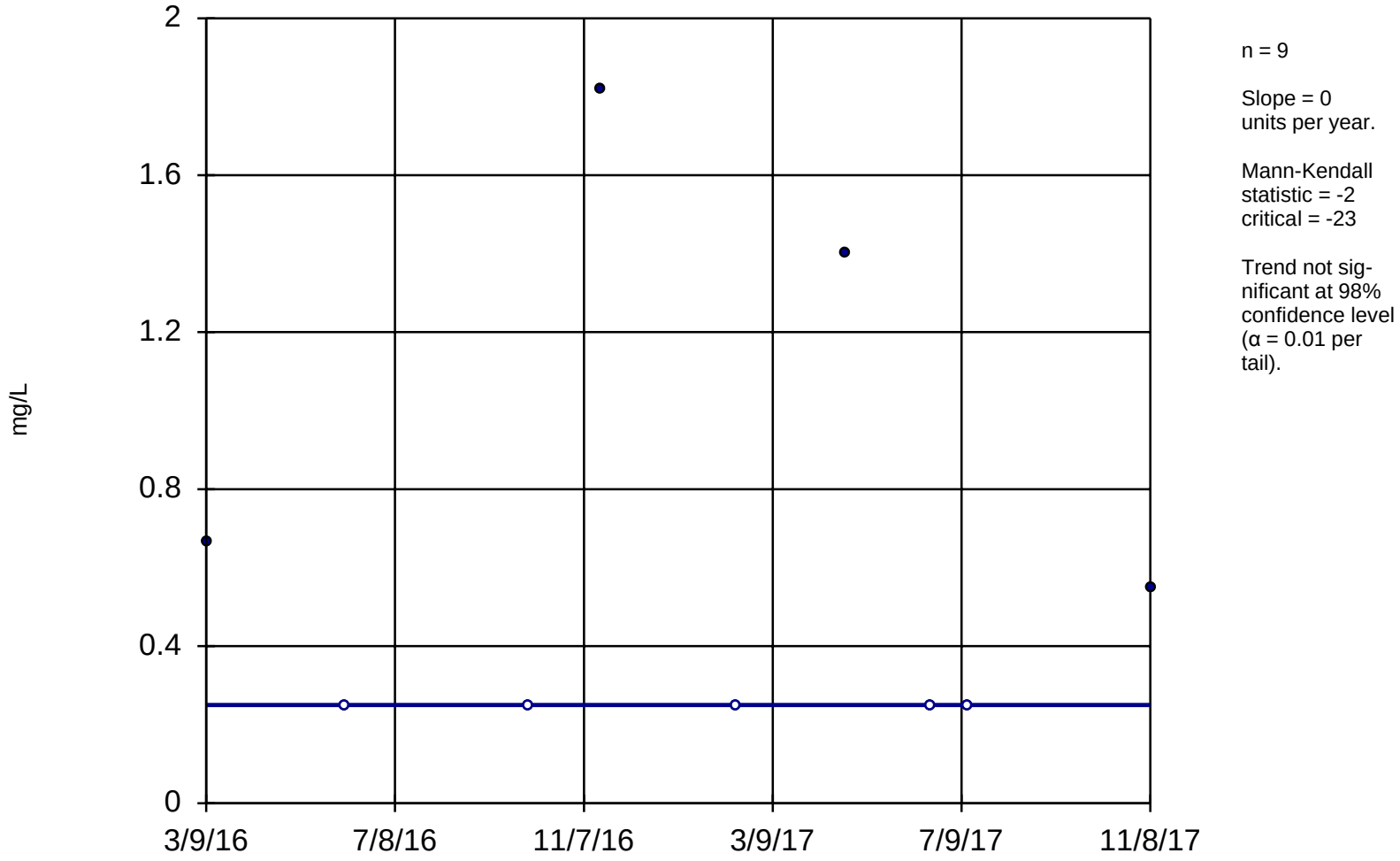
Constituent: Fluoride Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW2



n = 9

Slope = 0
units per year.

Mann-Kendall
statistic = -2
critical = -23

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

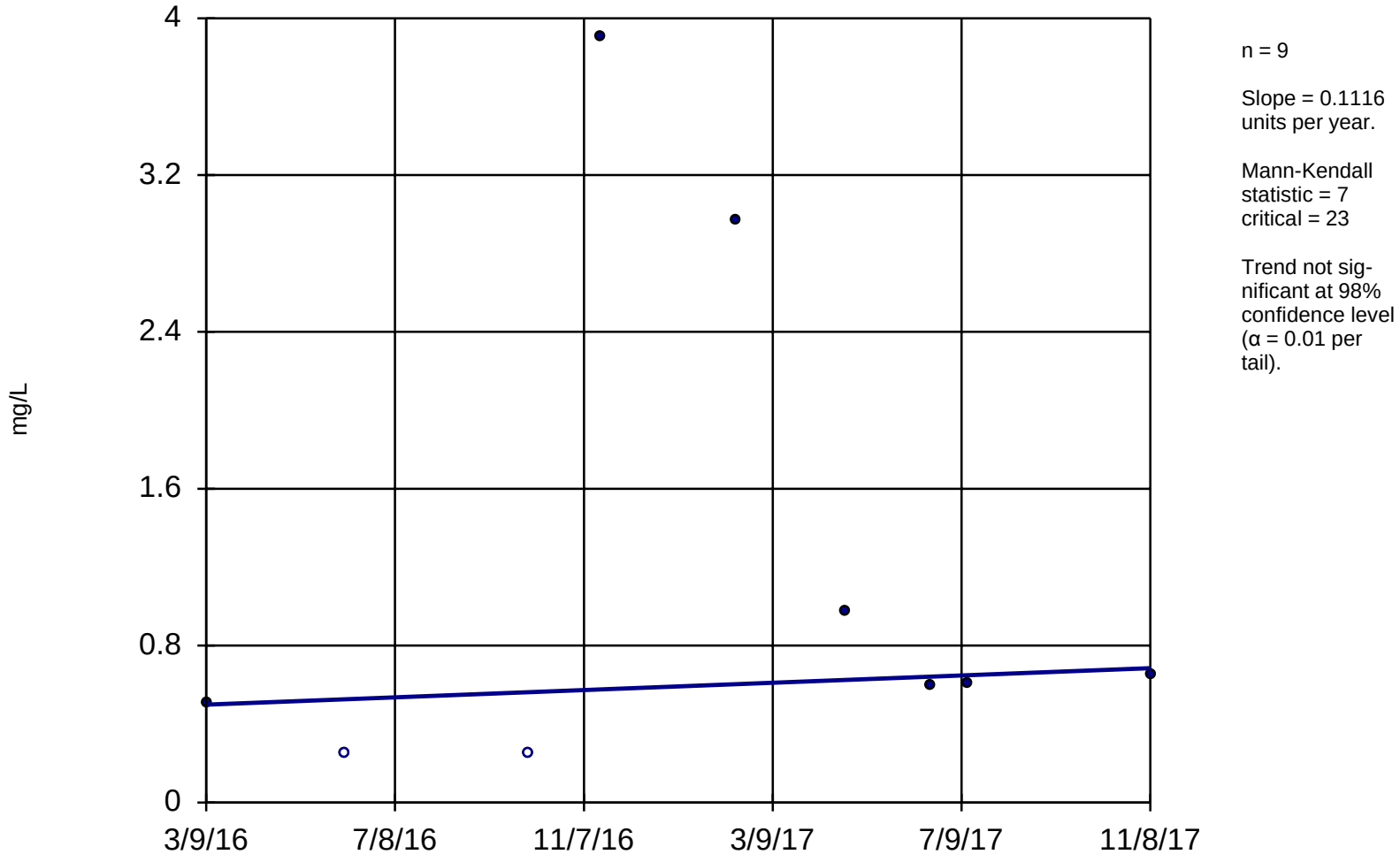
Constituent: Fluoride Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW3



n = 9

Slope = 0.1116 units per year.

Mann-Kendall statistic = 7
critical = 23

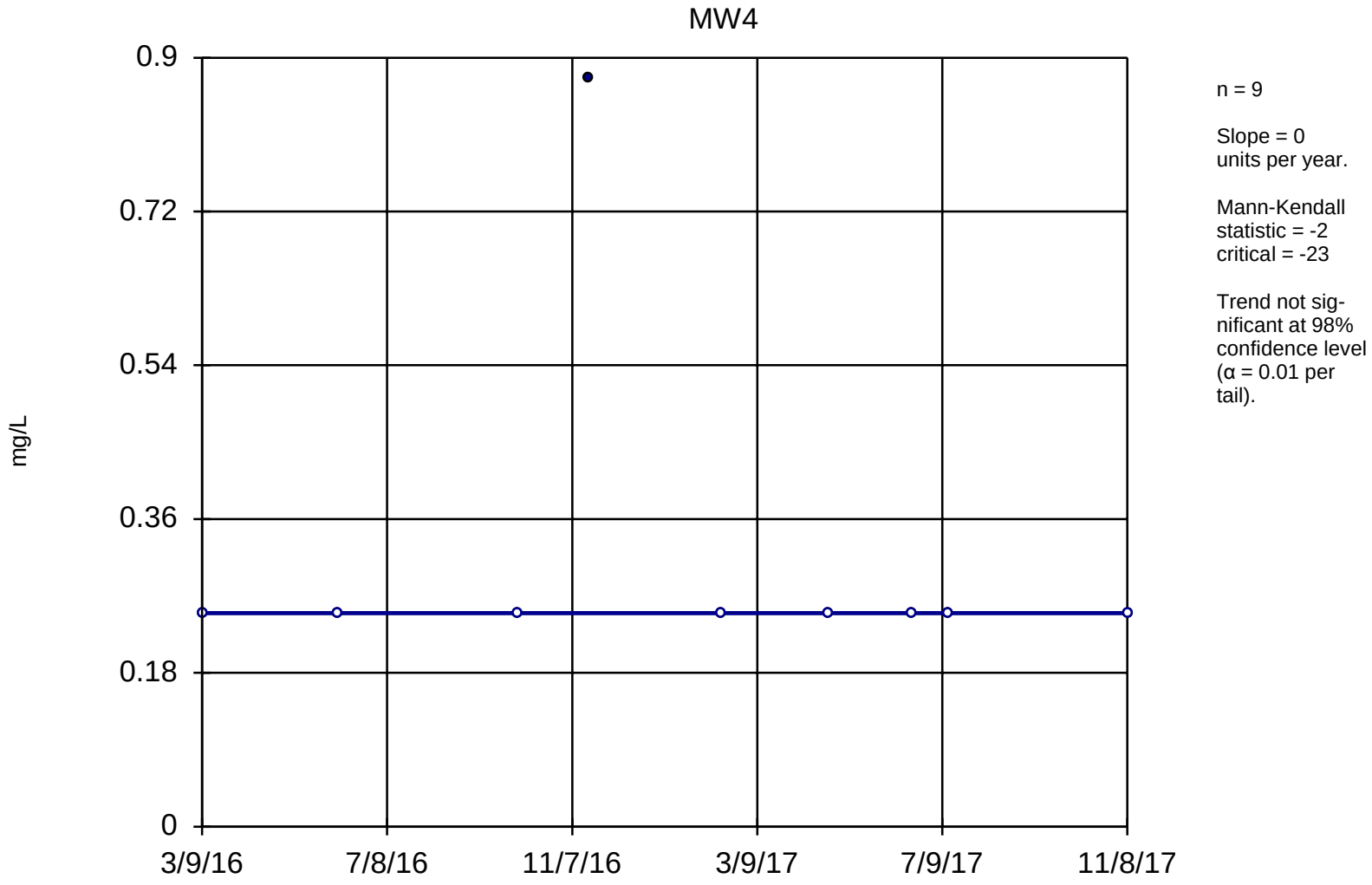
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Fluoride Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

Sen's Slope Estimator



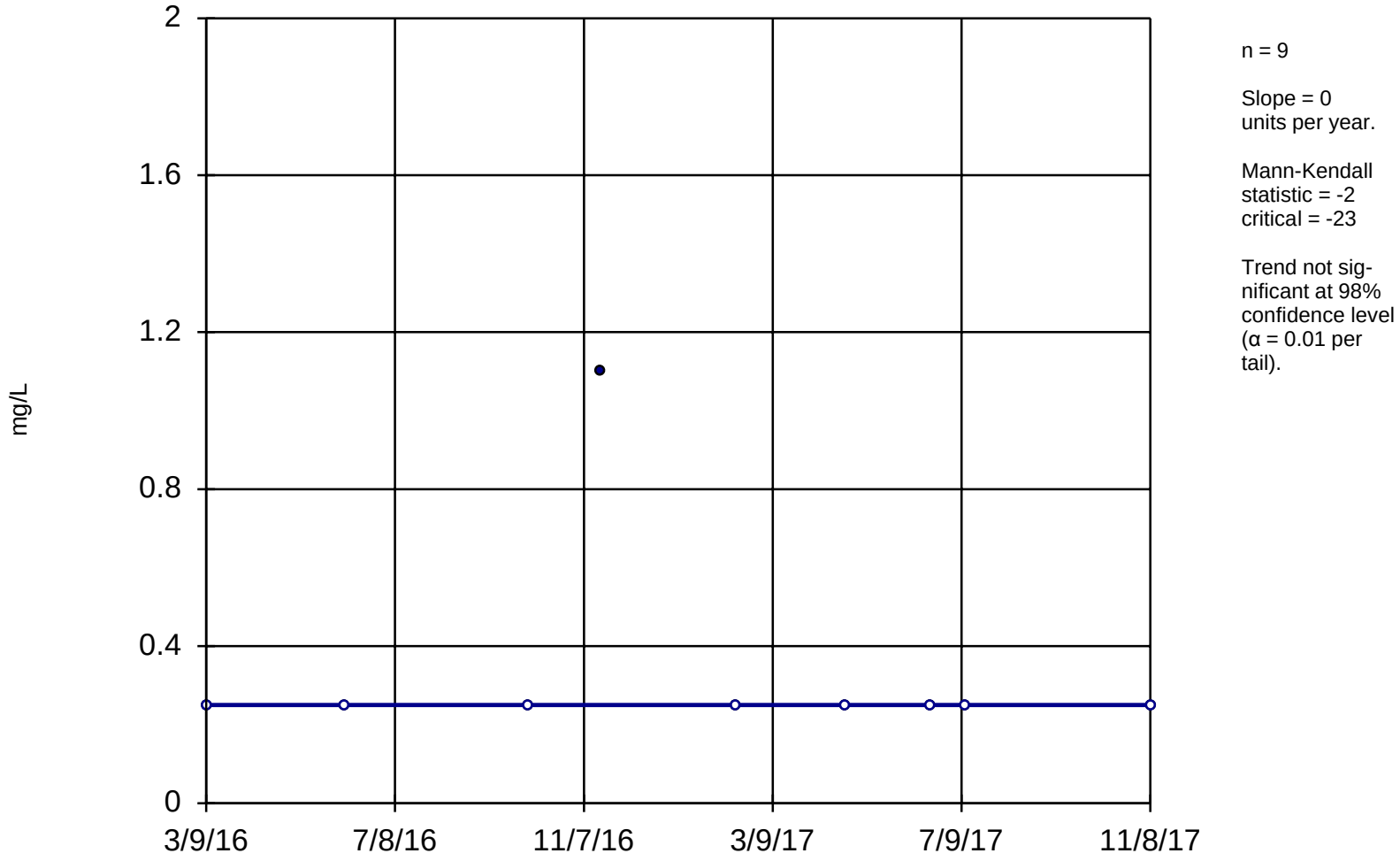
Constituent: Fluoride Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4NC2 (bg)



n = 9

Slope = 0
units per year.

Mann-Kendall
statistic = -2
critical = -23

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

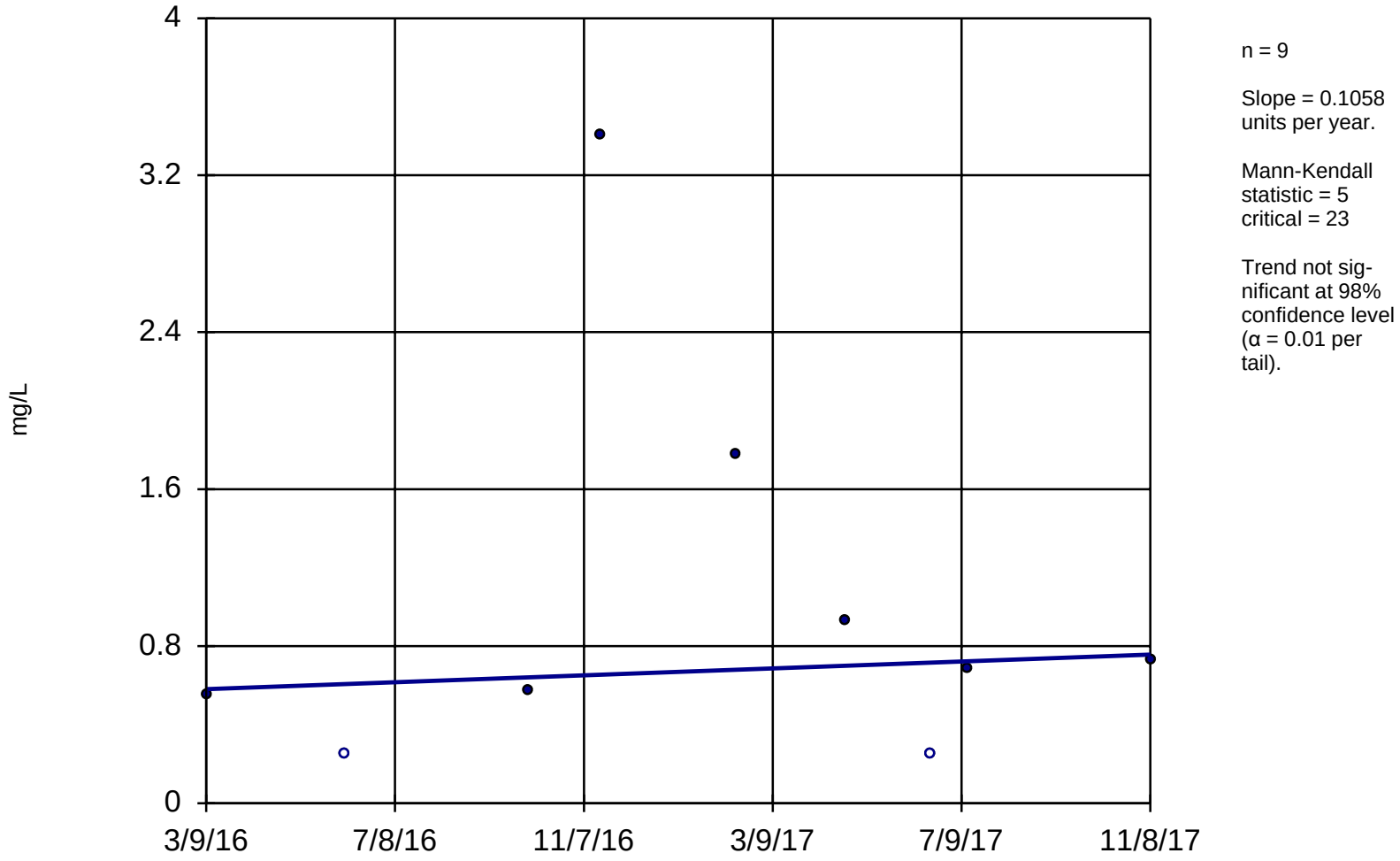
Constituent: Fluoride Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW9



n = 9

Slope = 0.1058 units per year.

Mann-Kendall statistic = 5
critical = 23

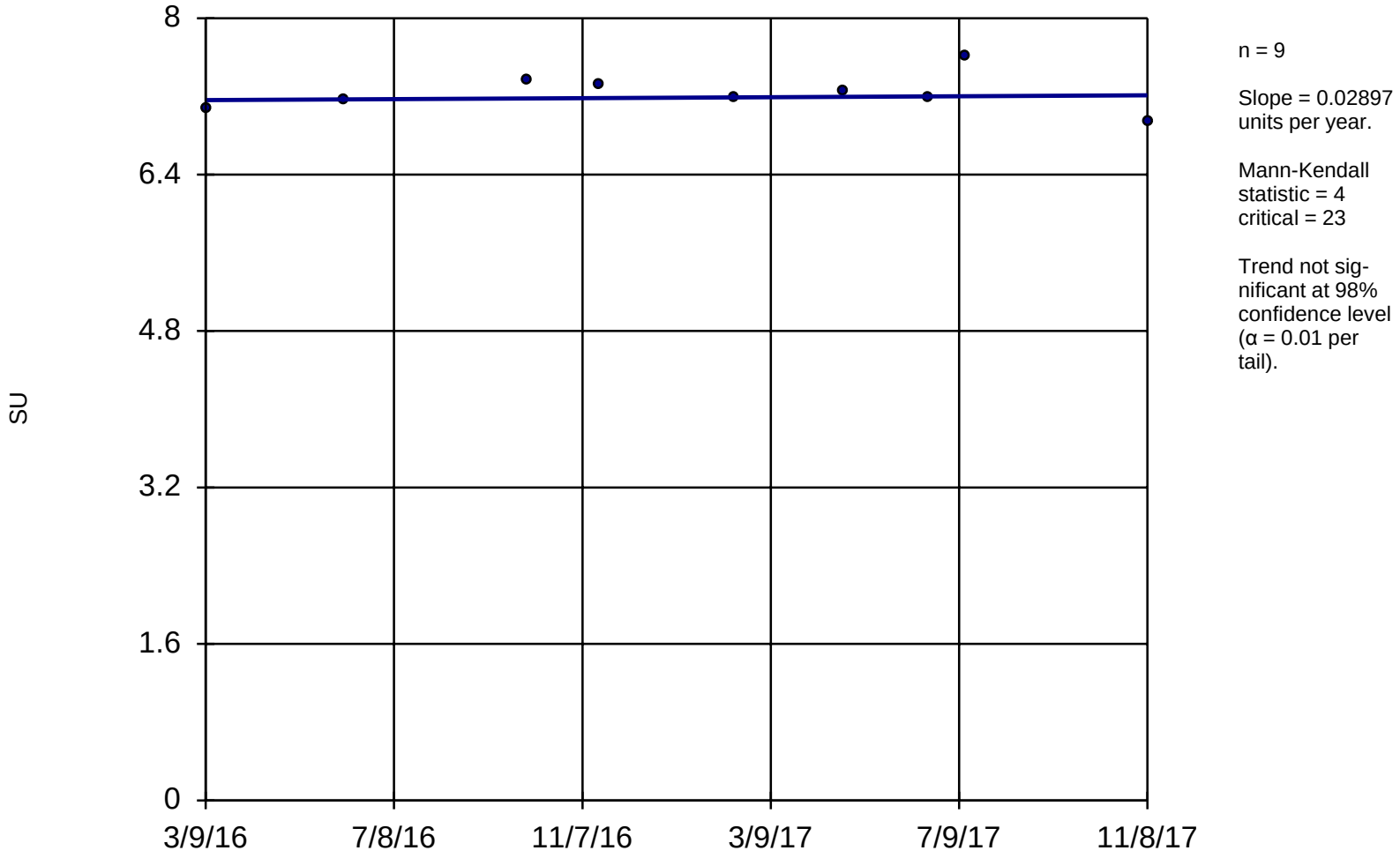
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Fluoride Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW11 (bg)



n = 9

Slope = 0.02897 units per year.

Mann-Kendall statistic = 4
critical = 23

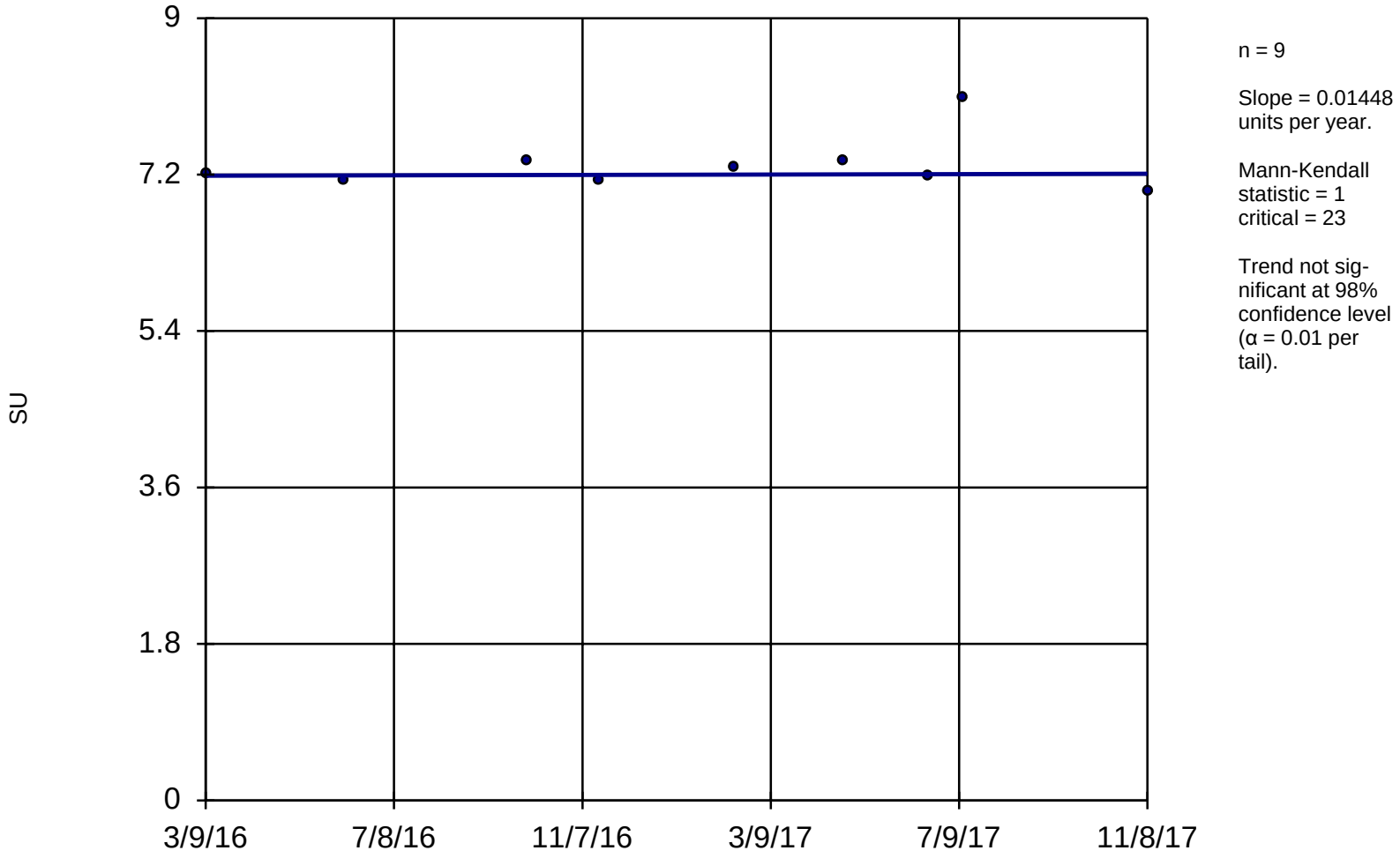
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: pH Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW13 (bg)



n = 9

Slope = 0.01448 units per year.

Mann-Kendall statistic = 1
critical = 23

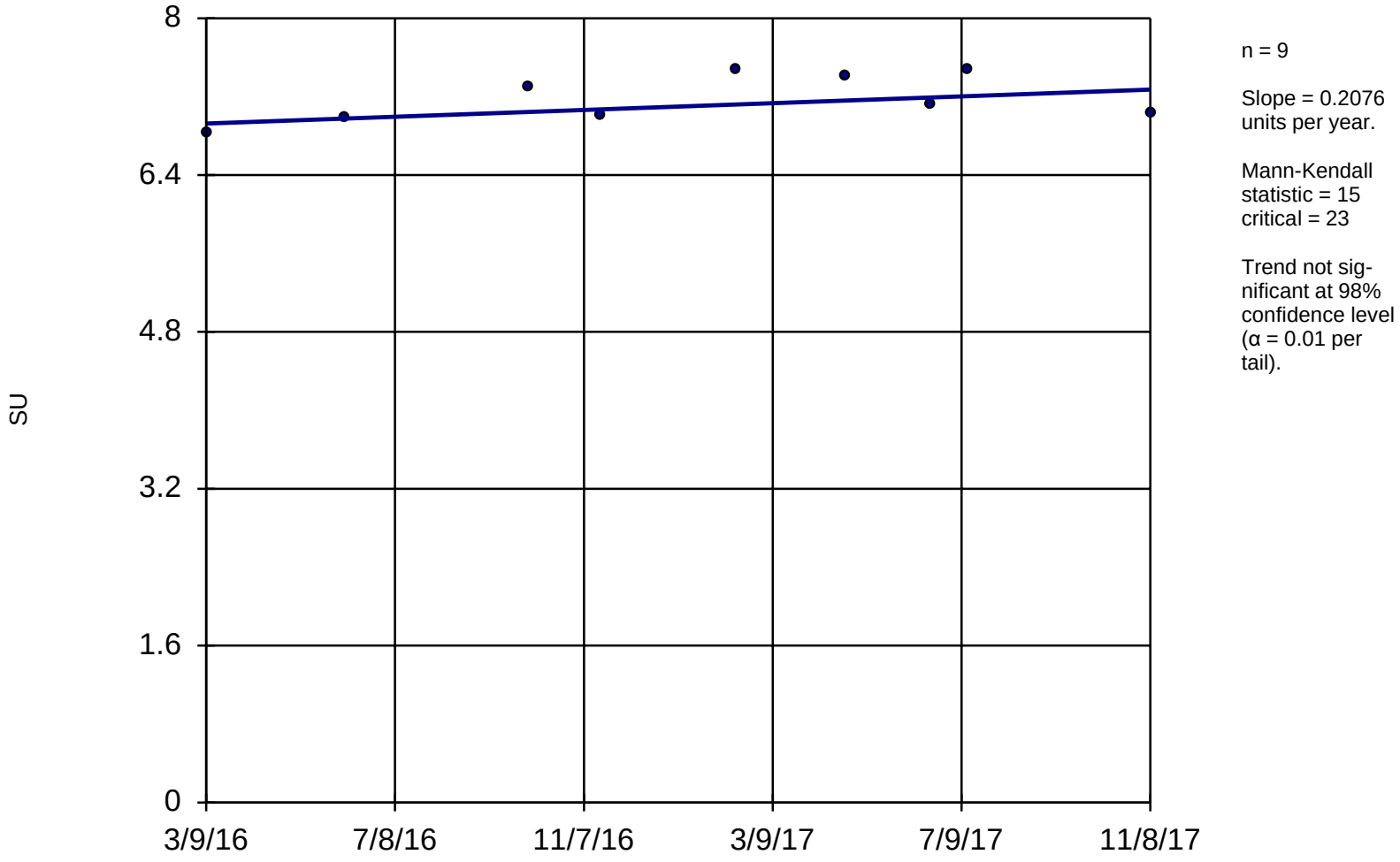
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: pH Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW2



n = 9

Slope = 0.2076 units per year.

Mann-Kendall statistic = 15
critical = 23

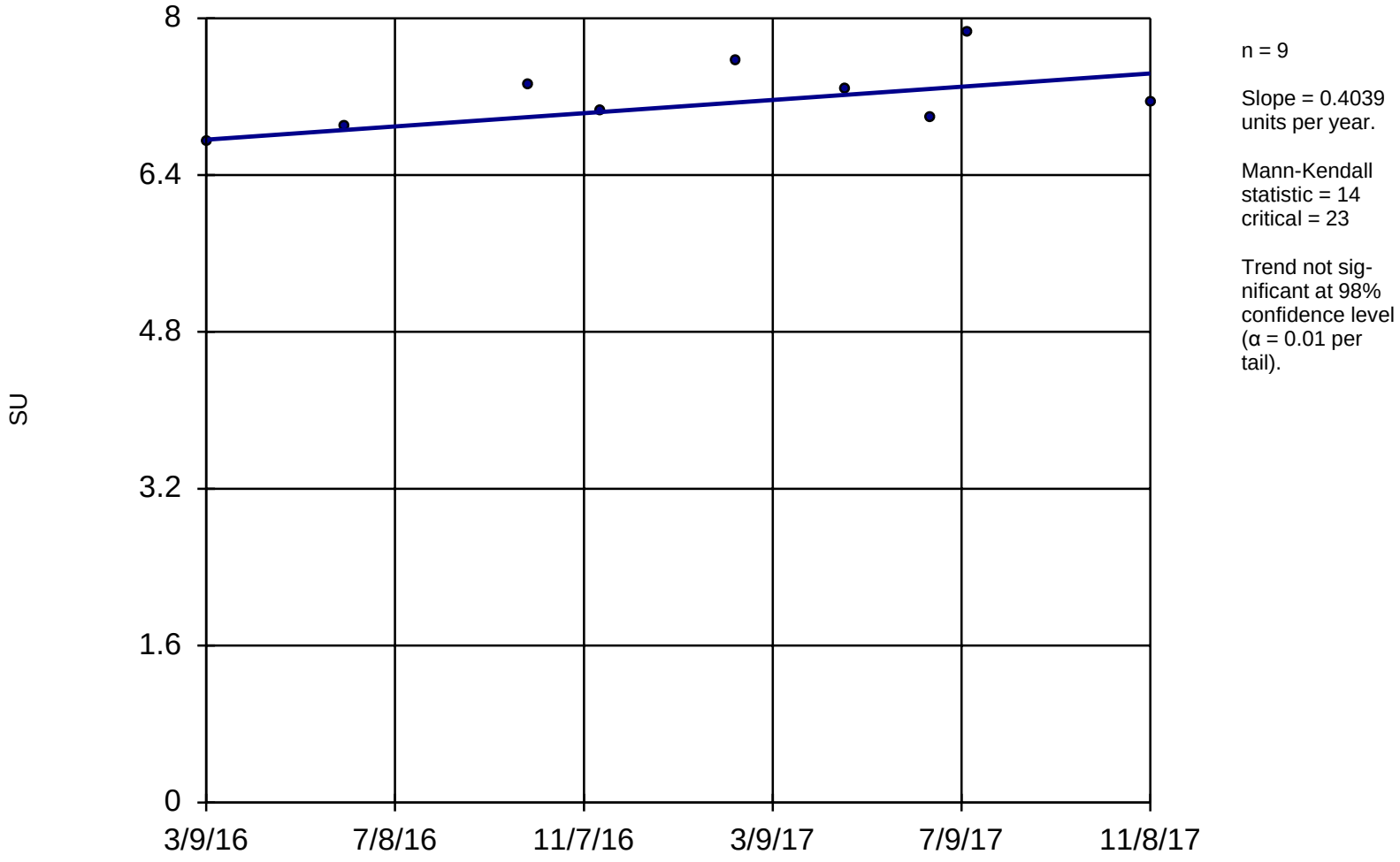
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: pH Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW3



n = 9

Slope = 0.4039 units per year.

Mann-Kendall statistic = 14
critical = 23

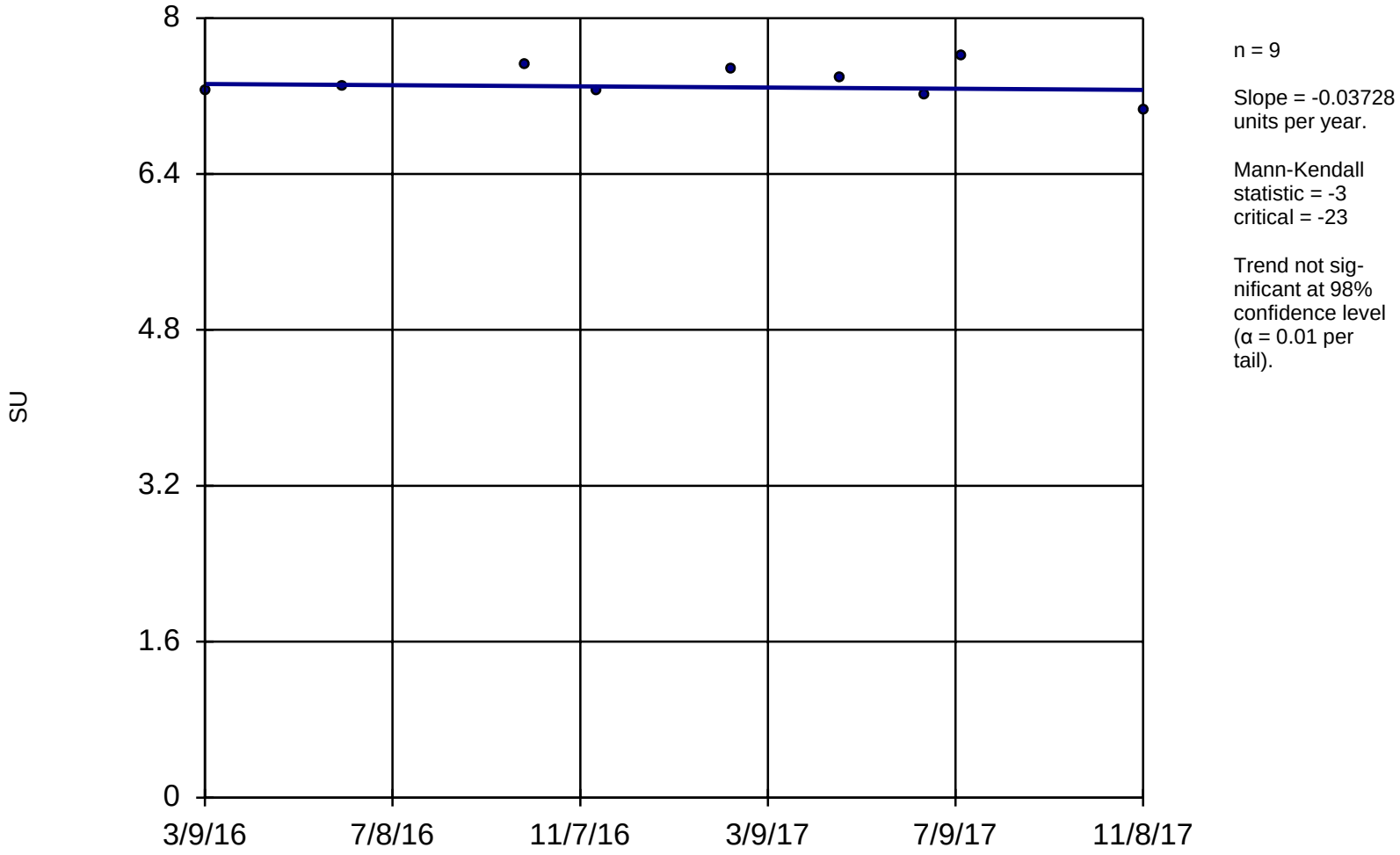
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: pH Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW4



n = 9

Slope = -0.03728 units per year.

Mann-Kendall statistic = -3
critical = -23

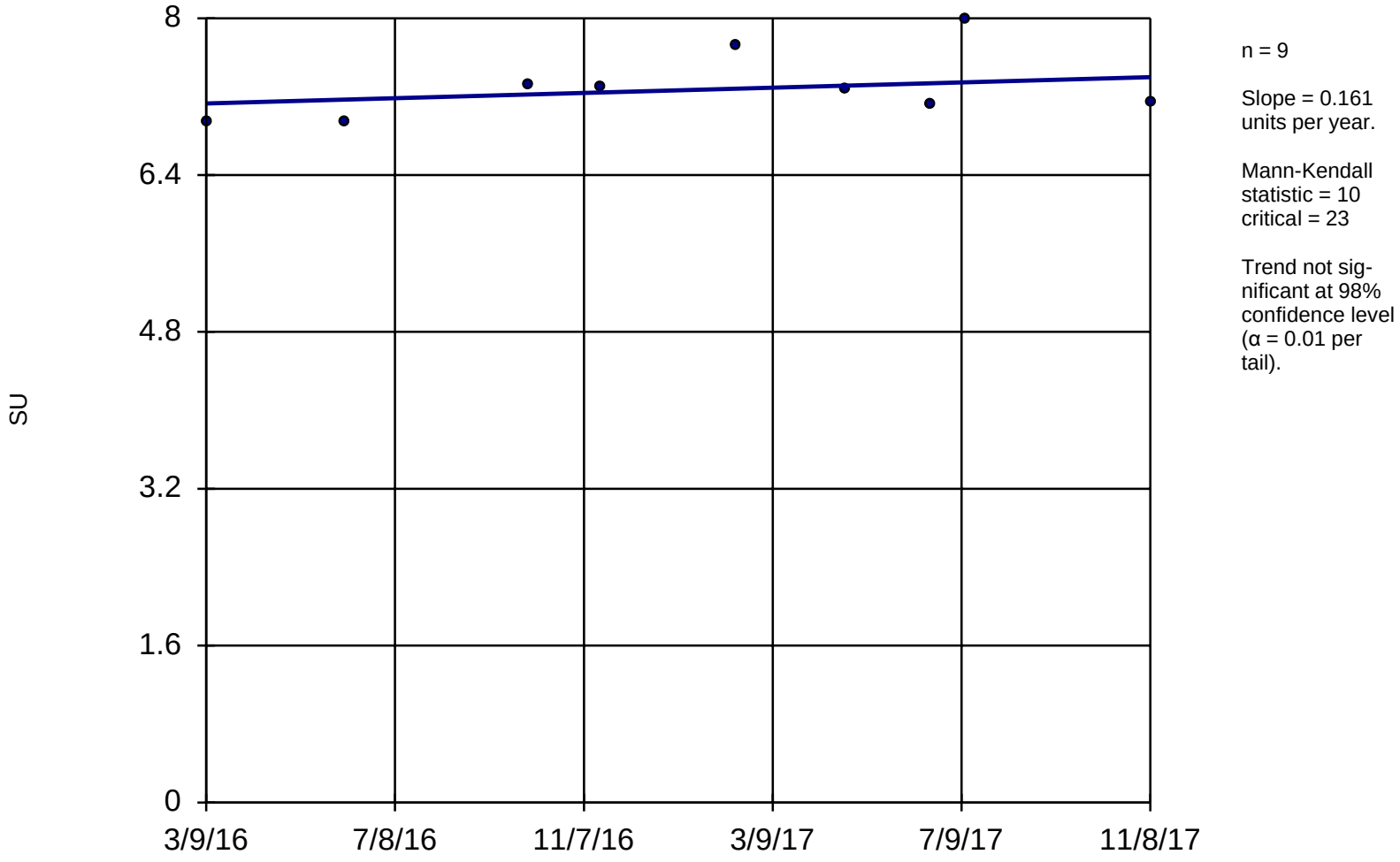
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: pH Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW4NC2 (bg)



n = 9

Slope = 0.161 units per year.

Mann-Kendall statistic = 10
critical = 23

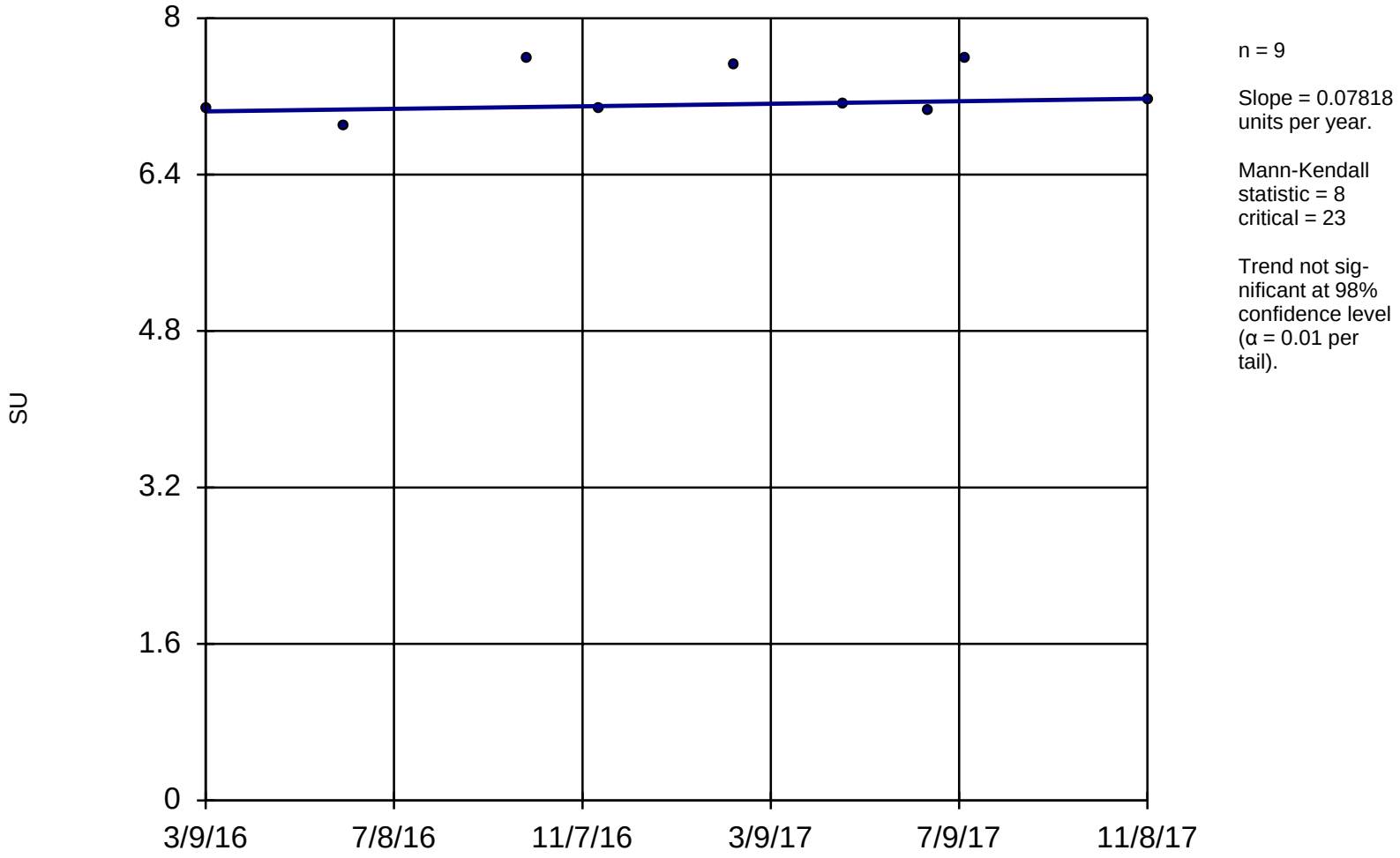
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: pH Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW9



n = 9

Slope = 0.07818 units per year.

Mann-Kendall statistic = 8
critical = 23

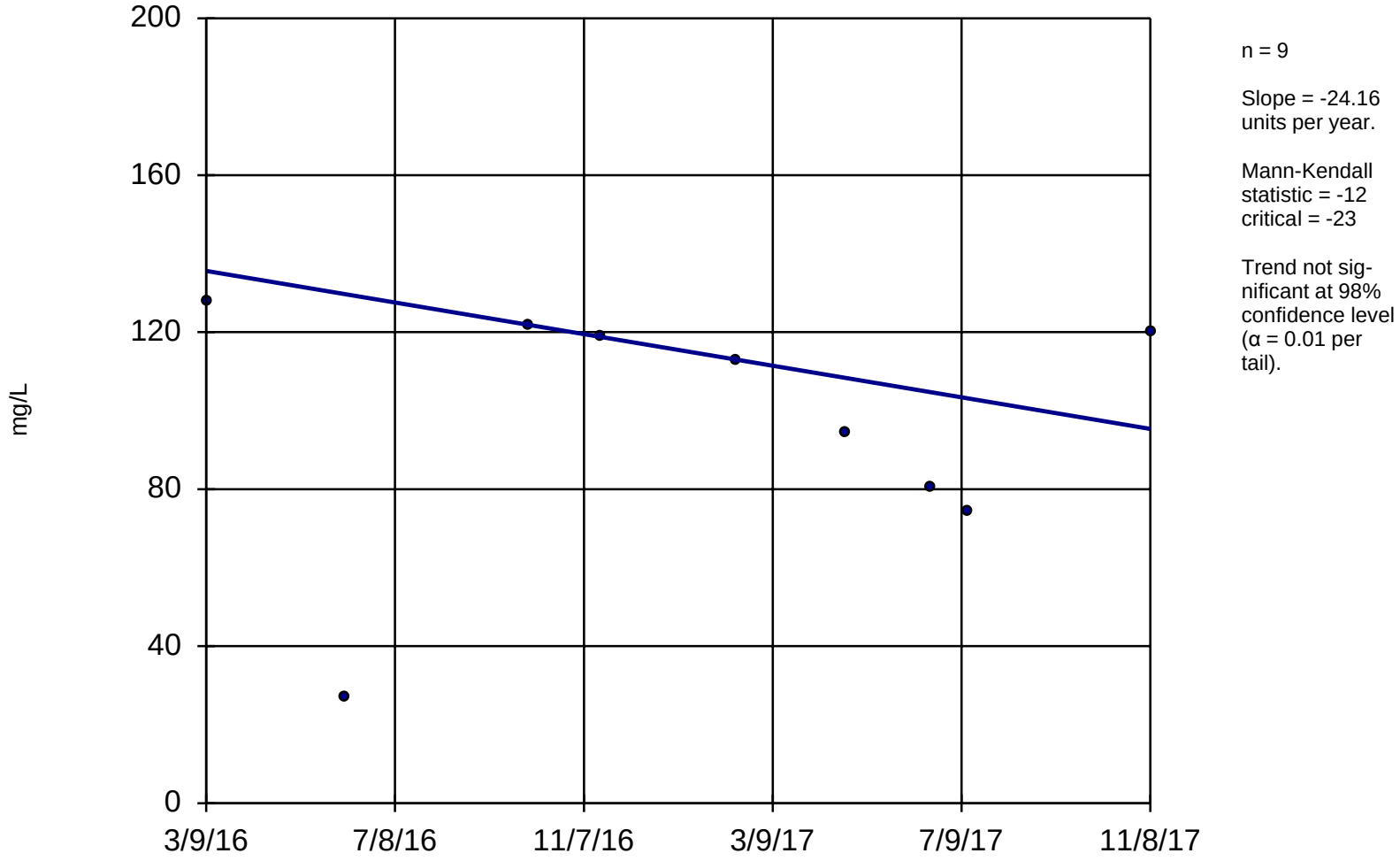
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: pH Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW11 (bg)



n = 9

Slope = -24.16 units per year.

Mann-Kendall statistic = -12
critical = -23

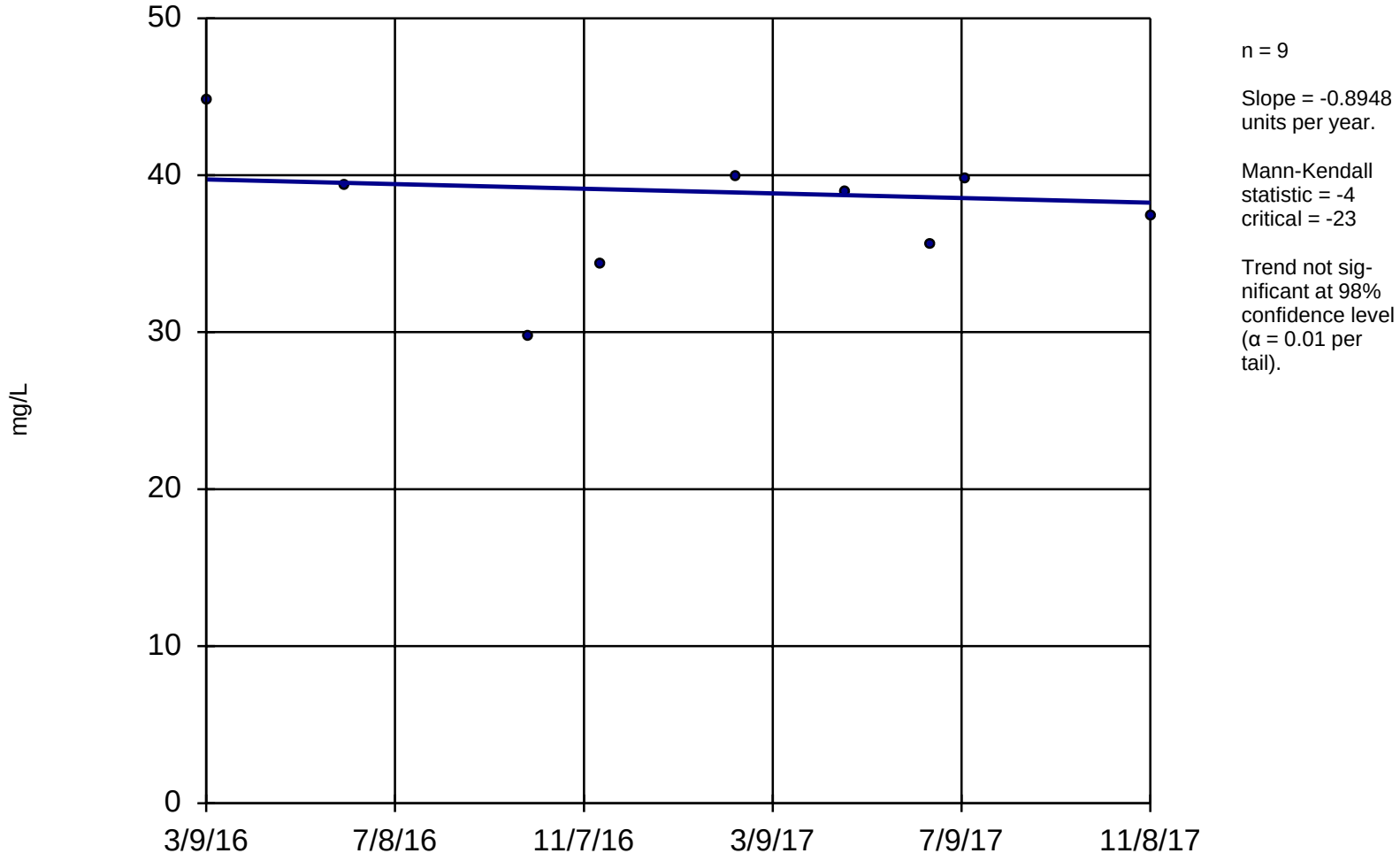
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Sulfate Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW13 (bg)



n = 9

Slope = -0.8948 units per year.

Mann-Kendall statistic = -4
critical = -23

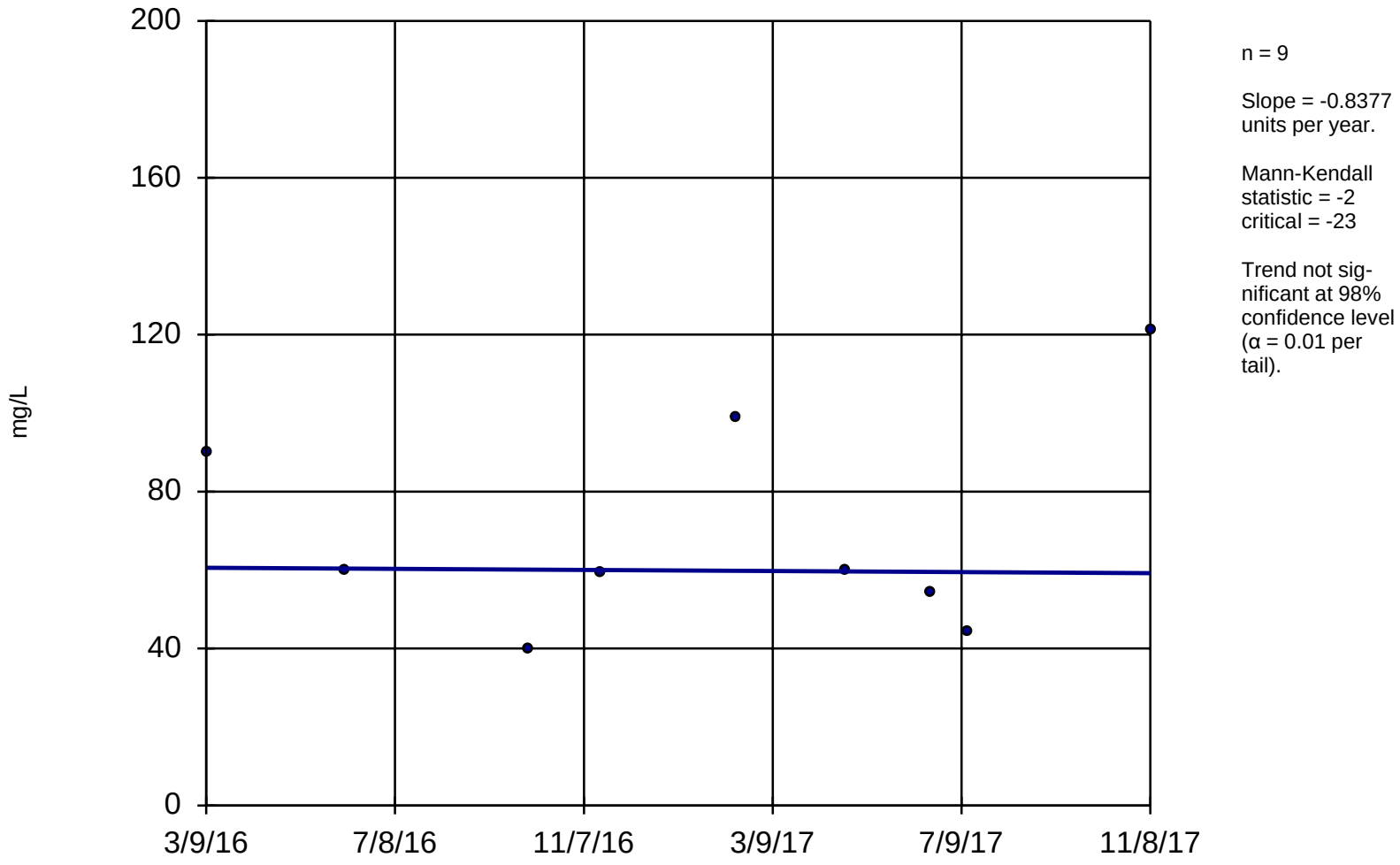
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Sulfate Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW2



n = 9

Slope = -0.8377 units per year.

Mann-Kendall statistic = -2
critical = -23

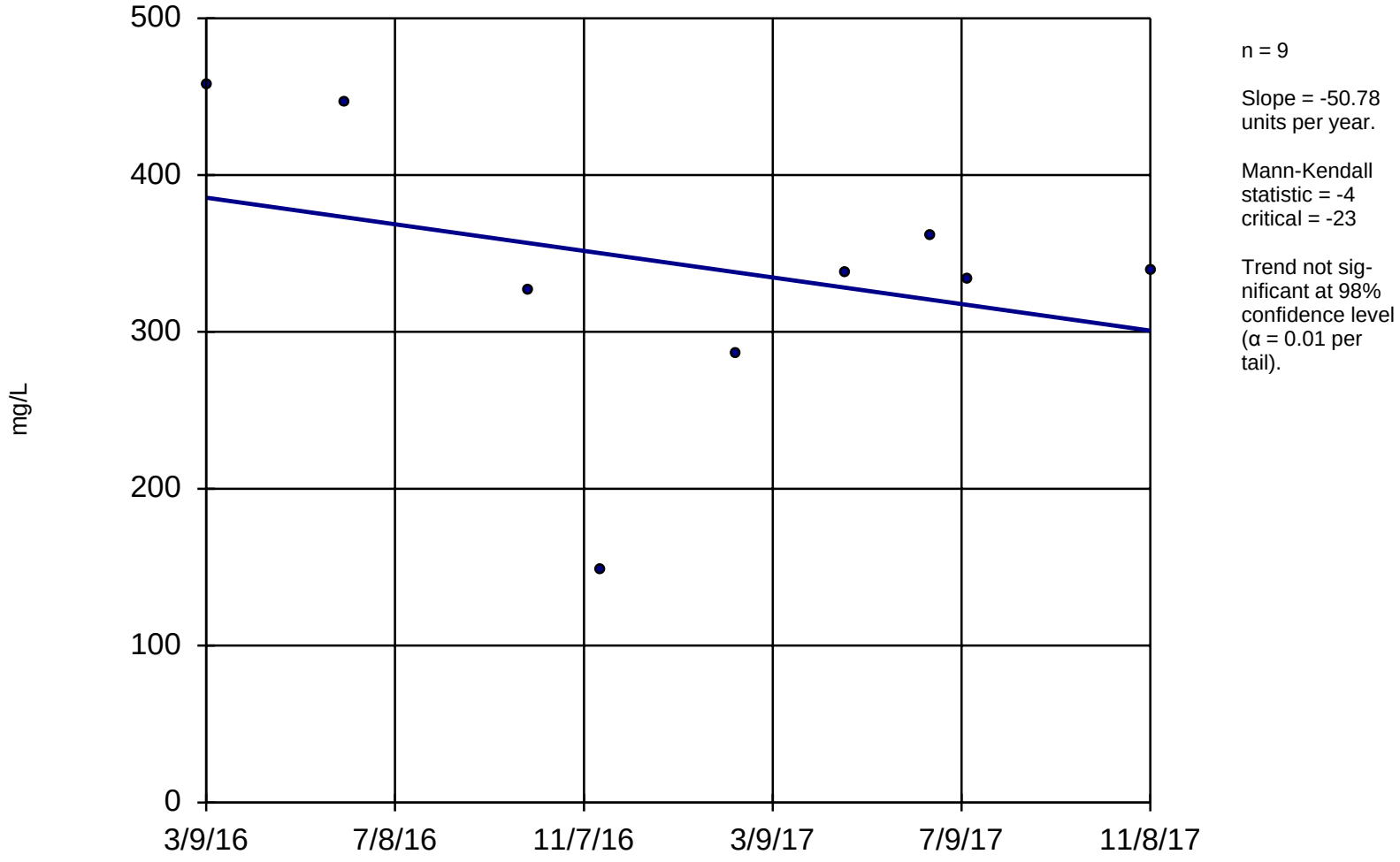
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Sulfate Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW3



n = 9

Slope = -50.78 units per year.

Mann-Kendall statistic = -4
critical = -23

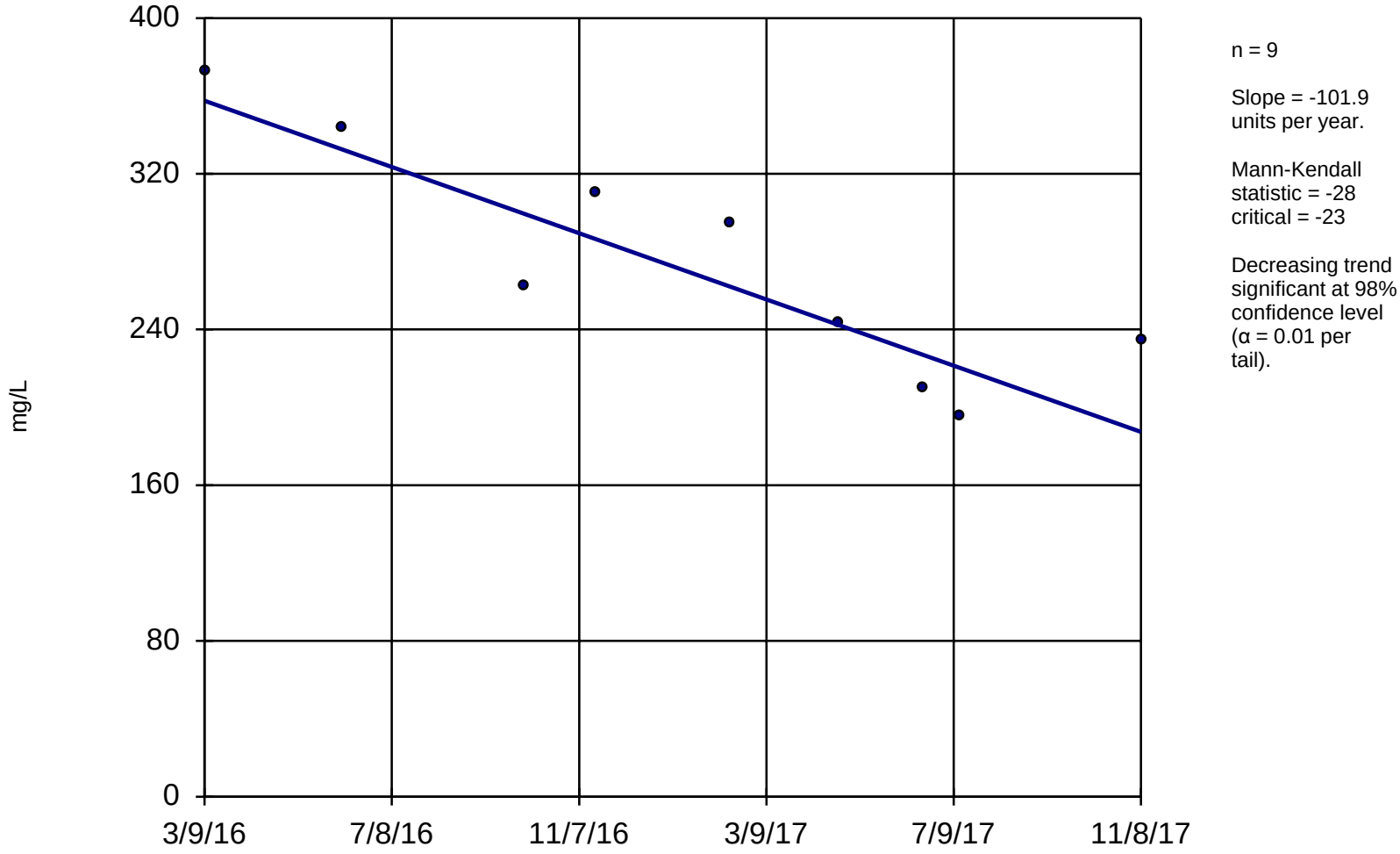
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Sulfate Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW4



n = 9

Slope = -101.9 units per year.

Mann-Kendall statistic = -28
critical = -23

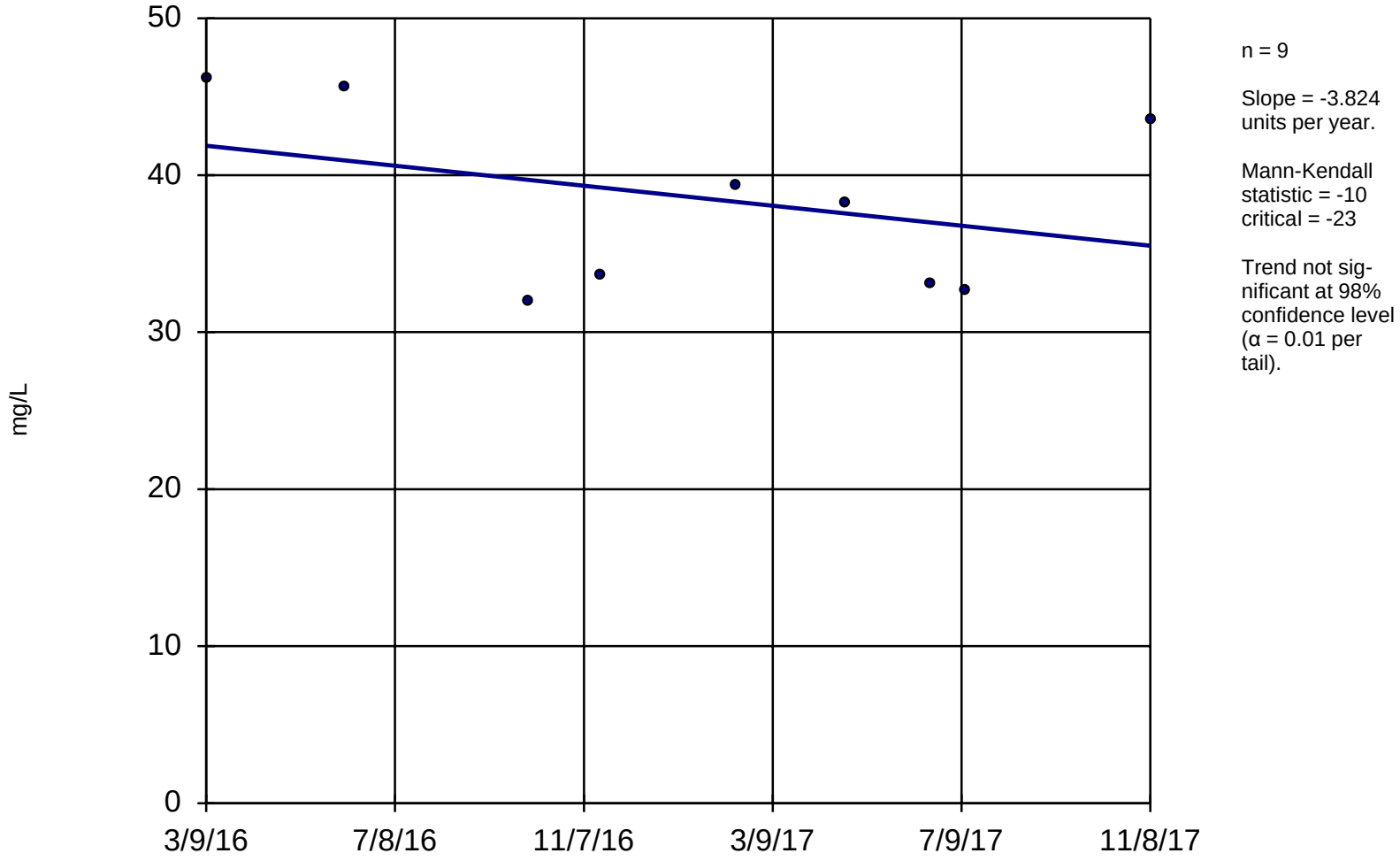
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Sulfate Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW4NC2 (bg)



n = 9

Slope = -3.824 units per year.

Mann-Kendall statistic = -10
critical = -23

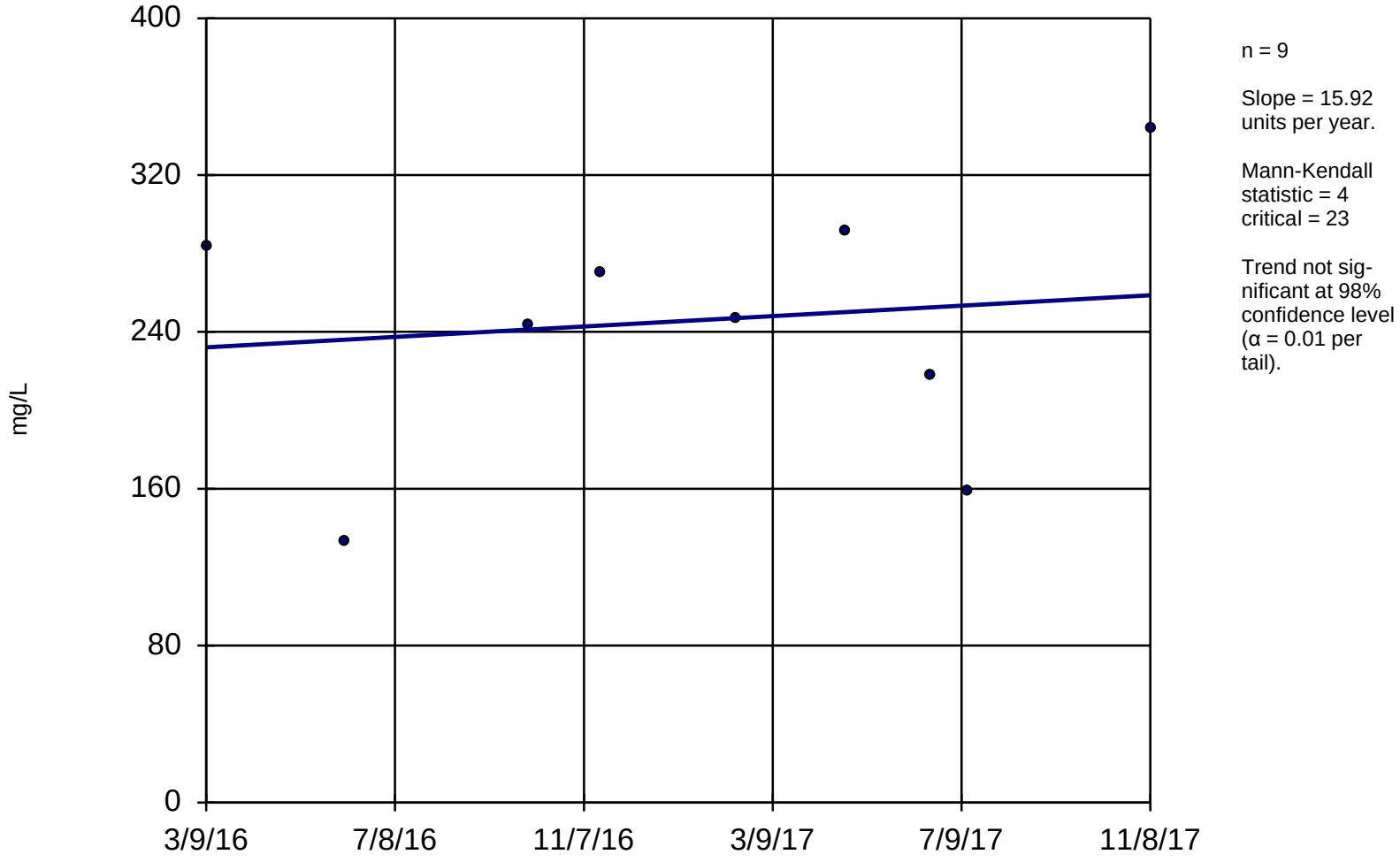
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Sulfate Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW9



n = 9

Slope = 15.92 units per year.

Mann-Kendall statistic = 4
critical = 23

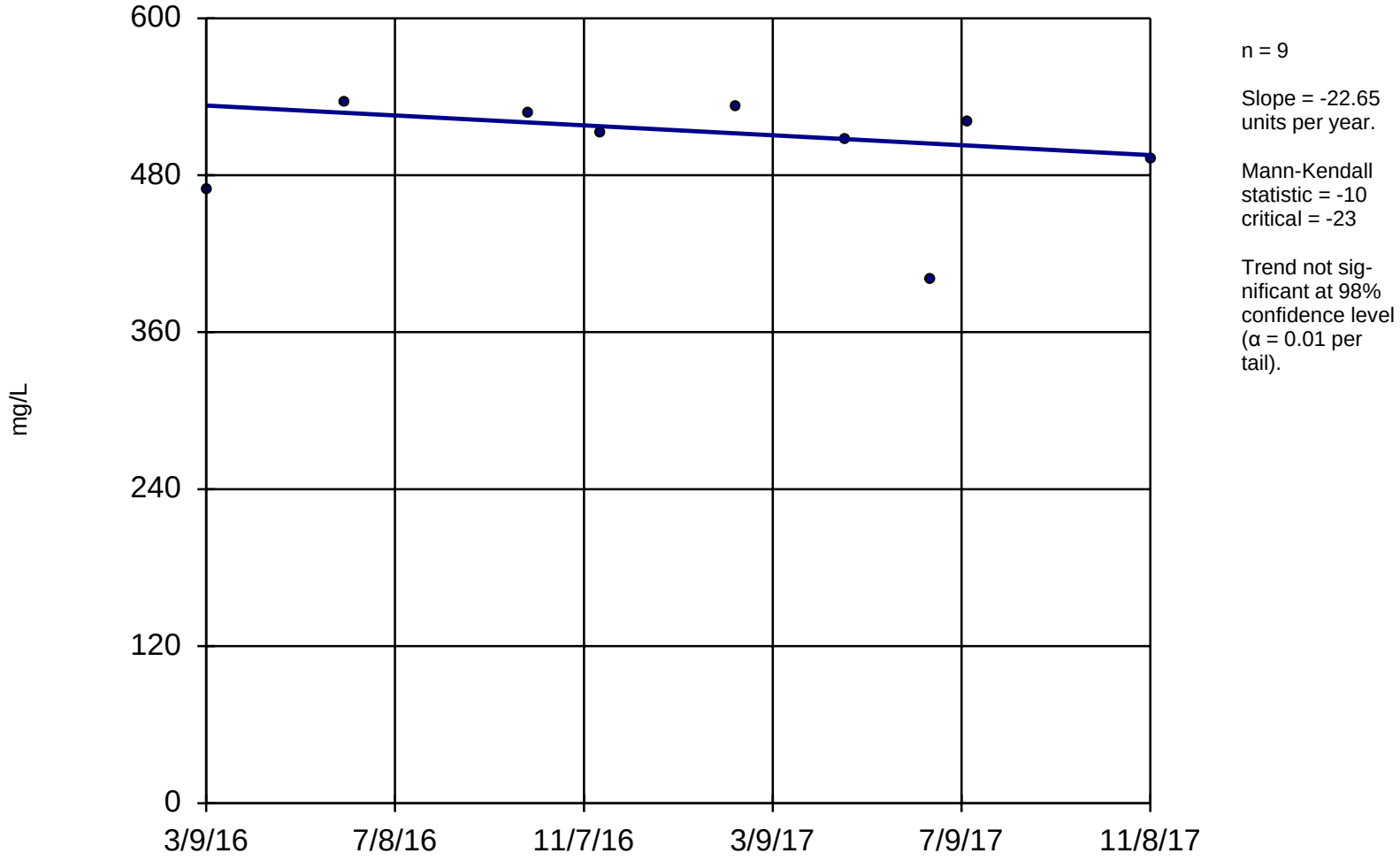
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Sulfate Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW11 (bg)



n = 9

Slope = -22.65 units per year.

Mann-Kendall statistic = -10
critical = -23

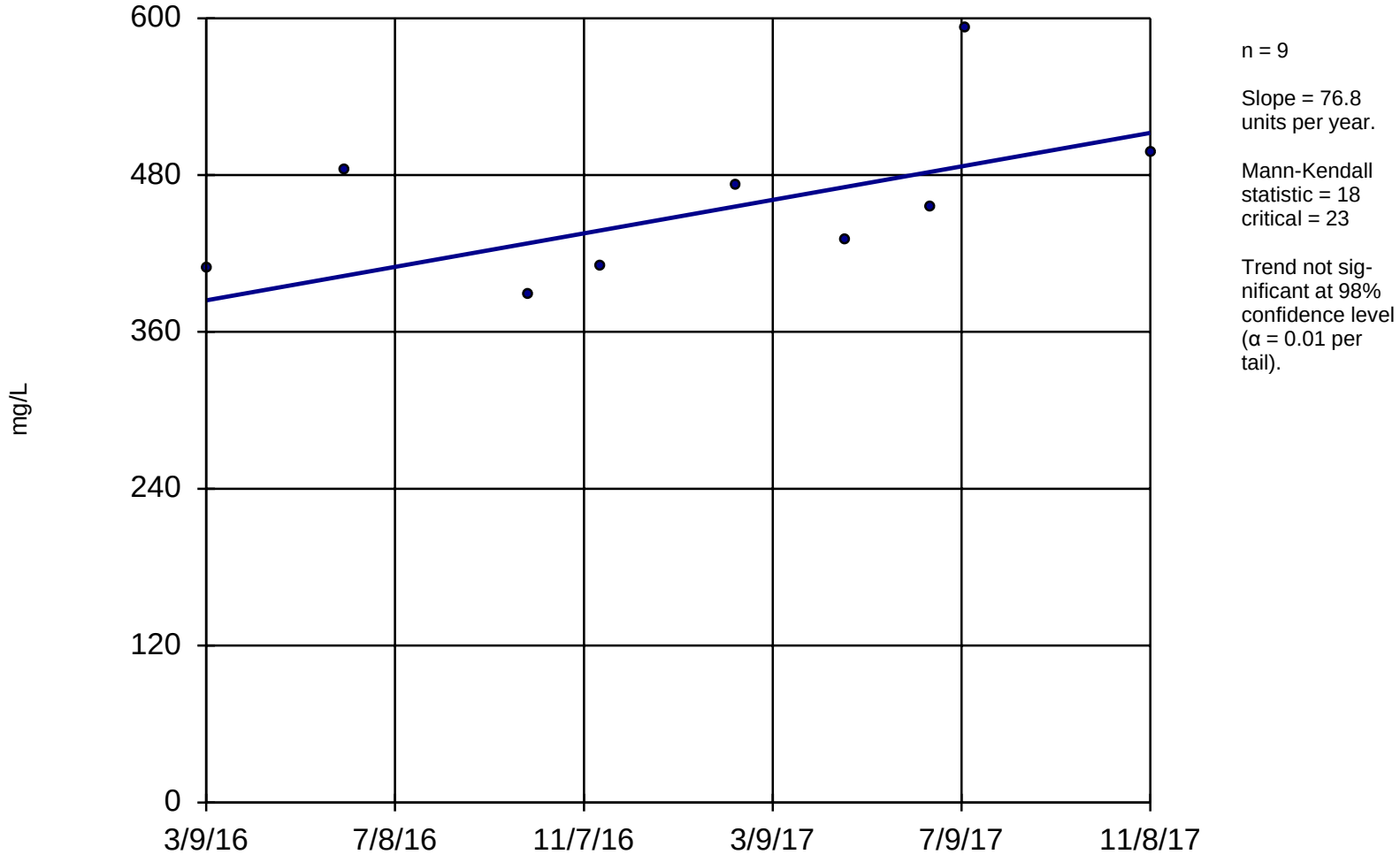
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Total Dissolved Solids Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW13 (bg)



n = 9

Slope = 76.8 units per year.

Mann-Kendall statistic = 18 critical = 23

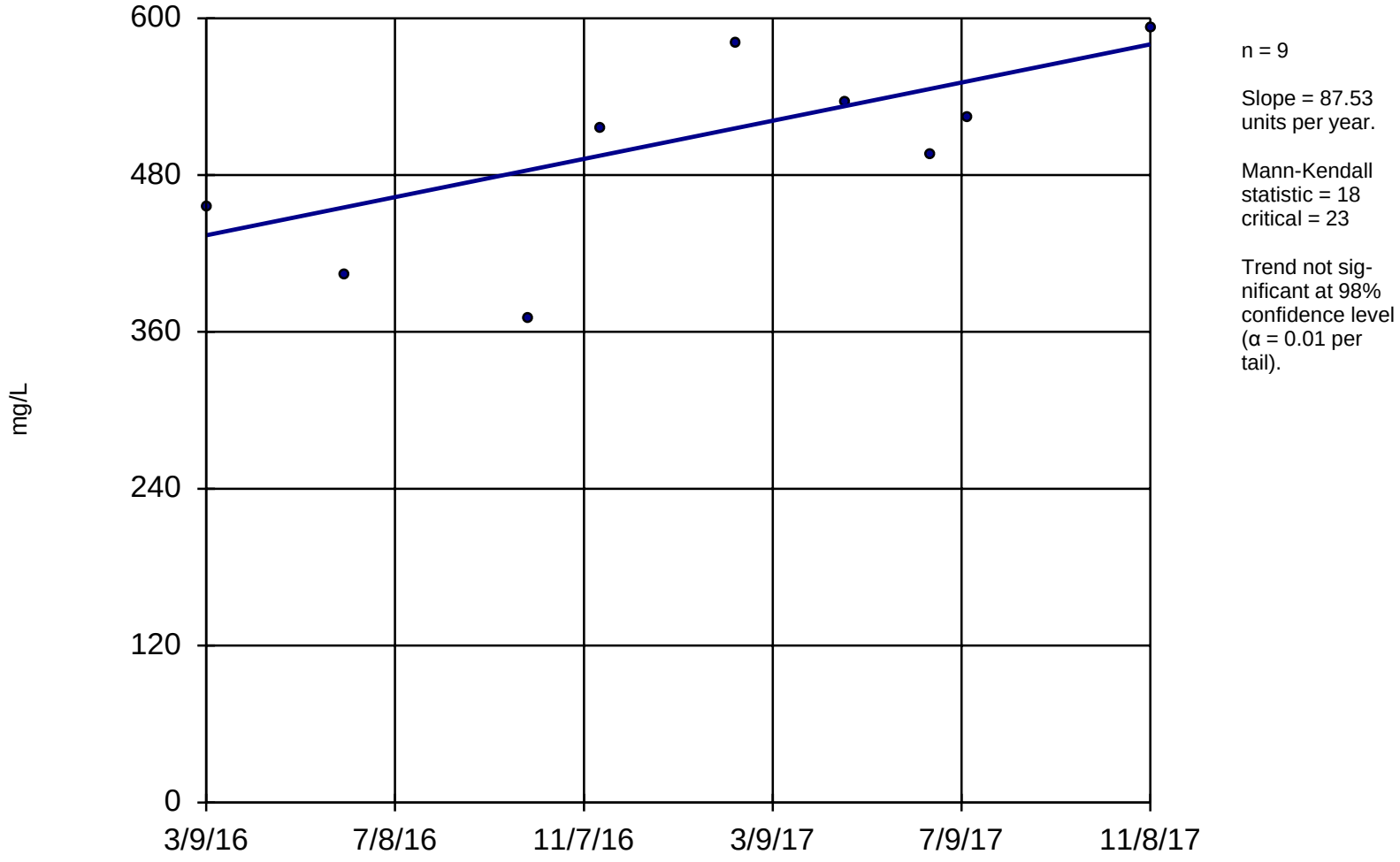
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Total Dissolved Solids Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW2



n = 9

Slope = 87.53 units per year.

Mann-Kendall statistic = 18
critical = 23

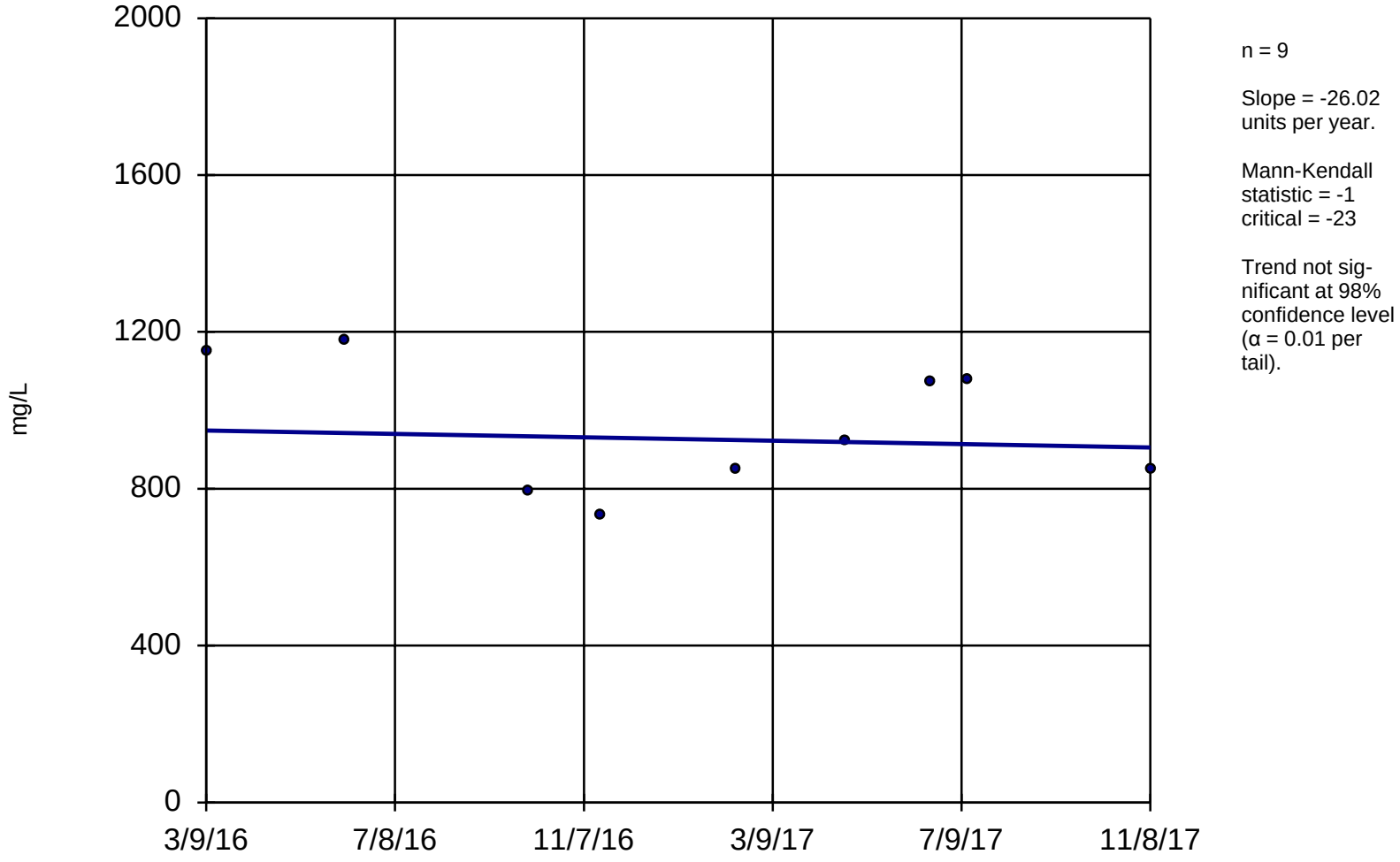
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Total Dissolved Solids Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW3



n = 9

Slope = -26.02 units per year.

Mann-Kendall statistic = -1
critical = -23

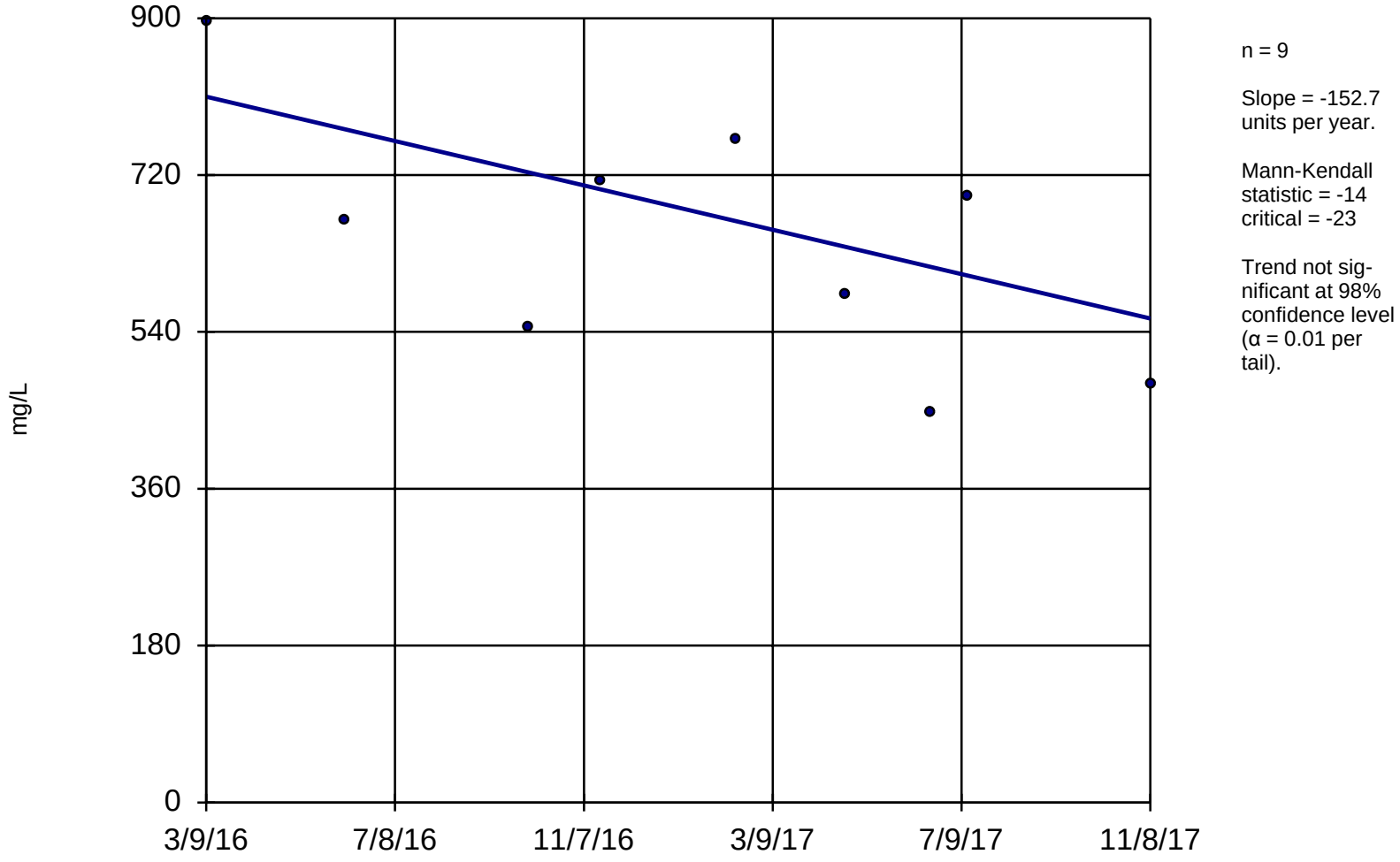
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Total Dissolved Solids Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW4



n = 9

Slope = -152.7 units per year.

Mann-Kendall statistic = -14
critical = -23

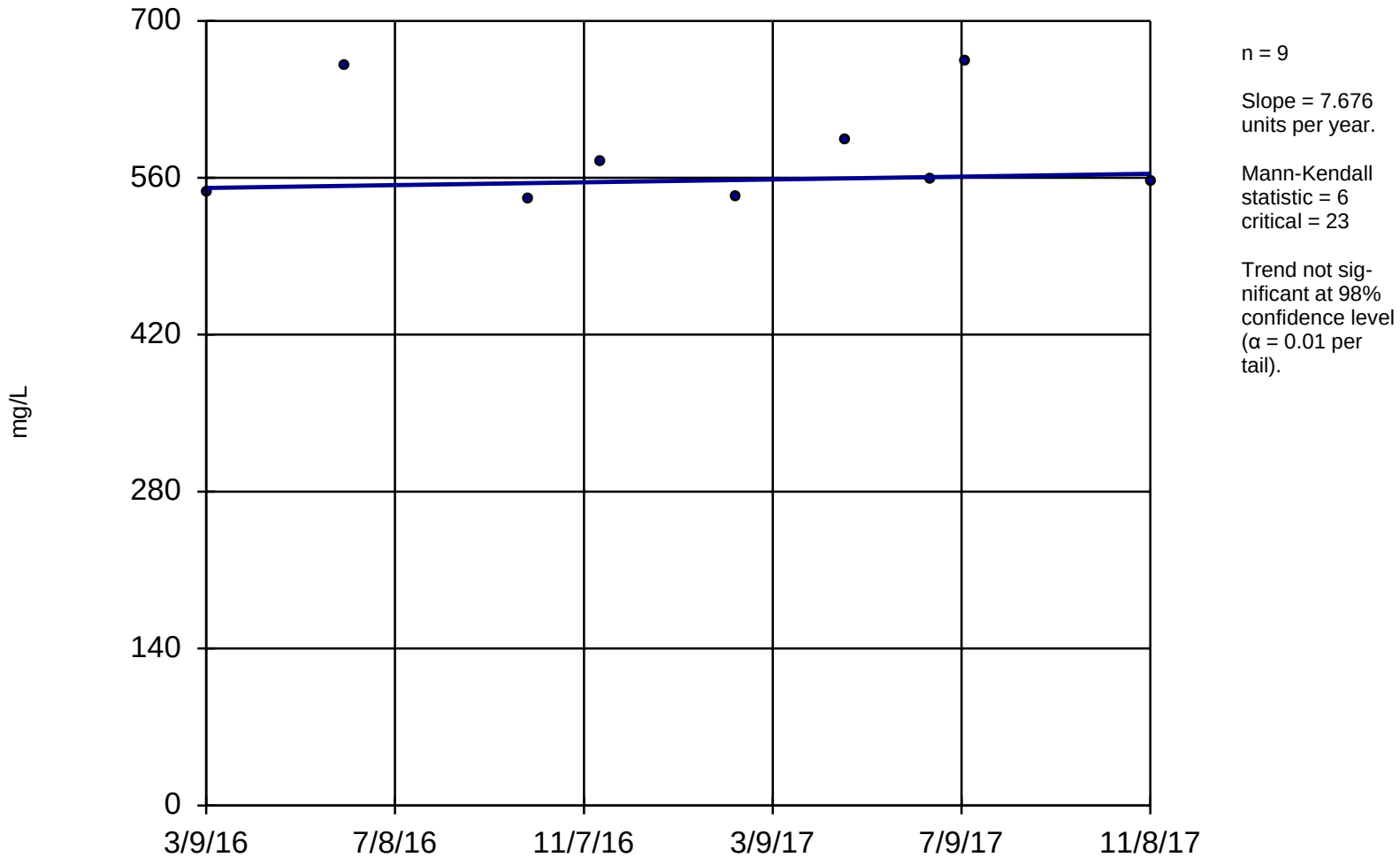
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Total Dissolved Solids Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW4NC2 (bg)



n = 9

Slope = 7.676 units per year.

Mann-Kendall statistic = 6
critical = 23

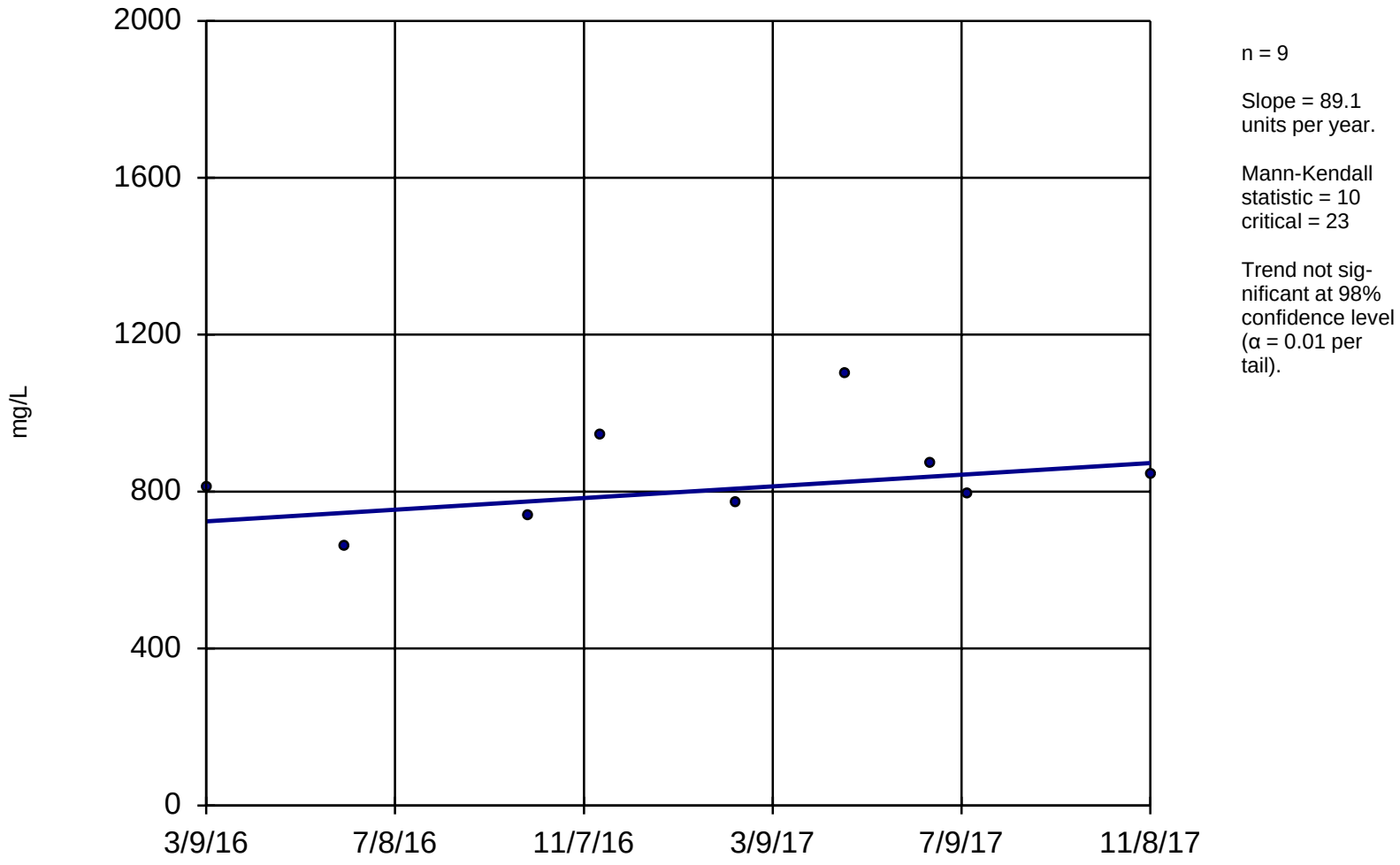
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Total Dissolved Solids Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW9



n = 9

Slope = 89.1 units per year.

Mann-Kendall statistic = 10 critical = 23

Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Total Dissolved Solids Analysis Run 1/3/2018 2:47 PM

OPPD Client: Terracon Data: NE1 SanitasMatrix CCR (Q4 2017)