2017 NC2 CCR Landfill Annual Groundwater Monitoring and Corrective Action Report

Nebraska City Ash Landfill Unit 2

Omaha Public Power District
Nebraska City Station

Nebraska City, Nebraska
January 31, 2018

OPPD Nebraska City Station
Unit 2 Ash Landfill
2017 NC2 CCR Landfill Annual Groundwater Monitoring and Corrective Action Report

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OPPD Nebraska City Station
Unit 2 Ash Landfill
2017 CCR Landfill Annual Groundwater Monitoring and Corrective Action Report

Summary

Detection monitoring began for the Nebraska City Unit 2 Ash 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:
Calcium: MW-2
pH: MW-2

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 will transition to assessment monitoring.

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 Nebraska City 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 NC2 Ash Disposal Area is a CCR landfill with a composite liner and leachate collection system and encompasses a total of 40.7 acres.

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 NC2 as part of this event were MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, 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 are SSI's above background for 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:

Calcium: MW-2

pH: MW-2

5 Upcoming Activities

A new monitoring well will be installed near the cells 2/3 Leachate pond. 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 2 ASH LANDFILL

2017 NC2 CCR GROUNDWATER REPORT

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

JANUARY 2018

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APPENDIX A

SUMMARY OF GROUNDWATER ELEVATIONS
NEBRASKA CITY UNIT 2

Location	Date	Top of Casing Elevation	Depth to Water	Groundwater Elevation	Comments
MW-2	3/14/2016	922.35	10.80	911.55	
MW-2	6/3/2016	922.35	8.96	913.39	
MW-2	8/31/2016	922.35	8.91	913.44	
MW-2	11/17/2016	922.35	10.90	911.45	
MW-2	2/15/2017	922.35	11.70	910.65	
MW-2	4/24/2017	922.35	9.85	912.50	
MW-2	6/15/2017	922.35	10.30	912.05	
MW-2	7/12/2017	922.35	10.76	911.59	
MW-2	11/9/2017	922.35	15.10	907.25	
MW-3	3/14/2016	916.01	4.05	911.96	
MW-3	6/3/2016	916.01	2.55	913.46	
MW-3	8/31/2016	916.01	2.31	913.70	
MW-3	11/17/2016	916.01	4.10	911.91	
MW-3	2/15/2017	916.01	4.95	911.06	
MW-3	4/24/2017	916.01	3.21	912.80	
MW-3	6/15/2017	916.01	3.42	912.59	
MW-3	7/12/2017	916.01	4.25	911.76	
MW-3	11/9/2017	916.01	12.10	903.91	
MW-4	3/14/2016	919.40	6.91	912.49	
MW-4	6/3/2016	919.40	5.62	913.78	
MW-4	8/31/2016	919.40	5.05	914.35	
MW-4	11/17/2016	919.40	6.80	912.60	
MW-4	2/15/2017	919.40	7.50	911.90	
MW-4	4/24/2017	919.40	6.11	913.29	
MW-4	6/15/2017	919.40	6.75	912.65	
MW-4	7/12/2017	919.40	7.11	912.29	
MW-4	11/9/2017	919.40	12.20	907.20	
MW-5	3/14/2016	922.93	6.98	915.95	
MW-5	6/3/2016	922.93	7.67	915.26	
MW-5	8/31/2016	922.93	5.30	917.63	
MW-5	11/17/2016	922.93	9.25	913.68	
MW-5	2/15/2017	922.93	10.20	912.73	
MW-5	4/24/2017	922.93	8.48	914.45	
MW-5	6/15/2017	922.93	9.82	913.11	
MW-5	7/12/2017	922.93	10.15	912.78	
MW-5	11/9/2017	922.93	14.20	908.73	
MW-6	3/14/2016	919.66	7.95	911.71	
MW-6	6/3/2016	919.66	6.02	913.64	
MW-6	8/31/2016	919.66	5.95	913.71	
MW-6	11/17/2016	919.66	8.10	911.56	
MW-6	2/15/2017	919.66	9.00	910.66	

Measurements are in feet.

Well condition is compliant unless noted otherwise.

SUMMARY OF GROUNDWATER ELEVATIONS
NEBRASKA CITY UNIT 2

Location	Date	Top of Casing Elevation	Depth to Water	Groundwater Elevation	Comments
MW-6	4/24/2017	919.66	7.00	912.66	
MW-6	6/15/2017	919.66	7.35	912.31	
MW-6	7/12/2017	919.66	7.90	911.76	
MW-6	11/9/2017	919.66	11.20	908.46	
MW-7	3/14/2016	917.97	7.04	910.93	
MW-7	6/3/2016	917.97	4.80	913.17	
MW-7	8/31/2016	917.97	5.40	912.57	
MW-7	11/17/2016	917.97	7.20	910.77	
MW-7	2/15/2017	917.97	8.15	909.82	
MW-7	4/24/2017	917.97	5.96	912.01	
MW-7	6/15/2017	917.97	6.35	911.62	
MW-7	7/12/2017	917.97	6.80	911.17	
MW-7	11/9/2017	917.97	10.50	907.47	
MW-13	3/14/2016	917.69	4.75	912.94	
MW-13	6/3/2016	917.69	3.51	914.18	
MW-13	8/31/2016	917.69	2.85	914.84	
MW-13	11/17/2016	917.69	4.40	913.29	
MW-13	2/15/2017	917.69	5.21	912.48	
MW-13	4/24/2017	917.69	4.00	913.69	
MW-13	6/15/2017	917.69	4.70	912.99	
MW-13	7/12/2017	917.69	5.02	912.67	
MW-13	11/9/2017	917.69	8.25	909.44	

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 2

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								
			3/14/2016	<0.2	277	<5	388	1120	6.8	0.371
			6/3/2016	0.301	196	<5	336	972	6.79	<0.5
	x		6/3/2016	0.328	200	<5	307	976	n/a	<0.5
			8/31/2016	0.511	130	<5	151	696(H)	7.04	<0.5
			11/17/2016	0.302	236	<5	298	1030	7.23	<0.5
	x		11/17/2016	0.306	238	<5	284	980	n/a	<0.5
			2/15/2017	0.219	269	13.2	290	1070	7.28	2.51
			4/24/2017	0.264	158	5.4	135	652	7.21	1.38
	x		4/24/2017	0.263	158	<5	132	648	n/a	0.813
			6/15/2017	0.304	165	<5	139	780	7.04	<0.5
			7/12/2017	0.325	127	<5	73	592	7.03	<0.5
			11/9/2017	0.25	131	<5	130	662	7.19	<0.5
MW3		d								
			3/14/2016	<0.2	85.3	<5	21	334	7.05	0.168
	x		3/14/2016	<0.2	83.5	<5	19.2	338	n/a	<0.5
			6/3/2016	<0.2	121	<5	19.6	500	7.14	<0.5
			8/31/2016	<0.2	51.3	<5	7.35	296(H)	7.18	<0.5
			11/17/2016	<0.2	91	<5	5.59	354	7.32	1.28
			2/15/2017	<0.2	74.2	15.6	49.6	378	7.09	5.11
			4/24/2017	<0.2	63.3	9	10.5	324	7.68	2.87
			6/15/2017	<0.2	89.4	<5	<5	386	7.32	<0.5
	x		6/15/2017	<0.2	91.1	<5	<5	440	n/a	<0.5
			7/12/2017	<0.2	92.8	<5	8.94	528	7.99	<0.5
			11/9/2017	<0.2	148	<5	185	604	7.33	<0.5
MW4		d								
			3/14/2016	<0.2	126	6.27	48.3	536	6.84	0.213
			6/3/2016	<0.2	130	<5	46.8	668	6.9	<0.5
			8/31/2016	<0.2	91.1	7.13	29.7	574(H)	7.2	0.646
			11/17/2016	<0.2	130	<5	34	548	7.19	1.28
			2/15/2017	<0.2	142	10.8	39.7	526	7.63	2.43
			4/24/2017	<0.2	126	<5	38.6	574	7.08	1.08
			6/15/2017	<0.2	122	<5	32.2	552	7.09	<0.5
			7/12/2017	<0.2	104	<5	32.7	580	7.88	<0.5
			11/9/2017	<0.2	134	<5	42.8	568	7.18	<0.5
MW5		d								
			3/14/2016	3.73	210	51	611	1310	7.12	<0.5
			6/3/2016	3.98	217	36.6	590	1390	7.01	<0.5
			8/31/2016	4.08	159	21.5	455	1280(H)	7.11	<0.5
			11/17/2016	4.27	228	21.6	414	1170	7.54	1.89
			2/15/2017	2.94	217	13.3	531	1210	7.3	0.591
			4/24/2017	2.85	183	12.5	331	1060	7.55	1.25
			6/15/2017	3.82	190	10.6	243	1090	7.17	<0.5
			7/12/2017	4.63	191	7.93	369	1190	7.45	<0.5
			11/9/2017	2.91	168	13.2	404	1260	7.2	<0.5

NEBRASKA CITY STATION UNIT 2

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)
MW6		d								
			3/14/2016	3.83	134	16.5	314	728	7.21	<0.5
			6/3/2016	4.14	93	6.16	171	608	7.27	<0.5
			8/31/2016	4.79	90.4	<5	149	592(H)	7.43	<0.5
			11/17/2016	5.11	125	15	165	588	7.63	6.53
			2/15/2017	4.11	132	<5	136	602	7.77	<0.5
			4/24/2017	3.08	96.5	10.2	99.1	530	7.68	1.71
			6/15/2017	3.58	119	6.26	196	636	7.35	<0.5
			7/12/2017	3.92	102	<5	155	596	7.25	<0.5
			11/9/2017	4.39	128	6.75	195	872	7.24	<0.5
MW7		d								
			3/14/2016	<0.2	134	6.55	6.88	496	6.92	0.312
			6/3/2016	<0.2	128	7.63	<5	690	7.28	<0.5
			8/31/2016	<0.2	100	6.68	<5	534(H)	7.55	<0.5(F1)
	x		8/31/2016	<0.2	103	7.85	<5	532(H)	n/a	<0.5
			11/17/2016	<0.2	138	5.73	<5	510	7.77	0.544
			2/15/2017	<0.2	143	9.96	<5	552	7.55	<0.5
	x		2/15/2017	<0.2	141	6.75	<5	600	n/a	<0.5
			4/24/2017	<0.2	139	11.3	<5	576	7.83	1.35
			6/15/2017	<0.2	128	9.81	<5	688	7.4	<0.5
			7/12/2017	<0.2	125	8.07	<5	636	7.25	<0.5
	x		7/12/2017	<0.2	124	8.03	<5	532	n/a	<0.5
			11/9/2017	0.201	131	7.79	17.8	580	7.4	<0.5
	x		11/9/2017	0.21	130	8.09	19.3	646	n/a	<0.5
MW13		d								
			3/14/2016	<0.2	90.6	11.4	47.7	438	6.97	<0.5
			6/3/2016	<0.2	87.9	12	37.6	360	7.11	<0.5
			8/31/2016	<0.2	66.6	11.1	31.3	414(H)	7.71	<0.5
			11/17/2016	<0.2	84.2	9.33	34.7	430	7.79	0.803
			2/15/2017	<0.2	94.9	11.2	40.9	448	7.21	<0.5
			4/24/2017	<0.2	94.1	12	39.5	520	7.27	0.789
			6/15/2017	<0.2	91.1	12.4	34.2	454	7.28	<0.5
			7/12/2017	<0.2	95.8	16.8	42	676	8.1	<0.5
			11/9/2017	<0.2	95.2	12.4	36.4	488	7.12	0.55

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.

(H) Sample was prepped or analyzed beyond the specified holding time

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS FOR APPENDIX IV CONSTITUENTS

NEBRASKA CITY STATION UNIT 2

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)	Molybdenum (mg/L)	Mercury (mg/L)	Selenium (mg/L)	Thallium (mg/L)	Ra-226 (pCi/L)	Ra-228 (pCi/L)	Ra 226+228 (pCi/L)
MW2		d																		
			3/14/2016	0.371	0.00188	<0.002	0.136	<0.001	<0.0005	<0.005	<0.0005	<0.0005	0.0512	0.00368	<0.0002	<0.005	<0.001	0.251	0.716	0.967
			6/3/2016	<0.5	0.00944	<0.002	0.0679	<0.001	<0.0005	<0.005	<0.0005	0.000538(B)	<0.05	0.00507	<0.0002	<0.005	<0.001	0.21	0.269	0.479
	x		6/3/2016	<0.5	0.00968	<0.002	0.0679	<0.001	<0.0005	0.0153	<0.0005	0.000656(B)	<0.05	0.00602	<0.0002	<0.005	<0.001	0.215	0.397	0.611
			8/31/2016	<0.5	0.00812	<0.002	0.0814	<0.001	<0.0005	<0.005	<0.0005	0.000872	<0.05	0.00757	<0.0002	<0.005	<0.001	0.245	0.29	0.535
			11/17/2016	<0.5	0.00452	<0.002	0.122	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	0.00519	<0.0002	<0.005	<0.001	0.312	0.684	0.996
	x		11/17/2016	<0.5	0.00464	<0.002	0.123	<0.001	<0.0005	<0.005	<0.0005	0.000538	<0.05	0.00532	<0.0002	<0.005	<0.001	0.232	0.847	1.08
			2/15/2017	2.51	0.00331	<0.002	0.144	<0.001	<0.0005	<0.005	<0.0005	0.000671	<0.05	0.0093	<0.0002	<0.005	<0.001	0.247	1.14	1.39
			4/24/2017	1.38	0.00303	<0.002	0.076	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	0.0158	<0.0002	<0.005	<0.001	0.192	0.112	0.304
	x		4/24/2017	0.813	0.00308	<0.002	0.0767	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	0.015	<0.0002	<0.005	<0.001	0.2	0.127	0.326
			6/15/2017	<0.5	0.00282	<0.002	0.0828	<0.001	<0.0005	<0.005	<0.0005	0.000721	<0.05	0.0106	<0.0002	<0.005	<0.001	0.164	0.354	0.518
			7/12/2017	<0.5	0.00266	<0.002	0.0837	<0.001	<0.0005	<0.005	<0.0005	0.000949	<0.05	0.0174	<0.0002	<0.005	<0.001	0.0861	0.394	0.48
MW3		d																		
			3/14/2016	0.168	<0.001	0.00762	0.253	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	0.00293	<0.0002	<0.005	<0.001	0.218	0.503	0.721
	x		3/14/2016	<0.5	<0.001	0.00634	0.252	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	0.00318	<0.0002	<0.005	<0.001	0.0993	0.2	0.299
			6/3/2016	<0.5	<0.001	0.0191	0.362	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	0.00377	<0.0002	<0.005	<0.001	0.275	0.673	0.948
			8/31/2016	<0.5	<0.001	0.0103	0.211	<0.001	<0.0005	<0.005	<0.0005	0.000692	<0.05	0.00301	<0.0002	<0.005	<0.001	0.906	0.0183	0.924
			11/17/2016	1.28	<0.001	0.0113	0.234	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.002	<0.0002	<0.005	<0.001	0.207	0.239	0.446
			2/15/2017	5.11	0.00111	0.0066	0.281	<0.001	<0.0005	<0.005	0.00051	<0.0005	<0.05	0.0176	<0.0002	<0.005	<0.001	0.252	0.364	0.616
			4/24/2017	2.87	<0.001	0.00892	0.174	<0.001	<0.0005	<0.005	0.00216	0.000691	<0.05	0.00677	<0.0002	<0.005	<0.001	0.329	0.0521	0.381
			6/15/2017	<0.5	<0.001	0.0101	0.225	<0.001	<0.0005	<0.005	0.00103	0.00103	<0.05	0.00298	<0.0002	<0.005	<0.001	0.26	0.262	0.521
	x		6/15/2017	<0.5	<0.001	0.011	0.215	<0.001	<0.0005	<0.005	0.000737	0.000859	<0.05	0.00348	<0.0002	<0.005	<0.001	0.202	0.283	0.484
			7/12/2017	<0.5	<0.001	0.00286	0.267	<0.001	<0.0005	<0.005	0.000806	0.000913	<0.05	0.00206	<0.0002	<0.005	<0.001	0.294	0.635	0.928
MW4		d																		
			3/14/2016	0.213	<0.001	<0.002	0.276	<0.001	<0.0005	<0.005	<0.0005	0.00065	<0.05	0.00239	<0.0002	<0.005	<0.001	0.189	0.374	0.563
			6/3/2016	<0.5	<0.001	<0.002	0.288	<0.001	<0.0005	<0.005	<0.0005	0.000737(B)	<0.05	0.00252	<0.0002	<0.005	<0.001	0.317	0.422	0.739
			8/31/2016	0.646	<0.001	<0.002	0.296	<0.001	<0.0005	<0.005	<0.0005	0.00162	<0.05	0.00597	<0.0002	<0.005	<0.001	0.378	0.665	1.04
			11/17/2016	1.28	<0.001	<0.002	0.284	<0.001	<0.0005	<0.005	<0.0005	0.000536	<0.05	0.00393	<0.0002	<0.005	<0.001	0.37	0.659	1.03
			2/15/2017	2.43	<0.001	<0.002	0.272	<0.001	<0.0005	<0.005	0.000584	0.00196	<0.05	0.00224	<0.0002	<0.005	<0.001	0.214	0.433	0.647
			4/24/2017	1.08	<0.001	<0.002	0.287	<0.001	<0.0005	<0.005	<0.0005	0.000802	<0.05	0.00422	<0.0002	<0.005	<0.001	0.387	0.692	1.08
			6/15/2017	<0.5	<0.001	<0.002	0.249	<0.001	<0.0005	<0.005	0.000521	0.00165	<0.05	0.00233	<0.0002	<0.005	<0.001	0.349	0.937	1.29
			7/12/2017	<0.5	<0.001	<0.002	0.232	<0.001	<0.0005	<0.005	<0.0005	0.000549	<0.05	0.00587	<0.0002	<0.005	<0.001	0.199	1.22	1.42
MW5		d																		
			3/14/2016	<0.5	<0.001	<0.002	0.0295	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	0.0237	<0.0002	<0.005	<0.001	0.0829	0.236	0.318
			6/3/2016	<0.5	<0.001	0.00291	0.0384	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	0.0243	<0.0002	<0.005	<0.001	0.041	0.313	0.354
			8/31/2016	<0.5	<0.001	<0.002	0.0414	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	0.0204	<0.0002	<0.005	<0.001	0.102	0.262	0.365
			11/17/2016	1.89	<0.001	0.00218	0.0558	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	0.0168	<0.0002	<0.005	<0.001	0.194	0.282	0.476
			2/15/2017	0.591	<0.001	<0.002	0.0335	<0.001	<0.0005	<0.005	<0.0005	0.00088	<0.05	0.00818	<0.0002	<0.005	<0.001	0.0493	0.0564	0.106
			4/24/2017	1.25	<0.001	0.00236	0.0366	<0.001	<0.0005	<0.005	<0.0005	0.000734	<0.05	0.0125	<0.0002	<0.005	<0.001	0.108	0.0277	0.136
			6/15/2017	<0.5	<0.001	0.00207	0.0416	<0.001	<0.0005	<0.005	<0.0005	0.000601	<0.05	0.012	0.0002	<0.005	<0.001	0.0958	0.169	0.265
			7/12/2017	<0.5	<0.001	0.0022	0.0484	<0.001	<0.0005	<0.005	<0.0005	0.000584	<0.05	0.0167	<0.0002	<0.005	<0.001	0.0916	0.415	0.507

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS FOR APPENDIX IV CONSTITUENTS

NEBRASKA CITY STATION UNIT 2

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)	Molybdenum (mg/L)	Mercury (mg/L)	Selenium (mg/L)	Thallium (mg/L)	Ra-226 (pCi/L)	Ra-228 (pCi/L)	Ra 226+228 (pCi/L)
MW6		d																		
			3/14/2016	<0.5	<0.001	<0.002	0.0818	<0.001	<0.0005	0.00629	<0.0005	<0.0005	<0.05	0.021	<0.0002	0.00645	<0.001	0.145	0.248	0.392
			6/3/2016	<0.5	<0.001	<0.002	0.0823	<0.001	<0.0005	0.00535	<0.0005	<0.0005	<0.05	0.0593	<0.0002	<0.005	<0.001	0.155	0.448	0.603
			8/31/2016	<0.5	<0.001	<0.002	0.122	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	0.0677	<0.0002	<0.005	<0.001	0.264	0.764	1.03
			11/17/2016	6.53	<0.001	<0.002	0.109	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	0.0455	<0.0002	<0.005	<0.001	0.144	1.33	1.48
			2/15/2017	<0.5	<0.001	<0.002	0.0948	<0.001	<0.0005	<0.005	<0.0005	0.000901	<0.05	0.0265	<0.0002	<0.005	<0.001	0.174	0.256	0.429
			4/24/2017	1.71	<0.001	<0.002	0.0791	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	0.041	<0.0002	<0.005	<0.001	0.164	0.261	0.425
			6/15/2017	<0.5	<0.001	<0.002	0.105	<0.001	<0.0005	0.00501	<0.0005	0.00329	<0.05	0.0354	<0.0002	<0.005	<0.001	0.267	0.374	0.641
			7/12/2017	<0.5	<0.001	<0.002	0.0916	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	0.0419	<0.0002	<0.005	<0.001	0.104	0.845	0.949
MW7		d																		
			3/14/2016	0.312	<0.001	0.0994	0.687	<0.001	<0.0005	<0.005	0.000794	<0.0005	0.0602	<0.002	<0.0002	<0.005	<0.001	0.606	0.821	1.43
			6/3/2016	<0.5	<0.001	0.0529	0.591	<0.001	<0.0005	<0.005	<0.0005	0.00166(B)	0.0542	<0.002	<0.0002	<0.005	<0.001	0.587	0.555	1.14
			8/31/2016	<0.5(F1)	<0.001	0.0418	0.526	<0.001	<0.0005	<0.005	0.000681	<0.0005	0.0581	<0.002	<0.0002	<0.005	<0.001	0.602	0.244	0.847
	x		8/31/2016	<0.5	<0.001	0.0442	0.539	<0.001	<0.0005	<0.005	0.000739	<0.0005	0.0606	<0.002	<0.0002	<0.005	<0.001	0.61	0.683	1.29
			11/17/2016	0.544	<0.001	0.0473	0.544	<0.001	<0.0005	<0.005	<0.0005	<0.0005	0.0613	<0.002	<0.0002	<0.005	<0.001	0.208	0.643	0.851
			2/15/2017	<0.5	<0.001(F1)	0.0608(F1)	0.558	<0.001	<0.0005	<0.005	0.000639	<0.0005	0.0638	<0.002	<0.0002	<0.005	<0.001	0.443	0.302	0.745
	x		2/15/2017	<0.5	<0.001	0.0606	0.554	<0.001	<0.0005	<0.005	0.000639	<0.0005	0.0618	<0.002	<0.0002	<0.005	<0.001	0.41	0.11	0.52
			4/24/2017	1.35	<0.001	0.0592	0.614	<0.001	<0.0005	<0.005	0.000629	<0.0005	0.0624	<0.002	<0.0002	<0.005	<0.001	0.626	0.418	1.04
			6/15/2017	<0.5	<0.001	0.0469	0.538	<0.001	<0.0005	<0.005	<0.0005	<0.0005	0.0579	<0.002	<0.0002	<0.005	<0.001	0.352	0.463	0.815
			7/12/2017	<0.5	<0.001	0.041	0.501	<0.001	<0.0005	<0.005	<0.0005	<0.0005	0.0602	<0.002	<0.0002	<0.005	<0.001	0.408	0.747	1.15
	x		7/12/2017	<0.5	<0.001	0.0409	0.495	<0.001	<0.0005	<0.005	<0.0005	<0.0005	0.0611	<0.002	<0.0002	<0.005	<0.001	0.389	0.858	1.25
MW13		d																		
			3/14/2016	<0.5	<0.001	0.00545	0.288	<0.001	<0.0005	<0.005	0.00105	<0.0005	<0.05	<0.002	<0.0002	<0.005	<0.001	0.49	0.251	0.741
			6/3/2016	<0.5	<0.001	0.00607	0.324	<0.001	<0.0005	<0.005	0.00122	0.000704(B)	<0.05	0.00216	<0.0002	<0.005	<0.001	0.393	0.617	1.01
			8/31/2016	<0.5	<0.001	0.00623	0.342	<0.001	<0.0005	<0.005	0.00107	<0.0005	<0.05	0.00258	<0.0002	<0.005	<0.001	0.6	0.492	1.09
			11/17/2016	0.803	<0.001	0.00515	0.322	<0.001	<0.0005	<0.005	0.000873	0.00089	<0.05	0.00221	<0.0002	<0.005	<0.001	0.389	0.977	1.37
			2/15/2017	<0.5	<0.001	0.00289	0.321	<0.001	<0.0005	<0.005	0.000883	<0.0005	<0.05	0.00207	<0.0002	<0.005	<0.001	0.32	0.087	0.407
			4/24/2017	0.789	<0.001	0.0024	0.336	<0.001	<0.0005	<0.005	0.00135	0.000516	<0.05	<0.002	<0.0002	<0.005	<0.001	0.283	0.296	0.579
			6/15/2017	<0.5	<0.001	0.00371	0.318	<0.001	<0.0005	<0.005	0.00127	<0.0005	<0.05	0.0021	<0.0002	<0.005	<0.001	0.241	0.559	0.8
			7/12/2017	<0.5	<0.001	0.00263	0.328	<0.001	<0.0005	<0.005	0.00112	<0.0005	<0.05	0.00207	<0.0002	<0.005	<0.001	0.194	1.37	1.56

mg/L = milligrams per liter

< = not detected above the reporting limit given

Well Type

u Upgradient/Background

d Downgradient

Laboratory Reported Qualifiers

(B) Compound was found in the blank and sample

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

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-2	Date: 3/14/2016
Sample Number: MW-2	Weather Conditions: Cool, 45°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	10.8	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	12:06 PM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	17.61	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:14
5.) Casing Volume (L)	4.2049	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	12:07 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)
12:17 PM	2.00	14.16	4.80	3	6.80	1.229	10.89
12:19 PM	2.50	14.17	4.78	3	6.80	1.227	10.89
12:21 PM	3.00	14.17	4.70	3	6.80	1.227	10.89

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	12:21 PM	14.17	4.70	3.00	6.80	1.227	10.89

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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-3	Date: 3/14/2016
Sample Number: MW-3	Weather Conditions: Cool, 45°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	4.05	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)	16	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:14
5.) Casing Volume (L)	7.3787	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	11:35 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)
11:45 AM	2.00	9.41	0.27	33	7.08	0.388	4.07
11:47 AM	2.50	9.40	0.26	21	7.06	0.388	4.07
11:49 AM	3.00	9.40	0.25	14	7.05	0.388	4.07

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	9.40	0.25	14.00	7.05	0.388	4.07
DUP	11:51 AM	9.40	0.25	14.00	7.05	0.39	4.07

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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-4	Date: 3/14/2016
Sample Number: MW-4	Weather Conditions: Cool, 45°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	9:36 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)	0:14
5.) Casing Volume (L)	4.6927	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	9:38 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)
9:48 AM	2.00	10.52	4.65	9	6.84	0.651	7.30
9:50 AM	2.50	10.39	4.68	8	6.84	0.650	7.30
9:52 AM	3.00	10.34	4.67	8	6.84	0.649	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)
MW-4	9:52 AM	10.34	4.67	8.00	6.84	0.649	7.30

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		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-5	Date: 3/14/2016
Sample Number: MW-5	Weather Conditions: Cool, 45°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	6.97	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)	15.8	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:16
5.) Casing Volume (L)	5.4522	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	10:11 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)
10:23 AM	3.00	8.92	1.58	4	7.12	1.279	7.23
10:25 AM	3.50	8.84	1.60	3	7.12	1.273	7.23
10:27 AM	4.00	8.85	1.62	3	7.12	1.266	7.23

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-5	10:27 AM	8.85	1.62	3.00	7.12	1.266	7.23

1.) Sample Equipment Used	Pump	Other Information	CPM-1 58/2 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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-6	Date: 3/14/2016
Sample Number: MW-6	Weather Conditions: Cool, 45°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	10:47 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)	0:26
5.) Casing Volume (L)	4.0444	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	6.50	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	10:50 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)
11:10 AM	5.00	9.30	2.49	56	7.23	0.725	8.21
11:12 AM	5.50	9.35	2.54	40	7.22	0.725	8.22
11:14 AM	6.00	9.40	2.56	32	7.21	0.725	8.21
11:16 AM	6.50	9.37	2.58	20	7.21	0.724	8.21

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-6	11:16 AM	9.37	2.58	20.00	7.21	0.724	8.21

1.) Sample Equipment Used	Pump	Other Information	CPM-2 28/2 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	Ants on top of well head	

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-7	Date: 3/14/2016
Sample Number: MW-7	Weather Conditions: Cool, 45°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	7.05	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)	24.1	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:25
5.) Casing Volume (L)	10.5278	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	12:36 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)
12:55 PM	4.00	14.21	1.20	39	6.92	0.752	7.17
12:57 PM	4.50	14.32	1.31	22	6.93	0.755	7.17
12:59 PM	5.00	14.36	1.28	19	6.92	0.759	7.17
1:01 PM	5.50	14.31	1.27	16	6.92	0.759	7.17

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-7	1:01 PM	14.31	1.27	16.00	6.92	0.759	7.17

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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-13	Date: 3/14/2016
Sample Number: MW-13	Weather Conditions: Cool, 45°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	4.75	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	9:00 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	15.19	10.) Purge Rate (mL/min)	150
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:14
5.) Casing Volume (L)	6.4463	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	2.00	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	9:06 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)
9:16 AM	1.00	10.81	0.60	6	7.02	0.536	4.73
9:18 AM	1.50	10.87	0.53	5	6.98	0.525	4.73
9:20 AM	2.00	10.93	0.48	5	6.97	0.523	4.73

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	9:20 AM	10.93	0.48	5.00	6.97	0.523	4.73

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		

NEBRASKA CITY UNIT #2

Water Levels Prior to Sampling

	Time	Water Level
MW-2	8:38 AM	10.8
MW-3	8:13 AM	4.05
MW-4	8:20 AM	6.91
MW-5	8:26 AM	6.98
MW-6	8:30 AM	7.95
MW-7	8:50 AM	7.04
MW-13	8:17 AM	4.75

Equipment Calibration Sheet

Date: 3/14/2016
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	1.01	Ntu
<10.0 Primary Standard	10.03	Ntu

Comments:

Equipment Calibration Sheet

Date: 3/14/2016
Time: 7:35 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	7.05	to	7.01	22.80°C	N/A
pH 4	4.04	to	4.01	22.72°C	N/A
pH 10	10.08	to	10.02	22.79°C	N/A
Conductivity	0.95	to	1.002	22.65°C	µS
DO (Start)	99.7%	Saturation	9.50mg/L	21.84°C	mg/L
DO (Cal)	99.2%	Saturation	8.90mg/L	21.77°C	mg/L

Comments:

.

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-2	Date: 6/3/2016
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)	8.95	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	12:02 PM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	17.61	10.) Purge Rate (mL/min)	150
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	29
5.) Casing Volume (L)	5.3472	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	12:05 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)
12:20 PM	4.00	16.26	2.65	5	6.80	0.933	9.20
12:22 PM	4.50	16.32	2.63	5	6.80	0.933	9.20
12:24 PM	5.00	16.31	2.65	5	6.79	0.933	9.20

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-2	12:24 PM	16.31	2.65	5	6.79	0.933	9.20
DUP	12:26 PM	16.31	2.65	5	6.79	0.933	9.20

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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-3	Date: 6/3/2016
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)	2.55	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	11:20 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	16	10.) Purge Rate (mL/min)	400
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	16
5.) Casing Volume (L)	8.3049	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	11:25 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)
11:37 AM	4.00	13.60	0.37	6	7.26	0.549	2.97
11:39 AM	5.00	13.56	0.36	5.5	7.17	0.546	2.98
11:41 AM	6.00	13.49	0.35	5.5	7.14	0.551	2.99

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	11:41 AM	13.49	0.35	5.5	7.14	0.551	2.99

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	400 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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-4	Date: 6/3/2016
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)	5.6	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	9:25 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)	5.4954	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	9:26 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)
9:37 AM	3.00	13.74	2.10	7.5	6.92	0.649	5.65
9:39 AM	3.50	14.03	2.15	6.5	6.91	0.650	5.65
9:41 AM	4.00	13.95	2.11	5	6.90	0.650	5.65

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	9:41 AM	13.95	2.11	5	6.90	0.650	5.65

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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-5	Date: 6/3/2016
Sample Number: MW-5	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)	7.68	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	9:58 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	15.8	10.) Purge Rate (mL/min)	300
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	16
5.) Casing Volume (L)	5.0138	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	10:00 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)
10:12 AM	4.00	17.83	0.34	4	7.01	1.428	7.76
10:14 AM	4.50	17.79	0.42	4	7.01	1.417	7.76
10:16 AM	5.00	17.83	0.39	4	7.01	1.406	7.76

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-5	10:16 AM	17.83	0.39	4	7.01	1.406	7.76

1.) Sample Equipment Used	Pump	Other Information	CPM-1 58/2 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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-6	Date: 6/3/2016
Sample Number: MW-6	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)	6.03	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)	14.5	10.) Purge Rate (mL/min)	300
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	18
5.) Casing Volume (L)	5.2299	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	10:34 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)
10:48 AM	4.00	14.64	3.86	20	7.26	0.563	6.22
10:50 AM	4.50	14.61	3.81	15.5	7.28	0.564	6.20
10:52 AM	5.00	14.64	3.84	14	7.27	0.564	6.20

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-6	10:52 AM	14.64	3.84	14	7.27	0.564	6.20

1.) Sample Equipment Used	Pump	Other Information	CPM-2 28/2 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	Ants on top of well head	

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-7	Date: 6/3/2016
Sample Number: MW-7	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)	4.8	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	12:42 PM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	24.1	10.) Purge Rate (mL/min)	300
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	16
5.) Casing Volume (L)	11.9170	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	12:58 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)
1:10 PM	4.00	13.56	0.32	22	7.46	0.667	5.22
1:12 PM	4.50	13.60	0.28	19	7.34	0.665	5.24
1:14 PM	5.00	13.71	0.25	18.5	7.28	0.665	5.22

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-7	1:14 PM	13.71	0.25	18.5	7.28	0.665	5.22

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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-13	Date: 6/3/2016
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)	3.5	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	8:46 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)	14
5.) Casing Volume (L)	7.2181	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	8:55 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)
9:05 AM	2.00	14.48	0.48	7	7.17	0.462	3.71
9:07 AM	2.50	14.44	0.45	6.5	7.13	0.460	3.72
9:09 AM	3.00	14.36	0.43	6	7.11	0.460	3.71

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	9:09 AM	14.36	0.43	6	7.11	0.460	3.71

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 #2

Water Levels Prior to Sampling

	Time	Water Level
MW-2	8:36	8.96
MW-3	8:38	2.55
MW-4	8:21	5.62
MW-5	8:32	7.67
MW-6	8:29	6.02
MW-7	8:40	4.80
MW-13	8:15	3.51

Equipment Calibration Sheet

Date: 6/3/2016
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	10.03	Ntu

Comments:

Equipment Calibration Sheet

Date: 6/3/2016
Time: 7:30 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 7.00	22.49°C	N/A
pH 4	3.97 to 4.0	22.32°C	N/A
pH 10	9.98 to 10.0	22.44°C	N/A
Conductivity	0.969 to 1.00	22.29°C	µS
DO (Start)	99.2% Saturation 9.36mg/L	21.50°C	mg/L
DO (Cal)	98.5% Saturation 8.50mg/L	21.53°C	mg/L

Comments:

.

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-2	Date: 8/31/2016
Sample Number: MW-2	Weather Conditions: Sunny, Clear, 88°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	8.9	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	1:00 PM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	17.61	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:14
5.) Casing Volume (L)	5.3781	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	1:05 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)
1:15 PM	2.00	26.58	0.95	6	7.04	1.032	9.10
1:17 PM	2.50	26.47	0.89	5	7.03	1.032	9.10
1:19 PM	3.00	26.52	0.83	5	7.04	1.032	9.10

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-2	1:19 PM	26.52	0.83	5.00	7.04	1.032	9.10

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		

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-3	Date: 8/31/2016
Sample Number: MW-3	Weather Conditions: Sunny, Clear, 88°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	2.3	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	12:06 PM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	16	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:16
5.) Casing Volume (L)	8.4593	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	12:28 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)
12:40 PM	3.00	23.46	0.24	10	7.12	0.416	2.35
12:42 PM	3.50	23.53	0.23	5	7.14	0.417	2.35
12:44 PM	4.00	23.68	0.22	5	7.18	0.414	2.35

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-3	12:44 PM	23.68	0.22	5.00	7.18	0.414	2.35

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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-4	Date: 8/31/2016
Sample Number: MW-4	Weather Conditions: Sunny, Clear, 88°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	5.05	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:35 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)	0:16
5.) Casing Volume (L)	5.8350	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	10:36 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)
10:48 AM	2.00	17.96	2.30	10	7.15	0.722	5.26
10:50 AM	2.50	17.67	2.21	8	7.18	0.718	5.26
10:52 AM	3.00	17.75	2.18	8	7.20	7.140	5.26

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	10:52 AM	17.75	2.18	8.00	7.20	7.140	5.26

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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-5	Date: 8/31/2016
Sample Number: MW-5	Weather Conditions: Sunny, Clear, 88°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	5.3	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	11:13 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	15.8	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:16
5.) Casing Volume (L)	6.4834	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	11:14 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)
11:26 AM	2.00	22.01	1.40	15	7.09	1.421	5.38
11:28 AM	2.50	22.10	1.38	10	7.10	1.423	5.38
11:30 AM	3.00	22.18	1.32	9	7.11	1.423	5.38

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-5	11:30 AM	22.18	1.32	9.00	7.11	1.423	5.38

1.) Sample Equipment Used	Pump	Other Information	CPM-1 58/2 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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-6	Date: 8/31/2016
Sample Number: MW-6	Weather Conditions: Sunny, Clear, 88°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	5.95	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	11:38 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)	0:16
5.) Casing Volume (L)	5.2793	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	11:39 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)
11:51 AM	2.00	18.93	3.98	16	7.43	0.713	6.05
11:53 AM	2.50	18.99	3.90	15	7.42	0.712	6.05
11:55 AM	3.00	19.10	3.85	15	7.43	0.709	6.05

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-6	11:55 AM	19.10	3.85	15.00	7.43	0.709	6.05

1.) Sample Equipment Used	Pump	Other Information	CPM-2 28/2 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	Ants on top of well head	

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-7	Date: 8/31/2016
Sample Number: MW-7	Weather Conditions: Sunny, Clear, 88°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	5.4	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	1:45 PM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	24.1	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:18
5.) Casing Volume (L)	11.5466	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	1:46 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)
1:58 PM	2.50	24.51	0.70	20	7.53	0.791	5.45
2:00 PM	3.00	24.68	0.64	19	7.54	0.788	5.45
2:02 PM	3.50	24.71	0.59	17	7.57	0.788	5.45
2:04 PM	4.00	24.73	0.57	14	7.55	0.787	5.45

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-7	2:04 PM	24.73	0.57	14.00	7.55	0.787	5.45
DUP	2:06 PM	24.73	0.57	14.00	7.55	0.79	5.45

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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-13	Date: 8/31/2016
Sample Number: MW-13	Weather Conditions: Sunny, Clear, 88°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	2.85	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	9:52 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)	0:14
5.) Casing Volume (L)	7.6195	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	9:58 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	1.50	18.49	0.88	12	7.69	0.513	3.01
10:10 AM	2.00	18.51	0.87	10	7.70	0.511	3.01
10:12 AM	2.50	18.50	0.85	8	7.71	0.511	3.10

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	10:12 AM	18.50	0.85	8.00	7.71	0.511	3.10

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 #2

Water Levels Prior to Sampling

	Time	Water Level
MW-2	9:46 AM	8.91
MW-3	9:44 AM	2.31
MW-4	9:34 AM	5.05
MW-5	9:40 AM	5.3
MW-6	9:38 AM	5.95
MW-7	9:49 AM	5.40
MW-13	9:31 AM	2.85

Equipment Calibration Sheet

Date: 8/31/2016
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	0.08	Ntu
1.0 Primary Standard	1.04	Ntu
<10.0 Primary Standard	10.02	Ntu

Comments:

Equipment Calibration Sheet

Date: 8/31/2016
Time: 7:35 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	22.85°C	N/A
pH 4	4.04	to	4.01	22.70°C	N/A
pH 10	10.05	to	10.02	22.80°C	N/A
Conductivity	1.00	to	1.005	22.75°C	µS
DO (Start)	99.8%	Saturation	9.50mg/L	21.82°C	mg/L
DO (Cal)	99.2%	Saturation	8.90mg/L	21.76°C	mg/L

Comments:

.

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-2	Date: 11/17/2016
Sample Number: MW-2	Weather Conditions: Sunny, Clear, 45°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	10.9	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:48 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	17.61	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	16
5.) Casing Volume (L)	4.1432	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	10:50 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)
11:00 AM	2.00	18.80	1.10	5	7.23	1.099	11.18
11:02 AM	2.50	18.75	1.14	5	7.22	1.098	11.19
11:04 AM	3.00	18.70	1.13	5	7.22	1.098	11.19
11:06 AM	3.50	18.69	1.08	5	7.23	1.097	11.19

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	11:06 AM	18.69	1.08	5	7.23	1.097	11.19
DUP	11:08 AM	18.69	1.08	5	7.23	1.097	11.19

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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-3	Date: 11/17/2016
Sample Number: MW-3	Weather Conditions: Sunny, Clear, 45°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	4.1	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)	16	10.) Purge Rate (mL/min)	350
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	14
5.) Casing Volume (L)	7.3478	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	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)
10:35 AM	4.00	16.30	0.75	9	7.36	0.428	4.35
10:37 AM	4.50	16.22	0.70	8	7.34	0.428	4.35
10:39 AM	5.00	16.19	0.69	5	7.32	0.428	4.35

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-3	10:39 AM	16.19	0.69	5	7.32	0.428	4.35

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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-4	Date: 11/17/2016
Sample Number: MW-4	Weather Conditions: Sunny, Clear, 45°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	6.8	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	8:30 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)	14
5.) Casing Volume (L)	4.7545	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	8:35 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)
8:45 AM	2.50	15.50	1.95	12	7.20	0.810	6.92
8:47 AM	3.00	15.61	1.90	10	7.19	0.800	6.92
8:49 AM	3.50	15.67	1.87	10	7.19	0.801	6.92

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	8:49 AM	15.67	1.87	10	7.19	0.801	6.92

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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-5	Date: 11/17/2016
Sample Number: MW-5	Weather Conditions: Sunny, Clear, 45°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	9.25	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	9:12 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	15.8	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	15
5.) Casing Volume (L)	4.0444	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	9:15 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)
9:26 AM	2.50	15.79	1.68	12	7.60	1.212	9.29
9:28 AM	3.00	15.72	1.61	12	7.55	1.210	9.30
9:30 AM	3.50	15.68	1.58	10	7.54	1.210	9.30

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-5	9:30 AM	15.68	1.58	10	7.54	1.210	9.30

1.) Sample Equipment Used	Pump	Other Information	CPM-1 58/2 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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-6	Date: 11/17/2016
Sample Number: MW-6	Weather Conditions: Sunny, Clear, 45°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	9:42 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)	3.9518	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	9:44 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)
9:55 AM	2.50	16.72	2.07	14	7.64	0.691	8.17
9:57 AM	3.00	16.67	2.05	14	7.64	0.690	8.17
9:59 AM	3.50	16.58	1.99	12	7.63	0.690	8.17

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-6	9:59 AM	16.58	1.99	12	7.63	0.690	8.17

1.) Sample Equipment Used	Pump	Other Information	CPM-2 28/2 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	Ants on top of well head	

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-7	Date: 11/17/2016
Sample Number: MW-7	Weather Conditions: Sunny, Clear, 45°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	11:45 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	24.1	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	15
5.) Casing Volume (L)	10.4351	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	12:58 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)
11:59 AM	3.00	17.92	0.55	15	7.80	0.757	7.32
12:01 PM	3.50	17.88	0.53	12	7.77	0.758	7.33
12:02 PM	4.00	17.80	0.50	10	7.77	0.757	7.33

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-7	12:02 PM	17.80	0.50	10	7.77	0.757	7.33

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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-13	Date: 11/17/2016
Sample Number: MW-13	Weather Conditions: Sunny, Clear, 45°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	4.4	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	8:00 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)	14
5.) Casing Volume (L)	6.6624	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	8:05 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)
8:15 AM	2.00	15.60	0.95	10	7.80	0.712	4.51
8:17 AM	2.50	15.72	0.94	10	7.78	0.710	4.52
8:19 AM	3.00	15.81	0.90	9	7.79	0.704	4.52

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	8:19 AM	15.81	0.90	9	7.79	0.704	4.52

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 #2

Water Levels Prior to Sampling

	Time	Water Level
MW-2	7:51	10.9
MW-3	7:50	4.1
MW-4	7:58	6.8
MW-5	7:48	9.25
MW-6	7:46	8.1
MW-7	7:52	7.20
MW-13	8:00	4.4

Equipment Calibration Sheet

Date: 11/17/2016
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	0.11	Ntu
1.0 Primary Standard	1.04	Ntu
<10.0 Primary Standard	10.04	Ntu

Comments:

Equipment Calibration Sheet

Date: 11/17/2016
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	7.05 to 7.00	21.90°	N/A
pH 4	4.01 to 4.0	21.75°	N/A
pH 10	10.04 to 10.0	21.68°	N/A
Conductivity	0.981 to 1.00	21.38°	µS
DO (Start)	99.9% Saturation 9.89mg/L	22.15°	mg/L
DO (Cal)	93.4% Saturation 9.80 mg/L	20.14°	mg/L

Comments:

.

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-2	Date: 2/15/2017
Sample Number: MW-2	Weather Conditions: Sunny, Cold, 40°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	11.7	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)	17.61	10.) Purge Rate (mL/min)	300
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:18
5.) Casing Volume (L)	3.6492	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	11:18 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)
11:32 AM	4.00	13.38	1.80	8	7.29	0.972	11.83
11:34 AM	4.50	13.40	1.75	8	7.29	0.975	11.85
11:36 AM	5.00	13.35	1.72	6	7.28	0.976	11.85

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-2	11:36 AM	13.35	1.72	6.00	7.28	0.976	11.85

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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-3	Date: 2/15/2017
Sample Number: MW-3	Weather Conditions: Sunny, Cold, 40°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	4.95	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	10.) Purge Rate (mL/min)	450
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:16
5.) Casing Volume (L)	6.8230	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	7.00	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	10:42 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)
10:54 AM	6.00	8.80	1.19	12	7.10	0.277	5.10
10:56 AM	6.50	8.78	1.15	12	7.08	0.275	5.15
10:58 AM	7.00	8.85	1.14	12	7.09	0.279	5.18

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	10:58 AM	8.85	1.14	12.00	7.09	0.279	5.18

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	450 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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-4	Date: 2/15/2017
Sample Number: MW-4	Weather Conditions: Sunny, Cold, 40°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	7.5	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	9:21 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)	0:16
5.) Casing Volume (L)	4.3222	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	9:22 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	3.00	7.15	2.51	10	7.61	0.539	7.68
9:36 AM	3.50	7.20	2.45	10	7.63	0.540	7.69
9:38 AM	4.00	7.18	2.39	10	7.63	0.542	7.70

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)
MW-4	9:38 AM	7.18	2.39	10.00	7.63	0.542	7.70

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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-5	Date: 2/15/2017
Sample Number: MW-5	Weather Conditions: Sunny, Cold, 40°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	10.2	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)	15.8	10.) Purge Rate (mL/min)	300
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:17
5.) Casing Volume (L)	3.4578	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	9:47 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)
10:00 AM	4.00	7.04	2.56	11	7.35	0.930	10.37
10:02 AM	4.50	7.03	2.50	10	7.33	0.936	10.39
10:04 AM	5.00	7.04	2.45	10	7.30	0.934	10.40

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-5	10:04 AM	7.04	2.45	10.00	7.30	0.934	10.40

1.) Sample Equipment Used	Pump	Other Information	CPM-1 58/2 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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-6	Date: 2/15/2017
Sample Number: MW-6	Weather Conditions: Sunny, Cold, 40°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	9	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:18 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	14.5	10.) Purge Rate (mL/min)	650
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:08
5.) Casing Volume (L)	3.3960	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	10:20 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	4.00	7.85	2.44	12	7.80	0.531	9.30
10:26 AM	4.50	7.90	2.40	10	7.76	0.534	9.28
10:28 AM	5.00	7.92	2.35	10	7.77	0.539	9.28

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-6	10:28 AM	7.92	2.35	10.00	7.77	0.539	9.28

1.) Sample Equipment Used	Pump	Other Information	CPM-2 28/2 20 psi
2.) Pump Rate (mL/Min)	650 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	Ants on top of well head	

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-7	Date: 2/15/2017
Sample Number: MW-7	Weather Conditions: Sunny, Cold, 40°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	11:50 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	24.1	10.) Purge Rate (mL/min)	300
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:17
5.) Casing Volume (L)	9.8485	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	11:52 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)
12:05 PM	4.00	12.94	0.29	12	7.58	0.673	8.29
12:07 PM	4.50	12.90	0.29	11	7.55	0.670	8.31
12:09 PM	5.00	12.92	0.29	11	7.55	0.670	8.30

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-7	12:09 PM	12.92	0.29	11.00	7.55	0.670	8.30
DUP	12:11 PM	12.92	0.29	11.00	7.55	0.67	8.30

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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-13	Date: 2/15/2017
Sample Number: MW-13	Weather Conditions: Sunny, Cold, 40°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	5.21	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	8:49 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)	6.1623	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	8:50 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	3.00	7.20	1.97	9	7.19	0.420	5.39
9:04 AM	3.50	7.15	1.95	9	7.20	0.419	5.40
9:06 AM	4.00	7.10	1.90	8	7.21	0.419	5.41

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-13	9:06 AM	7.10	1.90	8.00	7.21	0.419	5.41

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 #2

Water Levels Prior to Sampling

	Time	Water Level
MW-2	8:36 AM	11.7
MW-3	8:34 AM	4.95
MW-4	8:23 AM	7.5
MW-5	8:28 AM	10.2
MW-6	8:29 AM	9
MW-7	8:38 AM	8.15
MW-13	8:20 AM	5.21

Equipment Calibration Sheet

Date: 2/15/2017
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	0.10	Ntu
1.0 Primary Standard	1.02	Ntu
<10.0 Primary Standard	10.02	Ntu

Comments:

Equipment Calibration Sheet

Date: 2/15/2017
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	7.03	to	7	22.84°C	N/A
pH 4	4.05	to	4.01	22.80°C	N/A
pH 10	10.07	to	10.03	22.79°C	N/A
Conductivity	0.99	to	1.002	22.78°C	µS
DO (Start)	99.4%	Saturation	9.50mg/L	21.69°C	mg/L
DO (Cal)	99.1%	Saturation	8.80mg/L	21.73°C	mg/L

Comments:

.

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-2	Date: 4/24/2017
Sample Number: MW-2	Weather Conditions: Sunny, Clear, 72°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	9.85	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)	17.61	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	18
5.) Casing Volume (L)	4.7915	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	12:27 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)
12:41 PM	3.00	14.71	1.20	8	7.20	0.690	10.07
12:43 PM	3.50	14.68	1.18	7	7.21	0.701	10.05
12:45 PM	4.00	14.65	1.17	7	7.21	0.720	10.05

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	12:45 PM	14.65	1.17	7	7.21	0.720	10.05
DUP	12:47 PM	14.65	1.17	7	7.21	0.720	10.05

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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-3	Date: 4/24/2017
Sample Number: MW-3	Weather Conditions: Sunny, Clear, 72°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	3.2	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)	16	10.) Purge Rate (mL/min)	300
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	16
5.) Casing Volume (L)	7.9035	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	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)
11:54 AM	4.00	13.54	0.45	5	7.66	0.582	3.50
11:56 AM	4.50	13.57	0.44	5	7.62	0.580	3.49
11:58 AM	5.00	13.59	0.41	5	7.68	0.582	3.49

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	11:58 AM	13.59	0.41	5	7.68	0.582	3.49

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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-4	Date: 4/24/2017
Sample Number: MW-4	Weather Conditions: Sunny, Clear, 72°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	6.1	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	9:44 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)	5.1867	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	9:45 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)
9:56 AM	3.00	11.45	1.95	7	7.09	0.701	6.25
9:58 AM	3.50	11.52	1.90	7	7.09	0.687	6.25
10:00 AM	4.00	11.54	1.87	7	7.08	0.680	6.25

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	10:00 AM	11.54	1.87	7	7.08	0.680	6.25

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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-5	Date: 4/24/2017
Sample Number: MW-5	Weather Conditions: Sunny, Clear, 72°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	8.4	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:19 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	15.8	10.) Purge Rate (mL/min)	300
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	16
5.) Casing Volume (L)	4.5692	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	10:20 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)
10:32 AM	3.50	11.93	0.64	5	7.55	1.392	8.55
10:34 AM	4.00	11.95	0.60	4	7.54	1.381	8.59
10:36 AM	4.50	11.97	0.58	4	7.55	1.377	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-5	10:36 AM	11.97	0.58	4	7.55	1.377	8.60

1.) Sample Equipment Used	Pump	Other Information	CPM-1 58/2 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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-6	Date: 4/24/2017
Sample Number: MW-6	Weather Conditions: Sunny, Clear, 72°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	7	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:53 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)	16
5.) Casing Volume (L)	4.6310	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	10:54 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)
11:06 AM	3.50	11.75	4.01	24	7.71	0.467	7.32
11:08 AM	4.00	11.80	3.97	18	7.68	0.465	7.30
11:10 AM	4.50	11.84	3.86	15	7.68	0.461	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)
MW-6	11:10 AM	11.84	3.86	15	7.68	0.461	7.30

1.) Sample Equipment Used	Pump	Other Information	CPM-2 28/2 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	Ants on top of well head	

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-7	Date: 4/24/2017
Sample Number: MW-7	Weather Conditions: Sunny, Clear, 72°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	5.95	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	1:15 PM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	24.1	10.) Purge Rate (mL/min)	300
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	17
5.) Casing Volume (L)	11.2070	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	1:17 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)
1:30 PM	4.00	15.30	0.17	20	7.81	0.718	6.12
1:32 PM	4.50	15.26	0.16	15	7.83	0.720	6.11
1:34 PM	5.00	15.25	0.16	14	7.83	0.719	6.12

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-7	1:34 PM	15.25	0.16	14	7.83	0.719	6.12

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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-13	Date: 4/24/2017
Sample Number: MW-13	Weather Conditions: Sunny, Clear, 72°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	4	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	9:18 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)	16
5.) Casing Volume (L)	6.9094	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	9:20 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	2.50	10.98	0.69	8	7.29	0.499	4.28
9:34 AM	3.00	11.05	0.65	8	7.27	0.501	4.28
9:36 AM	3.50	11.01	0.60	8	7.27	0.501	4.28

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	9:36 AM	11.01	0.60	8	7.27	0.501	4.28

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 #2

Water Levels Prior to Sampling

	Time	Water Level
MW-2	8:58	9.85
MW-3	8:55	3.21
MW-4	8:44	6.11
MW-5	8:48	8.48
MW-6	8:50	7
MW-7	9:05	5.96
MW-13	8:43	4

Equipment Calibration Sheet

Date: 4/24/2017
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	10.03	Ntu

Comments:

Equipment Calibration Sheet

Date: 4/24/2017
Time: 7:30 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 7.00	22.49°C	N/A
pH 4	3.97 to 4.0	22.32°C	N/A
pH 10	9.98 to 10.0	22.44°C	N/A
Conductivity	0.969 to 1.00	22.29°C	µS
DO (Start)	99.2% Saturation 9.36mg/L	21.50°C	mg/L
DO (Cal)	98.5% Saturation 8.50mg/L	21.53°C	mg/L

Comments:

.

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-2	Date: 6/15/2017
Sample Number: MW-2	Weather Conditions: Sunny, Clear, 86°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	10.3	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	1:31 PM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	17.61	10.) Purge Rate (mL/min)	300
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:18
5.) Casing Volume (L)	4.5137	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	1:32 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)
1:46 PM	4.00	15.45	1.98	8	7.05	1.051	10.51
1:48 PM	4.50	15.40	1.95	7	7.05	1.050	10.51
1:50 PM	5.00	15.46	1.89	7	7.04	1.047	10.51

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	1:50 PM	15.46	1.89	7.00	7.04	1.047	10.51

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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-3	Date: 6/15/2017
Sample Number: MW-3	Weather Conditions: Sunny, Clear, 86°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	3.42	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	12:57 PM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	16	10.) Purge Rate (mL/min)	300
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:17
5.) Casing Volume (L)	7.7677	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	12:58 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)
1:11 PM	4.50	17.58	0.35	7	7.41	0.521	3.65
1:13 PM	5.00	17.63	0.30	7	7.37	0.520	3.65
1:15 PM	5.50	17.60	0.28	7	7.32	0.520	3.65

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	1:15 PM	17.60	0.28	7.00	7.32	0.520	3.65
DUP	1:17 PM	17.60	0.28	7.00	7.32	0.520	3.65

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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-4	Date: 6/15/2017
Sample Number: MW-4	Weather Conditions: Sunny, Clear, 86°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	11:18 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	11:20 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)
11:32 AM	3.50	16.50	1.89	12	7.15	0.699	6.84
11:34 AM	4.00	16.41	1.81	8	7.10	0.697	6.86
11:36 AM	4.50	16.45	1.78	7	7.09	0.697	6.89

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	11:36 AM	16.45	1.78	7.00	7.09	0.697	6.89

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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-5	Date: 6/15/2017
Sample Number: MW-5	Weather Conditions: Sunny, Clear, 86°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	9.82	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	11:56 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	15.8	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:17
5.) Casing Volume (L)	3.6924	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	11:57 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)
12:10 PM	3.50	18.01	0.45	5	7.18	1.498	9.98
12:12 PM	4.00	17.98	0.44	4	7.17	1.480	9.98
12:14 PM	4.50	17.95	0.44	4	7.17	1.480	9.98

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-5	12:14 PM	17.95	0.44	4.00	7.17	1.480	9.98

1.) Sample Equipment Used	Pump	Other Information	CPM-1 58/2 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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-6	Date: 6/15/2017
Sample Number: MW-6	Weather Conditions: Sunny, Clear, 86°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	12:26 PM	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)	0:18
5.) Casing Volume (L)	4.4149	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	12:27 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)
12:41 PM	4.00	17.59	3.25	19	7.38	0.610	7.50
12:43 PM	4.50	17.62	3.24	17	7.35	0.599	7.49
12:45 PM	5.00	17.65	3.15	15	7.35	0.591	7.49

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-6	12:45 PM	17.65	3.15	15.00	7.35	0.591	7.49

1.) Sample Equipment Used	Pump	Other Information	CPM-2 28/2 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	Ants on top of well head	

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-7	Date: 6/15/2017
Sample Number: MW-7	Weather Conditions: Sunny, Clear, 86°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	6.35	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	1:59 PM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	24.1	10.) Purge Rate (mL/min)	350
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:14
5.) Casing Volume (L)	10.9600	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	2:00 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)
2:10 PM	4.00	14.55	0.39	23	7.48	0.730	6.58
2:12 PM	4.50	14.67	0.41	20	7.42	0.730	6.57
2:14 PM	5.00	14.70	0.38	18	7.40	0.730	6.57

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-7	2:14 PM	14.70	0.38	18.00	7.40	0.730	6.57

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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-13	Date: 6/15/2017
Sample Number: MW-13	Weather Conditions: Sunny, Clear, 86°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	4.7	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)	15.19	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:18
5.) Casing Volume (L)	6.4772	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	10:42 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)
10:56 AM	3.50	15.91	0.49	20	7.31	0.781	4.92
10:58 AM	4.00	15.99	0.43	17	7.30	0.774	4.92
11:00 AM	4.50	16.05	0.40	16	7.28	0.769	4.92

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	11:00 AM	16.05	0.40	16.00	7.28	0.769	4.92

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 #2

Water Levels Prior to Sampling

	Time	Water Level
MW-2	10:25 AM	10.3
MW-3	10:23 AM	3.42
MW-4	10:12 AM	6.75
MW-5	10:16 AM	9.82
MW-6	10:18 AM	7.35
MW-7	10:27 AM	6.35
MW-13	10:10 AM	4.7

Equipment Calibration Sheet

Date: 4/24/2017
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	10.03	Ntu

Comments:

Equipment Calibration Sheet

Date: 6/15/2017
Time: 7:35 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	7.08	to	7.02	22.94°C	N/A
pH 4	4.06	to	4.01	22.77°C	N/A
pH 10	10.10	to	10.05	22.89°C	N/A
Conductivity	0.98	to	1.005	22.74°C	µS
DO (Start)	99.5%	Saturation	9.45mg/L	21.93°C	mg/L
DO (Cal)	99.0%	Saturation	8.78mg/L	21.96°C	mg/L

Comments:

.

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-2	Date: 7/12/2017
Sample Number: MW-2	Weather Conditions: Sunny, Clear, 86°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	10.75	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	1:12 PM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	17.61	10.) Purge Rate (mL/min)	300
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:16
5.) Casing Volume (L)	4.2358	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	1:14 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)
1:26 PM	4.00	17.20	0.70	7	7.03	0.640	10.89
1:28 PM	4.50	17.23	0.68	5	7.02	0.642	10.88
1:30 PM	5.00	17.27	0.66	5	7.03	0.642	10.88

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-2	1:30 PM	17.27	0.66	5.00	7.03	0.642	10.88

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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-3	Date: 7/12/2017
Sample Number: MW-3	Weather Conditions: Sunny, Clear, 86°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	4.25	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	9:40 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	16	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:17
5.) Casing Volume (L)	7.2552	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	9:41 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)
9:54 AM	3.50	20.00	0.68	23	8.00	0.530	4.40
9:56 AM	4.00	20.10	0.65	20	7.95	0.525	4.40
9:58 AM	4.50	20.15	0.59	17	7.99	0.527	4.40

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	9:58 AM	20.15	0.59	17.00	7.99	0.527	4.40

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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-4	Date: 7/12/2017
Sample Number: MW-4	Weather Conditions: Sunny, Clear, 86°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)	250
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)	4.50	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	3.50	17.30	1.03	11	7.90	0.670	7.25
10:44 AM	4.00	17.25	0.97	9	7.90	0.662	7.25
10:46 AM	4.50	17.28	0.91	8	7.88	0.662	7.25

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	10:46 AM	17.28	0.91	8.00	7.88	0.662	7.25

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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-5	Date: 7/12/2017
Sample Number: MW-5	Weather Conditions: Sunny, Clear, 86°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	10.15	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	11:57 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	15.8	10.) Purge Rate (mL/min)	300
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:16
5.) Casing Volume (L)	3.4887	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	11:59 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)
12:11 PM	4.00	17.10	1.08	12	7.45	1.165	10.32
12:13 PM	4.50	17.07	0.99	10	7.48	1.165	10.32
12:15 PM	5.00	17.08	0.98	10	7.45	1.165	10.32

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-5	12:15 PM	17.08	0.98	10.00	7.45	1.165	10.32

1.) Sample Equipment Used	Pump	Other Information	CPM-1 58/2 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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-6	Date: 7/12/2017
Sample Number: MW-6	Weather Conditions: Sunny, Clear, 86°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	7.9	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	12:31 PM	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)	0:17
5.) Casing Volume (L)	4.0753	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	12:33 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)
12:46 PM	4.00	18.02	1.10	14	7.25	0.632	8.20
12:48 PM	4.50	18.07	0.98	12	7.25	0.635	8.20
12:50 PM	5.00	18.12	0.95	10	7.25	0.637	8.20

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-6	12:50 PM	18.12	0.95	10.00	7.25	0.637	8.20

1.) Sample Equipment Used	Pump	Other Information	CPM-2 28/2 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	Ants on top of well head	

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-7	Date: 7/12/2017
Sample Number: MW-7	Weather Conditions: Sunny, Clear, 86°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions) Compliant

Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	6.8	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	1:45 PM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	24.1	10.) Purge Rate (mL/min)	150
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:32
5.) Casing Volume (L)	10.6821	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	1:58 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)
2:26 PM	4.00	17.00	0.11	16	7.30	0.750	7.05
2:28 PM	4.50	17.12	0.10	15	7.28	0.742	7.05
2:30 PM	5.00	17.15	0.11	12	7.25	0.742	7.05

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-7	2:30 PM	17.15	0.11	12.00	7.25	0.742	7.05
DUP	8:00 AM	17.15	0.11	12.00	7.25	0.74	7.05

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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-13	Date: 7/12/2017
Sample Number: MW-13	Weather Conditions: Sunny, Clear, 86°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)	250
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)	4.50	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)
11:16 AM	3.50	16.78	0.25	10	8.08	0.550	5.25
11:18 AM	4.00	16.80	0.22	8	8.11	0.553	5.25
11:20 AM	4.50	16.83	0.19	7	8.10	0.553	5.25

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-13	11:20 AM	16.83	0.19	7.00	8.10	0.553	5.25

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		

NEBRASKA CITY UNIT #2

Water Levels Prior to Sampling

	Time	Water Level
MW-2	8:48 AM	10.76
MW-3	8:50 AM	4.25
MW-4	8:35 AM	7.11
MW-5	8:40 AM	10.15
MW-6	8:43 AM	7.9
MW-7	8:46 AM	6.80
MW-13	8:30 AM	5.02

Equipment Calibration Sheet

Date: 7/12/2017
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	1.01	Ntu
<10.0 Primary Standard	10.02	Ntu

Comments:

Equipment Calibration Sheet

Date: 7/12/2017
Time: 7:35 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	7.06	to	7.01	22.75°C	N/A
pH 4	4.04	to	4.01	22.80°C	N/A
pH 10	10.08	to	10.02	22.81°C	N/A
Conductivity	0.99	to	1.002	22.70°C	µS
DO (Start)	99.8%	Saturation	9.32mg/L	21.83°C	mg/L
DO (Cal)	99.2%	Saturation	8.89mg/L	21.86°C	mg/L

Comments:

.

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-2	Date: 11/9/2017
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)	15.1	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:33 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	17.61	10.) Purge Rate (mL/min)	100
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:16
5.) Casing Volume (L)	1.5498	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	1.75	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	10:34 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	1.00	13.90	2.05	9	7.21	1.102	15.22
10:48 AM	1.50	13.95	2.00	9	7.23	1.105	15.22
10:50 AM	1.75	13.99	1.96	9	7.19	1.103	15.24

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	13.99	1.96	9.00	7.19	1.103	15.24

1.) Sample Equipment Used	Pump	Other Information	CPM-2 27/2 20 psi
2.) Pump Rate (mL/Min)	100 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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-3	Date: 11/9/2017
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)	12.1	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	10.) Purge Rate (mL/min)	150
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:14
5.) Casing Volume (L)	2.4081	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	2.00	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	10:08 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	1.00	13.49	0.81	7	7.36	0.671	12.45
10:20 AM	1.50	13.52	0.76	5	7.34	0.675	12.45
10:22 AM	2.00	13.60	0.72	5	7.33	0.675	12.45

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	10:22 AM	13.60	0.72	5.00	7.33	0.675	12.45

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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-4	Date: 11/9/2017
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)	12.2	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)	14.5	10.) Purge Rate (mL/min)	150
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:15
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	8:41 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)
8:52 AM	1.50	10.40	1.39	6	7.19	0.590	12.70
8:54 AM	2.00	10.38	1.35	5	7.18	0.590	12.70
8:56 AM	2.50	10.35	1.32	5	7.18	0.590	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)
MW-4	8:56 AM	10.35	1.32	5.00	7.18	0.590	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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-5	Date: 11/9/2017
Sample Number: MW-5	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)	14.2	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	9:10 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	15.8	10.) Purge Rate (mL/min)	150
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:15
5.) Casing Volume (L)	0.9879	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	9:11 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)
9:22 AM	1.50	14.25	0.50	4	7.20	1.379	14.55
9:24 AM	2.00	14.21	0.48	4	7.20	1.380	14.55
9:26 AM	2.50	14.29	0.41	4	7.20	1.399	14.55

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-5	9:26 AM	14.29	0.41	4.00	7.20	1.399	14.55

1.) Sample Equipment Used	Pump	Other Information	CPM-1 58/2 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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-6	Date: 11/9/2017
Sample Number: MW-6	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)	11.2	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	9:36 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)	0:13
5.) Casing Volume (L)	2.0376	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	9:37 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)
9:46 AM	1.50	14.41	2.95	18	7.25	0.641	11.50
9:48 AM	2.00	14.50	2.83	17	7.24	0.650	11.50
9:50 AM	2.50	14.30	2.78	17	7.24	0.658	11.50

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-6	9:50 AM	14.30	2.78	17.00	7.24	0.658	11.50

1.) Sample Equipment Used	Pump	Other Information	CPM-2 28/2 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	Ants on top of well head	

Field Notes For Monitoring Well Sampling

Facility Name: Nebraska City II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-7	Date: 11/9/2017
Sample Number: MW-7	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)	10.5	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)	24.1	10.) Purge Rate (mL/min)	300
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:18
5.) Casing Volume (L)	8.3975	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	11:10 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)
11:24 AM	4.00	13.89	0.56	14	7.40	0.653	10.70
11:26 AM	4.50	14.00	0.54	12	7.40	0.655	10.70
11:28 AM	5.00	14.11	0.52	12	7.40	0.659	10.70

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)
MW-7	11:28 AM	14.11	0.52	12.00	7.40	0.659	10.70
DUP	8:00 AM	14.11	0.52	12.00	7.40	0.659	10.70

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 II	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-13	Date: 11/9/2017
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)	8.25	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	8:15 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	15.19	10.) Purge Rate (mL/min)	300
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:14
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	8:16 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)
8:26 AM	3.00	14.39	0.78	10	7.19	0.529	8.58
8:28 AM	3.50	14.45	0.74	8	7.15	0.529	8.58
8:30 AM	4.00	14.50	0.69	8	7.12	0.529	8.58

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	8:30 AM	14.50	0.69	8.00	7.12	0.529	8.58

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		

NEBRASKA CITY UNIT #2

Water Levels Prior to Sampling

	Time	Water Level
MW-2	8:05 AM	15.1
MW-3	8:04 AM	12.1
MW-4	8:01 AM	12.2
MW-5	8:10 AM	14.2
MW-6	8:11 AM	11.2
MW-7	8:07 AM	10.50
MW-13	7:59 AM	8.25

Equipment Calibration Sheet

Date: 11/9/2017
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	0.10	Ntu
1.0 Primary Standard	1.01	Ntu
<10.0 Primary Standard	10.02	Ntu

Comments:

Equipment Calibration Sheet

Date: 11/9/2017
Time: 7:05 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	22.60°C	N/A
pH 4	4.08	to	4.01	22.72°C	N/A
pH 10	10.03	to	10.02	22.79°C	N/A
Conductivity	0.97	to	1.004	22.70°C	µS
DO (Start)	99.6%	Saturation	9.29mg/L	21.90°C	mg/L
DO (Cal)	99.3%	Saturation	9.02mg/L	21.87°C	mg/L

Comments:

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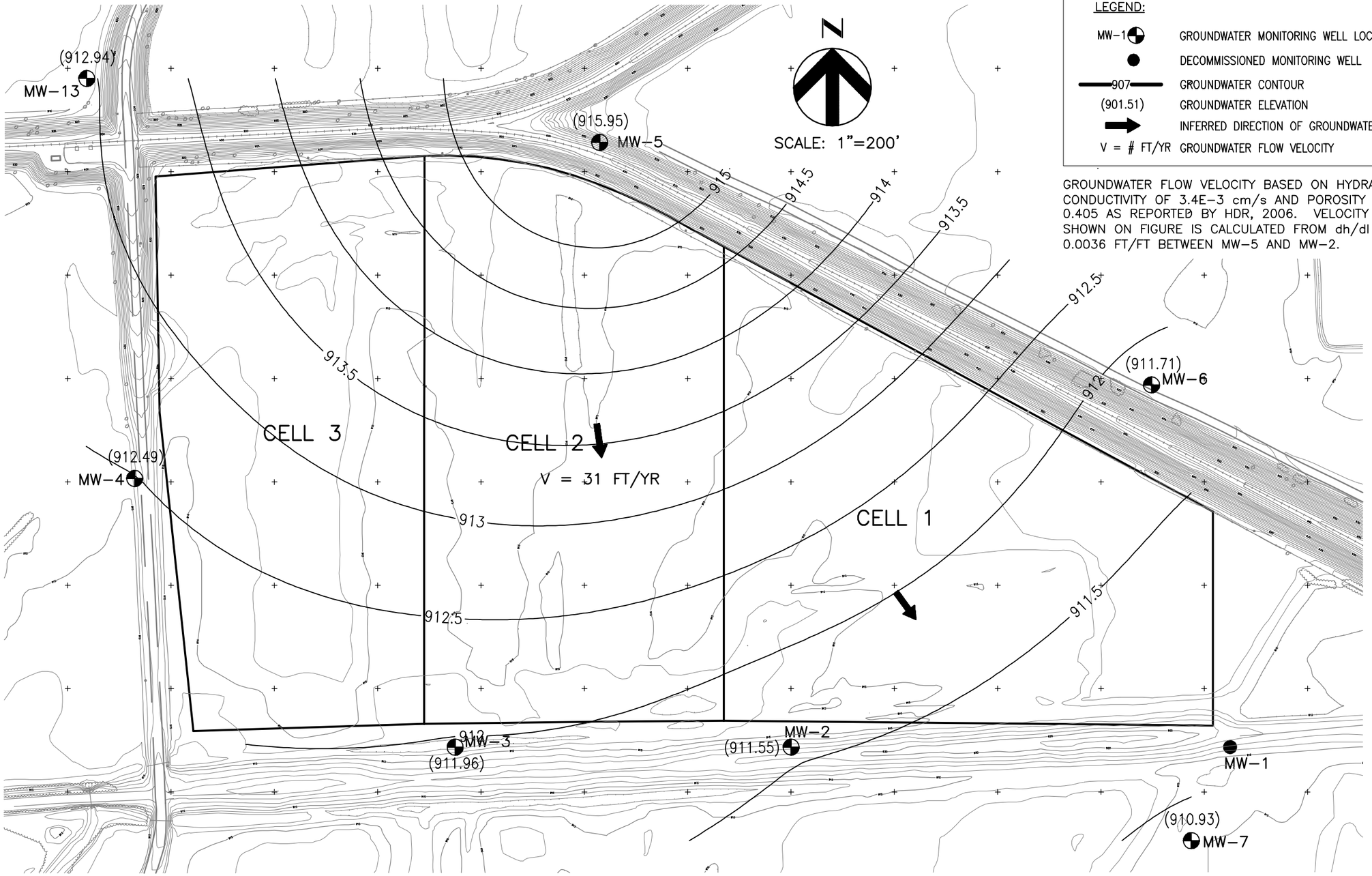
APPENDIX B

NOTE:
BASE MAP AND REFERENCE ELEVATIONS FROM HDR 2006.



LEGEND:

MW-1	GROUNDWATER MONITORING WELL LOCATIONS
●	DECOMMISSIONED MONITORING WELL
907	GROUNDWATER CONTOUR
(901.51)	GROUNDWATER ELEVATION
→	INFERRED DIRECTION OF GROUNDWATER FLOW
V = # FT/YR	GROUNDWATER FLOW VELOCITY

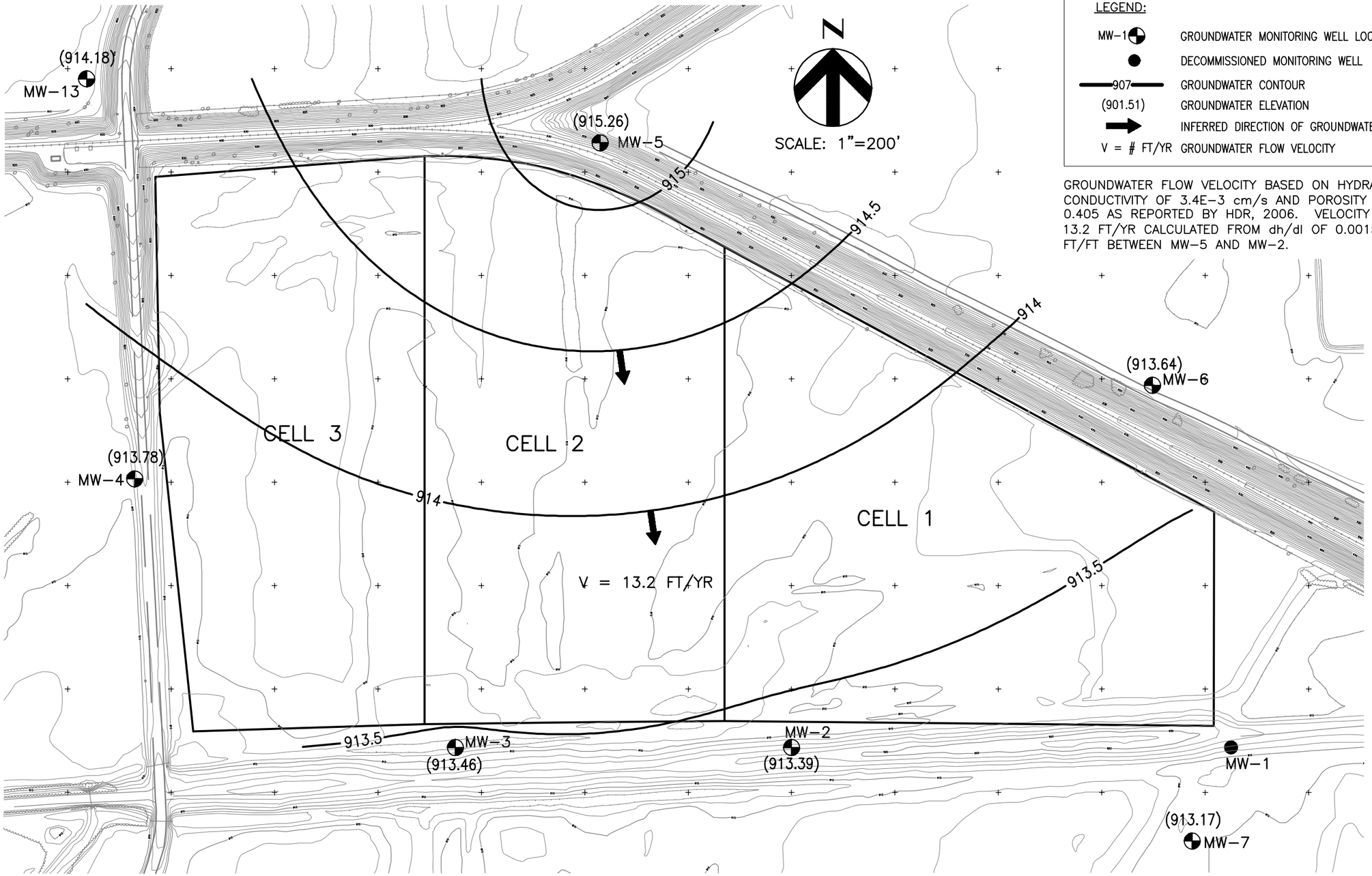
GROUNDWATER FLOW VELOCITY BASED ON HYDRAULIC CONDUCTIVITY OF 3.4E-3 cm/s AND POROSITY OF 0.405 AS REPORTED BY HDR, 2006. VELOCITY AS SHOWN ON FIGURE IS CALCULATED FROM dh/dl OF 0.0036 FT/FT BETWEEN MW-5 AND MW-2.

NC2_20160314

FIGURE 1
GROUNDWATER CONTOUR MAP
MARCH 14, 2016

OMAHA PUBLIC POWER DISTRICT
NEBRASKA CITY STATION UNIT 2 ASH LANDFILL
NEBRASKA CITY, NEBRASKA

NOTE:
BASE MAP AND REFERENCE ELEVATIONS FROM HDR 2006.



LEGEND:

MW-1	GROUNDWATER MONITORING WELL LOCATIONS
●	DECOMMISSIONED MONITORING WELL
907	GROUNDWATER CONTOUR
(901.51)	GROUNDWATER ELEVATION
→	INFERRED DIRECTION OF GROUNDWATER FLOW
V = # FT/YR	GROUNDWATER FLOW VELOCITY

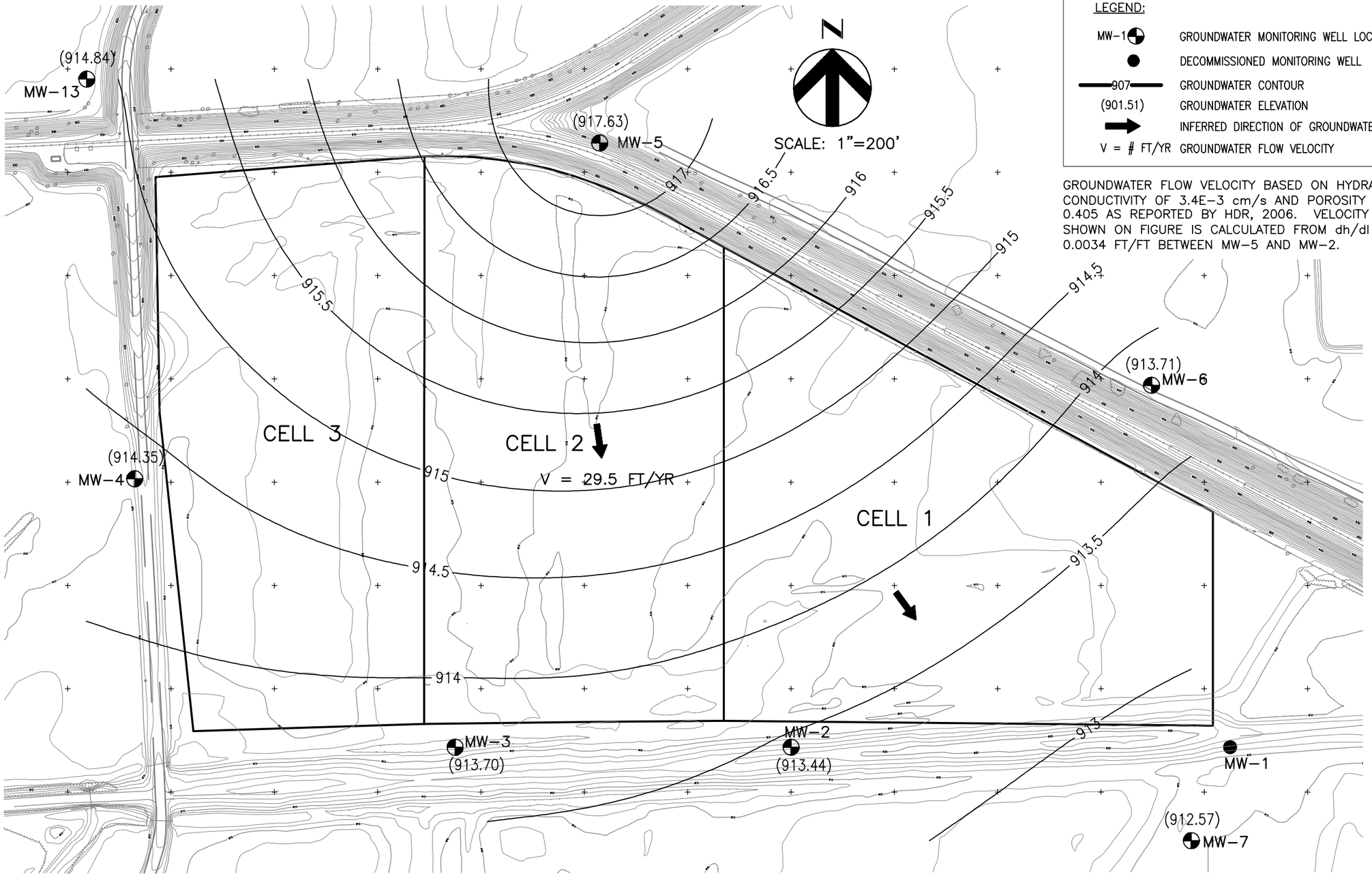
GROUNDWATER FLOW VELOCITY BASED ON HYDRAULIC CONDUCTIVITY OF 3.4E-3 cm/s AND POROSITY OF 0.405 AS REPORTED BY HDR, 2006. VELOCITY OF 13.2 FT/YR CALCULATED FROM dh/dl OF 0.0015 FT/FT BETWEEN MW-5 AND MW-2.

2E041NC2_16Q2

FIGURE 2
GROUNDWATER CONTOUR MAP
JUNE 3, 2016

OMAHA PUBLIC POWER DISTRICT
NEBRASKA CITY STATION UNIT 2 ASH LANDFILL
NEBRASKA CITY, NEBRASKA

NOTE:
BASE MAP AND REFERENCE ELEVATIONS FROM HDR 2006.



LEGEND:

MW-1	GROUNDWATER MONITORING WELL LOCATIONS
●	DECOMMISSIONED MONITORING WELL
907	GROUNDWATER CONTOUR
(901.51)	GROUNDWATER ELEVATION
→	INFERRED DIRECTION OF GROUNDWATER FLOW
V = # FT/YR	GROUNDWATER FLOW VELOCITY

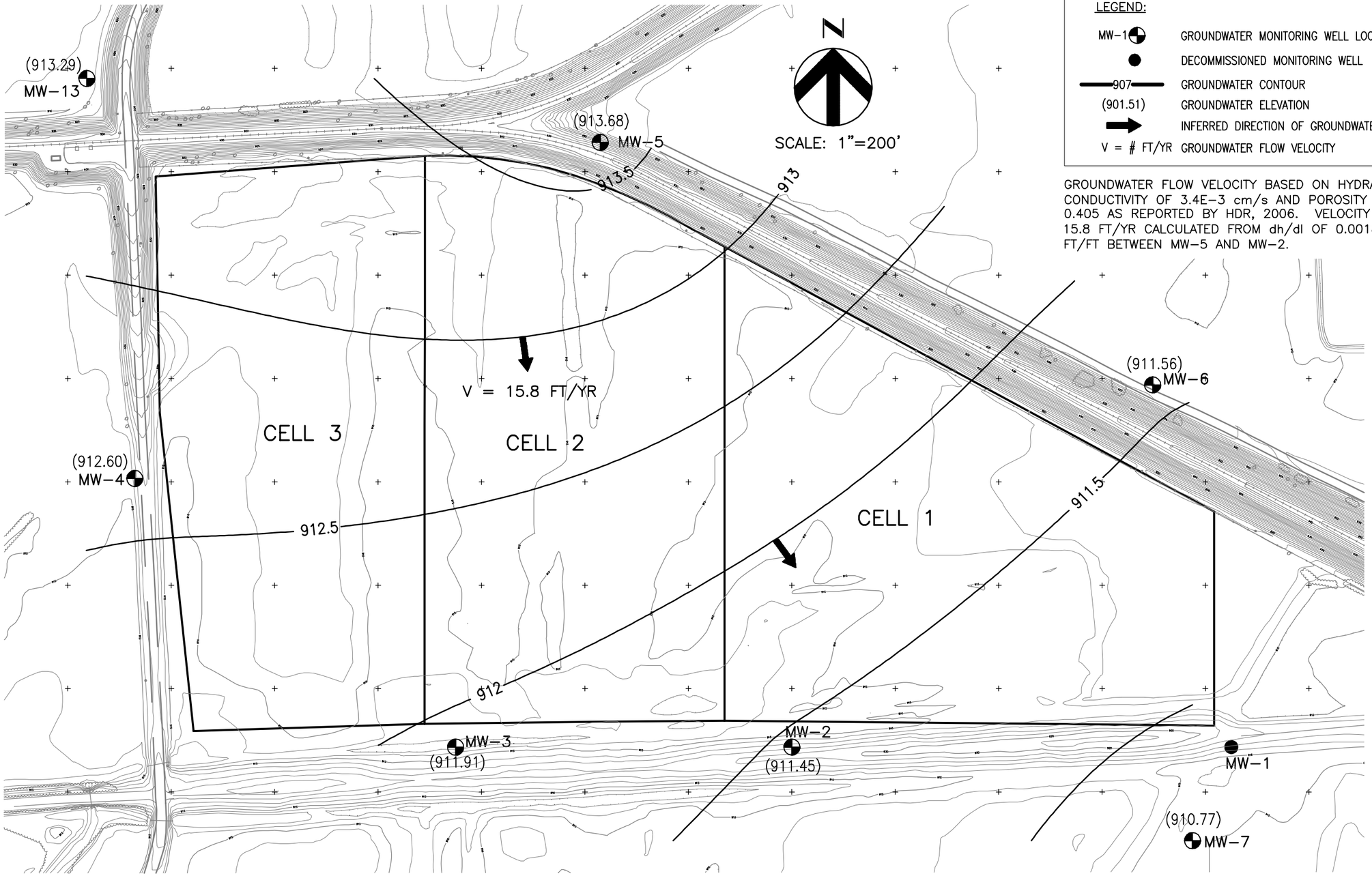
GROUNDWATER FLOW VELOCITY BASED ON HYDRAULIC CONDUCTIVITY OF 3.4E-3 cm/s AND POROSITY OF 0.405 AS REPORTED BY HDR, 2006. VELOCITY AS SHOWN ON FIGURE IS CALCULATED FROM dh/dl OF 0.0034 FT/FT BETWEEN MW-5 AND MW-2.

NC2_20160831

FIGURE 3
GROUNDWATER CONTOUR MAP
AUGUST 31, 2016

OMAHA PUBLIC POWER DISTRICT
NEBRASKA CITY STATION UNIT 2 ASH LANDFILL
NEBRASKA CITY, NEBRASKA

NOTE:
BASE MAP AND REFERENCE ELEVATIONS FROM HDR 2006.



LEGEND:

MW-1	GROUNDWATER MONITORING WELL LOCATIONS
●	DECOMMISSIONED MONITORING WELL
907	GROUNDWATER CONTOUR
(901.51)	GROUNDWATER ELEVATION
→	INFERRED DIRECTION OF GROUNDWATER FLOW
V = # FT/YR	GROUNDWATER FLOW VELOCITY

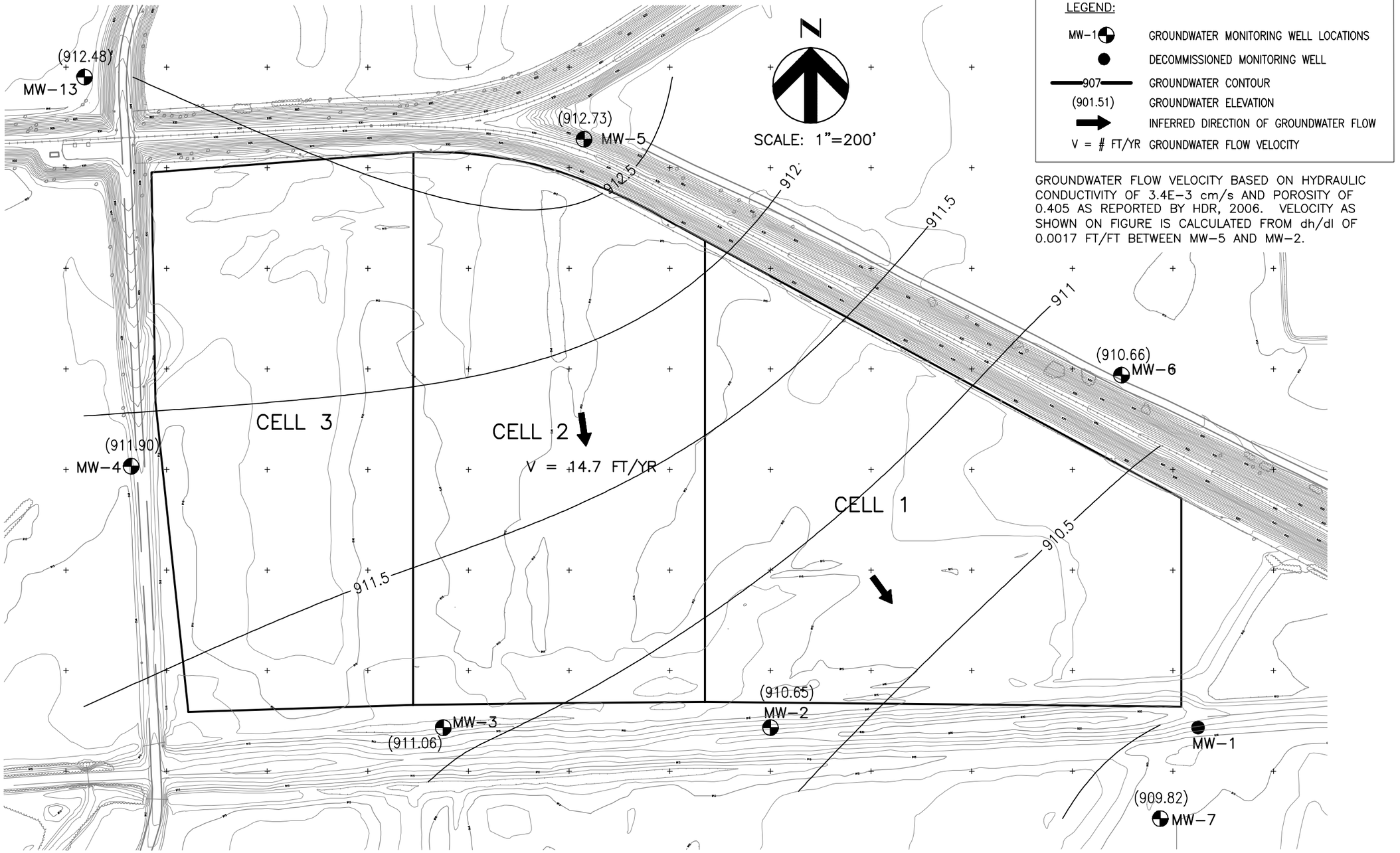
GROUNDWATER FLOW VELOCITY BASED ON HYDRAULIC CONDUCTIVITY OF 3.4E-3 cm/s AND POROSITY OF 0.405 AS REPORTED BY HDR, 2006. VELOCITY OF 15.8 FT/YR CALCULATED FROM dh/dl OF 0.0018 FT/FT BETWEEN MW-5 AND MW-2.

2E041NC2_16Q4

FIGURE 4
GROUNDWATER CONTOUR MAP
NOVEMBER 17, 2016

OMAHA PUBLIC POWER DISTRICT
NEBRASKA CITY STATION UNIT 2 ASH LANDFILL
NEBRASKA CITY, NEBRASKA

NOTE:
BASE MAP AND REFERENCE ELEVATIONS FROM HDR 2006.



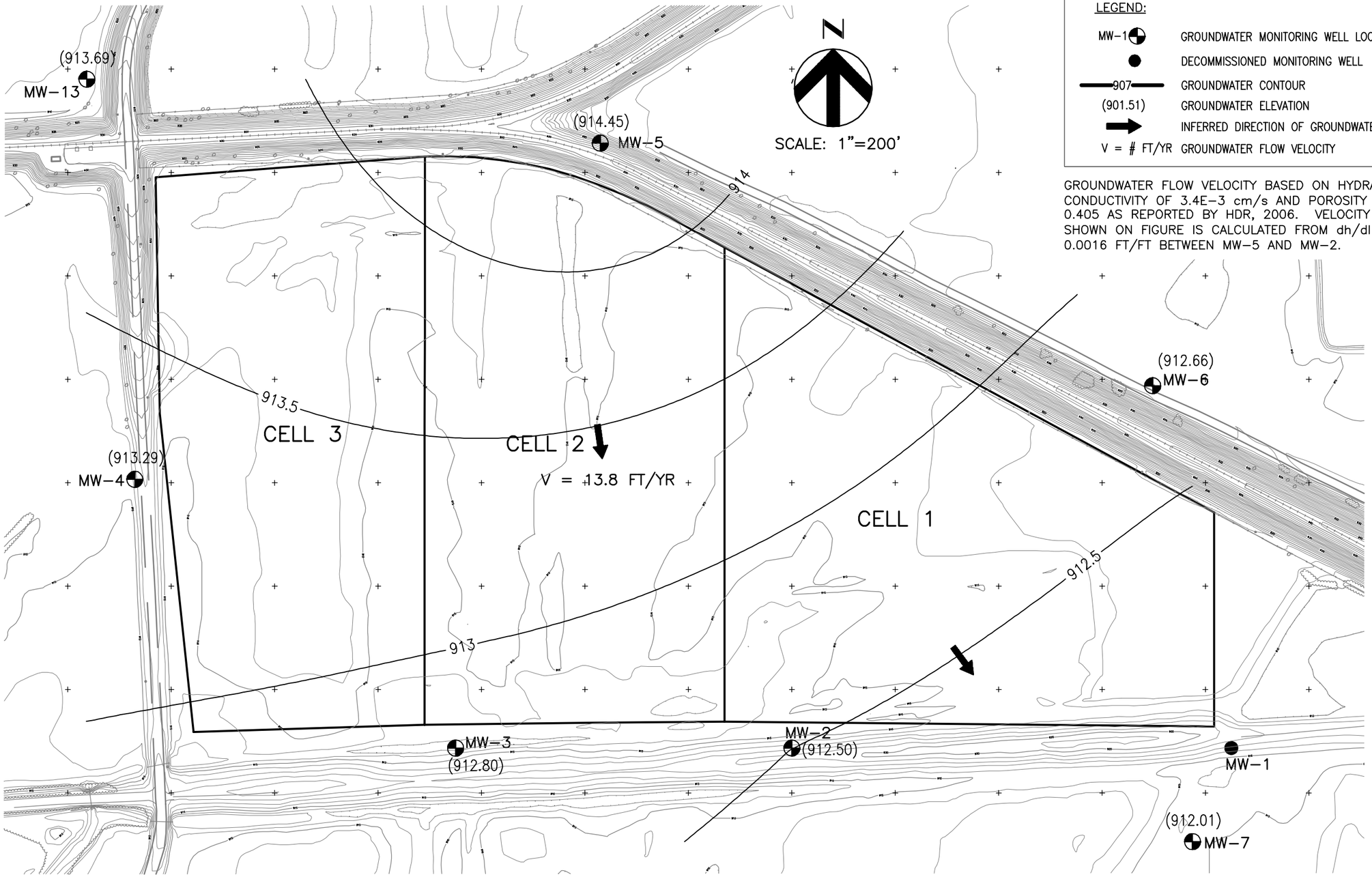
NC2_20170215

FIGURE 5
GROUNDWATER CONTOUR MAP
FEBRUARY 15, 2017

OMAHA PUBLIC POWER DISTRICT
NEBRASKA CITY STATION UNIT 2 ASH LANDFILL
NEBRASKA CITY, NEBRASKA

OPPD

NOTE:
BASE MAP AND REFERENCE ELEVATIONS FROM HDR 2006.



LEGEND:

MW-1	GROUNDWATER MONITORING WELL LOCATIONS
●	DECOMMISSIONED MONITORING WELL
907	GROUNDWATER CONTOUR
(901.51)	GROUNDWATER ELEVATION
→	INFERRED DIRECTION OF GROUNDWATER FLOW
V = # FT/YR	GROUNDWATER FLOW VELOCITY

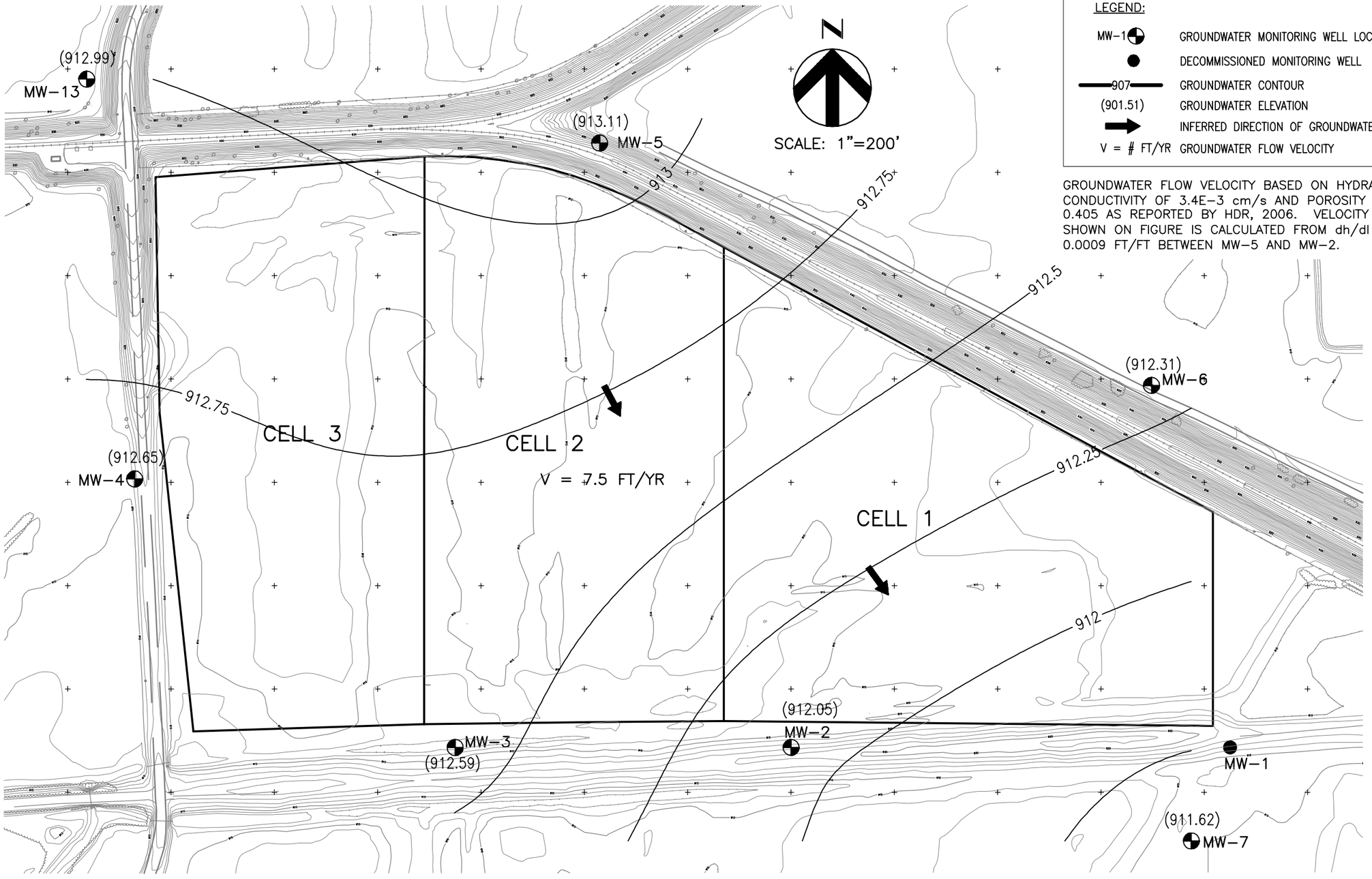
GROUNDWATER FLOW VELOCITY BASED ON HYDRAULIC CONDUCTIVITY OF 3.4E-3 cm/s AND POROSITY OF 0.405 AS REPORTED BY HDR, 2006. VELOCITY AS SHOWN ON FIGURE IS CALCULATED FROM dh/dl OF 0.0016 FT/FT BETWEEN MW-5 AND MW-2.

2E041NC2_17Q2

FIGURE 6
GROUNDWATER CONTOUR MAP
APRIL 24, 2017

OMAHA PUBLIC POWER DISTRICT
NEBRASKA CITY STATION UNIT 2 ASH LANDFILL
NEBRASKA CITY, NEBRASKA

NOTE:
BASE MAP AND REFERENCE ELEVATIONS FROM HDR 2006.

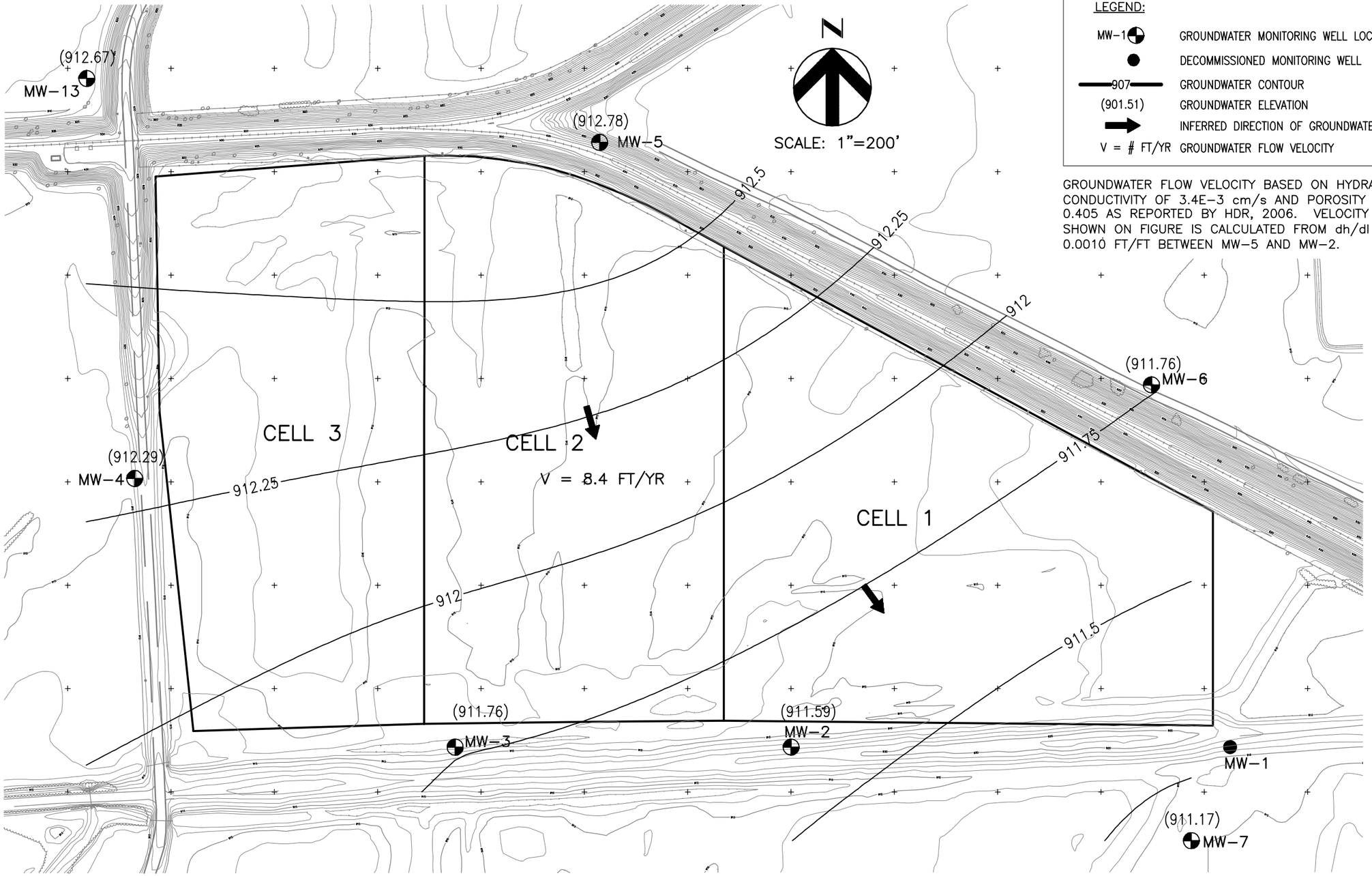


NC2_20170615

FIGURE 7
GROUNDWATER CONTOUR MAP
JUNE 15, 2017

OMAHA PUBLIC POWER DISTRICT
NEBRASKA CITY STATION UNIT 2 ASH LANDFILL
NEBRASKA CITY, NEBRASKA

NOTE:
BASE MAP AND REFERENCE ELEVATIONS FROM HDR 2006.



LEGEND:

MW-1	GROUNDWATER MONITORING WELL LOCATIONS
●	DECOMMISSIONED MONITORING WELL
907	GROUNDWATER CONTOUR
(901.51)	GROUNDWATER ELEVATION
→	INFERRED DIRECTION OF GROUNDWATER FLOW
V = # FT/YR	GROUNDWATER FLOW VELOCITY

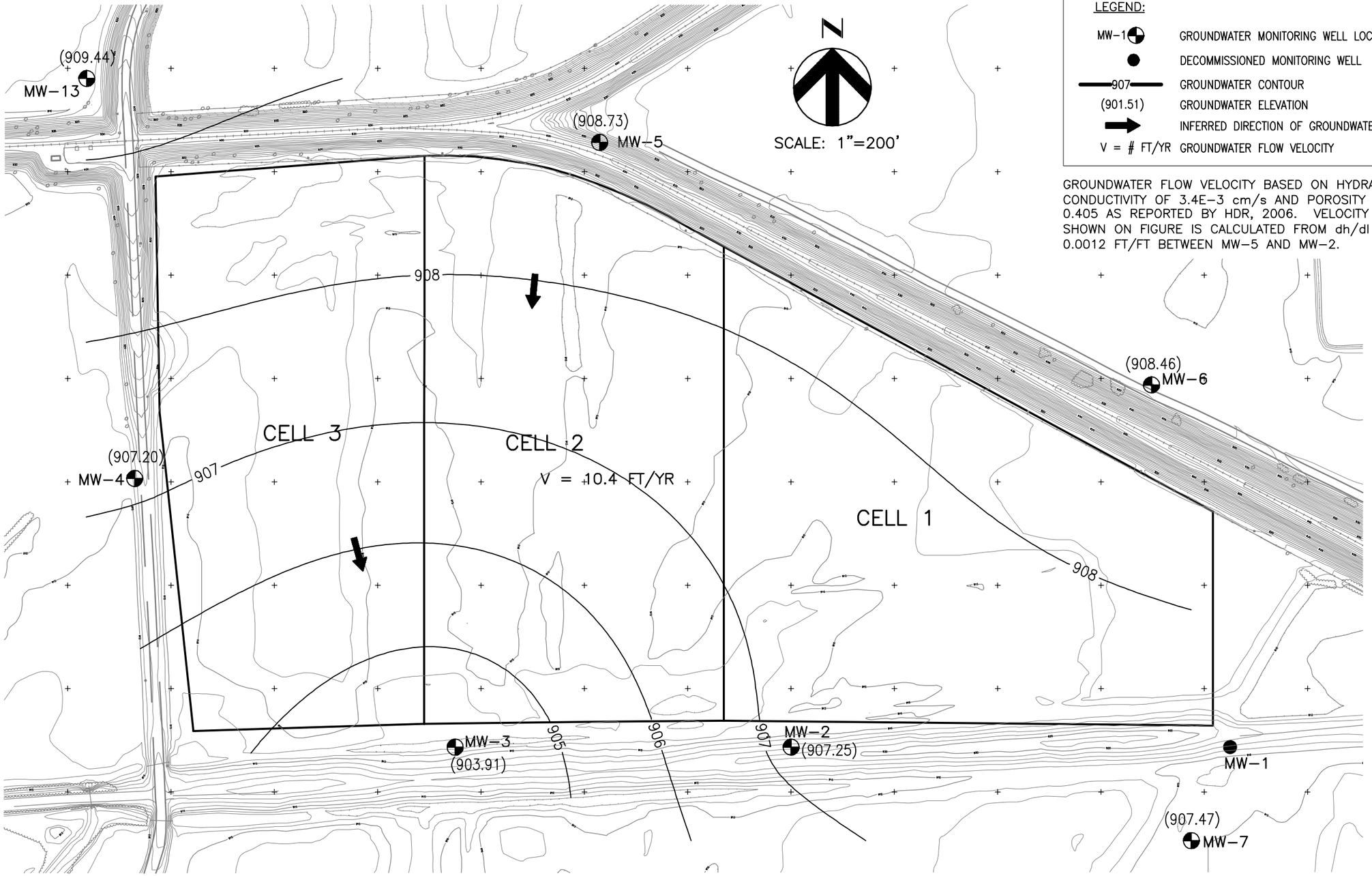
GROUNDWATER FLOW VELOCITY BASED ON HYDRAULIC CONDUCTIVITY OF 3.4E-3 cm/s AND POROSITY OF 0.405 AS REPORTED BY HDR, 2006. VELOCITY AS SHOWN ON FIGURE IS CALCULATED FROM dh/dl OF 0.0010 FT/FT BETWEEN MW-5 AND MW-2.

NC2_20170712

FIGURE 8
GROUNDWATER CONTOUR MAP
JULY 12, 2017

OMAHA PUBLIC POWER DISTRICT
NEBRASKA CITY STATION UNIT 2 ASH LANDFILL
NEBRASKA CITY, NEBRASKA

NOTE:
BASE MAP AND REFERENCE ELEVATIONS FROM HDR 2006.



LEGEND:

MW-1	GROUNDWATER MONITORING WELL LOCATIONS
●	DECOMMISSIONED MONITORING WELL
907	GROUNDWATER CONTOUR
(901.51)	GROUNDWATER ELEVATION
➡	INFERRED DIRECTION OF GROUNDWATER FLOW
V = # FT/YR	GROUNDWATER FLOW VELOCITY

GROUNDWATER FLOW VELOCITY BASED ON HYDRAULIC CONDUCTIVITY OF 3.4E-3 cm/s AND POROSITY OF 0.405 AS REPORTED BY HDR, 2006. VELOCITY AS SHOWN ON FIGURE IS CALCULATED FROM dh/dl OF 0.0012 FT/FT BETWEEN MW-5 AND MW-2.

NC2_20171109

FIGURE 9
GROUNDWATER CONTOUR MAP
NOVEMBER 9, 2017

OMAHA PUBLIC POWER DISTRICT
NEBRASKA CITY STATION UNIT 2 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: 310-76568-1
Client Project/Site: Nebraska City Unit 2 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:
3/30/2016 1:04:33 PM

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

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Case Narrative

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-76568-1

Job ID: 310-76568-1

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-76568-1

Comments
No additional comments.

Receipt
The samples were received on 3/18/2016 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 2.1° C and 2.3° C.

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

General Chemistry
Method(s) 9056A: The following sample was diluted due to the nature of the sample matrix: MW3 (310-76568-3). Elevated reporting limits (RLs) are provided for chloride.

Method(s) 9056A: The following samples were diluted due to the nature of the sample matrix: MW5 (310-76568-5), MW6 (310-76568-6), MW13 (310-76568-7). Elevated reporting limits (RLs) are provided for fluoride.

Method(s) 9056A: The following sample was diluted due to the nature of the sample matrix: DUP (310-76568-8). Elevated reporting limits (RLs) are provided for chloride and fluoride.

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 2 Landfill

TestAmerica Job ID: 310-76568-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-76568-1	MW7	Ground Water	03/14/16 13:01	03/18/16 09:45
310-76568-2	MW2	Ground Water	03/14/16 12:21	03/18/16 09:45
310-76568-3	MW3	Ground Water	03/14/16 11:49	03/18/16 09:45
310-76568-4	MW4	Ground Water	03/14/16 09:52	03/18/16 09:45
310-76568-5	MW5	Ground Water	03/14/16 10:27	03/18/16 09:45
310-76568-6	MW6	Ground Water	03/14/16 11:16	03/18/16 09:45
310-76568-7	MW13	Ground Water	03/14/16 09:20	03/18/16 09:45
310-76568-8	DUP	Ground Water	03/14/16 11:51	03/18/16 09:45

Detection Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-76568-1

Client Sample ID: MW7 — Lab Sample ID: 310-76568-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.55		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.312		0.100		mg/L	1		9056A	Total/NA
Sulfate	6.88		5.00		mg/L	5		9056A	Total/NA
Lithium	0.0602		0.0500		mg/L	1		6010C	Total/NA
Arsenic	0.0994		0.00200		mg/L	1		6020A	Total/NA
Barium	0.687		0.00200		mg/L	1		6020A	Total/NA
Calcium	134		1.00		mg/L	5		6020A	Total/NA
Cobalt	0.000794		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	496		60.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW2 — Lab Sample ID: 310-76568-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.371		0.100		mg/L	1		9056A	Total/NA
Sulfate	388		10.0		mg/L	10		9056A	Total/NA
Lithium	0.0512		0.0500		mg/L	1		6010C	Total/NA
Antimony	0.00188		0.00100		mg/L	1		6020A	Total/NA
Barium	0.136		0.00200		mg/L	1		6020A	Total/NA
Calcium	277		1.00		mg/L	5		6020A	Total/NA
Molybdenum	0.00368		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1120		60.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW3 — Lab Sample ID: 310-76568-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.168		0.100		mg/L	1		9056A	Total/NA
Sulfate	21.0		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.00762		0.00200		mg/L	1		6020A	Total/NA
Barium	0.253		0.00200		mg/L	1		6020A	Total/NA
Calcium	85.3		1.00		mg/L	5		6020A	Total/NA
Molybdenum	0.00293		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	334		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW4 — Lab Sample ID: 310-76568-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.27		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.213		0.100		mg/L	1		9056A	Total/NA
Sulfate	48.3		5.00		mg/L	5		9056A	Total/NA
Barium	0.276		0.00200		mg/L	1		6020A	Total/NA
Calcium	126		1.00		mg/L	5		6020A	Total/NA
Lead	0.000650		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00239		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	536		60.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW5 — Lab Sample ID: 310-76568-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	51.0		5.00		mg/L	5		9056A	Total/NA
Sulfate	611		50.0		mg/L	50		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-76568-1

Client Sample ID: MW5 (Continued) — Lab Sample ID: 310-76568-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0295		0.00200		mg/L	1		6020A	Total/NA
Boron	3.73		0.200		mg/L	1		6020A	Total/NA
Calcium	210		1.00		mg/L	5		6020A	Total/NA
Molybdenum	0.0237		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1310		60.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW6 — Lab Sample ID: 310-76568-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	16.5		5.00		mg/L	5		9056A	Total/NA
Sulfate	314		5.00		mg/L	5		9056A	Total/NA
Barium	0.0818		0.00200		mg/L	1		6020A	Total/NA
Boron	3.83		0.200		mg/L	1		6020A	Total/NA
Calcium	134		1.00		mg/L	5		6020A	Total/NA
Chromium	0.00629		0.00500		mg/L	1		6020A	Total/NA
Molybdenum	0.0210		0.00200		mg/L	1		6020A	Total/NA
Selenium	0.00645		0.00500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	728		60.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW13 — Lab Sample ID: 310-76568-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	11.4		5.00		mg/L	5		9056A	Total/NA
Sulfate	47.7		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.00545		0.00200		mg/L	1		6020A	Total/NA
Barium	0.288		0.00200		mg/L	1		6020A	Total/NA
Calcium	90.6		1.00		mg/L	5		6020A	Total/NA
Cobalt	0.00105		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	438		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP — Lab Sample ID: 310-76568-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	19.2		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.00634		0.00200		mg/L	1		6020A	Total/NA
Barium	0.252		0.00200		mg/L	1		6020A	Total/NA
Calcium	83.5		1.00		mg/L	5		6020A	Total/NA
Molybdenum	0.00318		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	338		30.0		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW7

Date Collected: 03/14/16 13:01
Date Received: 03/18/16 09:45

Lab Sample ID: 310-76568-1

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6.55**		5.00		mg/L			03/22/16 06:28	5
Fluoride	**0.312**		0.100		mg/L			03/22/16 14:28	1
Sulfate	**6.88**		5.00		mg/L			03/22/16 06:28	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	**0.0602**		0.0500		mg/L		03/22/16 08:00	03/22/16 17:18	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		03/21/16 08:08	03/25/16 19:29	1
Arsenic	**0.0994**		0.00200		mg/L		03/21/16 08:08	03/25/16 19:29	1
Barium	**0.687**		0.00200		mg/L		03/21/16 08:08	03/25/16 19:29	1
Beryllium	<0.00100		0.00100		mg/L		03/21/16 08:08	03/25/16 19:29	1
Boron	<0.200		0.200		mg/L		03/21/16 08:08	03/25/16 19:29	1
Cadmium	<0.000500		0.000500		mg/L		03/21/16 08:08	03/25/16 19:29	1
Calcium	**134**		1.00		mg/L		03/21/16 08:08	03/25/16 23:30	5
Chromium	<0.00500		0.00500		mg/L		03/21/16 08:08	03/25/16 19:29	1
Cobalt	**0.000794**		0.000500		mg/L		03/21/16 08:08	03/25/16 19:29	1
Lead	<0.000500		0.000500		mg/L		03/21/16 08:08	03/25/16 19:29	1
Molybdenum	<0.00200		0.00200		mg/L		03/21/16 08:08	03/25/16 19:29	1
Selenium	<0.00500		0.00500		mg/L		03/21/16 08:08	03/25/16 19:29	1
Thallium	<0.00100		0.00100		mg/L		03/21/16 08:08	03/25/16 19:29	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		03/22/16 09:57	03/23/16 12:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**496**		60.0		mg/L			03/18/16 13:07	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-76568-1

Client Sample ID: MW2

Date Collected: 03/14/16 12:21
Date Received: 03/18/16 09:45

Lab Sample ID: 310-76568-2

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			03/22/16 06:28	5
Fluoride	**0.371**		0.100		mg/L			03/23/16 13:32	1
Sulfate	**388**		10.0		mg/L			03/22/16 14:28	10

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	**0.0512**		0.0500		mg/L		03/22/16 08:00	03/22/16 17:20	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.00188**		0.00100		mg/L		03/21/16 08:08	03/25/16 19:32	1
Arsenic	<0.00200		0.00200		mg/L		03/21/16 08:08	03/25/16 19:32	1
Barium	**0.136**		0.00200		mg/L		03/21/16 08:08	03/25/16 19:32	1
Beryllium	<0.00100		0.00100		mg/L		03/21/16 08:08	03/25/16 19:32	1
Boron	<0.200		0.200		mg/L		03/21/16 08:08	03/25/16 19:32	1
Cadmium	<0.000500		0.000500		mg/L		03/21/16 08:08	03/25/16 19:32	1
Calcium	**277**		1.00		mg/L		03/21/16 08:08	03/25/16 23:33	5
Chromium	<0.00500		0.00500		mg/L		03/21/16 08:08	03/25/16 19:32	1
Cobalt	<0.000500		0.000500		mg/L		03/21/16 08:08	03/25/16 19:32	1
Lead	<0.000500		0.000500		mg/L		03/21/16 08:08	03/25/16 19:32	1
Molybdenum	**0.00368**		0.00200		mg/L		03/21/16 08:08	03/25/16 19:32	1
Selenium	<0.00500		0.00500		mg/L		03/21/16 08:08	03/25/16 19:32	1
Thallium	<0.00100		0.00100		mg/L		03/21/16 08:08	03/25/16 19:32	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		03/22/16 09:57	03/23/16 12:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1120**		60.0		mg/L			03/18/16 16:05	1

Client Sample ID: MW3

Date Collected: 03/14/16 11:49
Date Received: 03/18/16 09:45

Lab Sample ID: 310-76568-3

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			03/22/16 06:28	5
Fluoride	**0.168**		0.100		mg/L			03/22/16 14:28	1
Sulfate	**21.0**		5.00		mg/L			03/22/16 06:28	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		03/22/16 08:00	03/22/16 17:22	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		03/21/16 08:08	03/25/16 19:35	1
Arsenic	**0.00762**		0.00200		mg/L		03/21/16 08:08	03/25/16 19:35	1
Barium	**0.253**		0.00200		mg/L		03/21/16 08:08	03/25/16 19:35	1
Beryllium	<0.00100		0.00100		mg/L		03/21/16 08:08	03/25/16 19:35	1
Boron	<0.200		0.200		mg/L		03/21/16 08:08	03/25/16 19:35	1
Cadmium	<0.000500		0.000500		mg/L		03/21/16 08:08	03/25/16 19:35	1
Calcium	**85.3**		1.00		mg/L		03/21/16 08:08	03/25/16 23:37	5
Chromium	<0.00500		0.00500		mg/L		03/21/16 08:08	03/25/16 19:35	1
Cobalt	<0.000500		0.000500		mg/L		03/21/16 08:08	03/25/16 19:35	1
Lead	<0.000500		0.000500		mg/L		03/21/16 08:08	03/25/16 19:35	1
Molybdenum	**0.00293**		0.00200		mg/L		03/21/16 08:08	03/25/16 19:35	1
Selenium	<0.00500		0.00500		mg/L		03/21/16 08:08	03/25/16 19:35	1
Thallium	<0.00100		0.00100		mg/L		03/21/16 08:08	03/25/16 19:35	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		03/22/16 09:57	03/23/16 12:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**334**		30.0		mg/L			03/18/16 16:05	1

Client Sample ID: MW4

Date Collected: 03/14/16 09:52
Date Received: 03/18/16 09:45

Lab Sample ID: 310-76568-4

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6.27**		5.00		mg/L			03/22/16 06:28	5
Fluoride	**0.213**		0.100		mg/L			03/22/16 14:28	1
Sulfate	**48.3**		5.00		mg/L			03/22/16 06:28	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		03/22/16 08:00	03/22/16 17:24	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		03/21/16 08:08	03/25/16 19:38	1
Arsenic	<0.00200		0.00200		mg/L		03/21/16 08:08	03/25/16 19:38	1
Barium	**0.276**		0.00200		mg/L		03/21/16 08:08	03/25/16 19:38	1
Beryllium	<0.00100		0.00100		mg/L		03/21/16 08:08	03/25/16 19:38	1
Boron	<0.200		0.200		mg/L		03/21/16 08:08	03/25/16 19:38	1
Cadmium	<0.000500		0.000500		mg/L		03/21/16 08:08	03/25/16 19:38	1
Calcium	**126**		1.00		mg/L		03/21/16 08:08	03/25/16 23:40	5
Chromium	<0.00500		0.00500		mg/L		03/21/16 08:08	03/25/16 19:38	1
Cobalt	<0.000500		0.000500		mg/L		03/21/16 08:08	03/25/16 19:38	1
Lead	**0.000650**		0.000500		mg/L		03/21/16 08:08	03/25/16 19:38	1
Molybdenum	**0.00239**		0.00200		mg/L		03/21/16 08:08	03/25/16 19:38	1
Selenium	<0.00500		0.00500		mg/L		03/21/16 08:08	03/25/16 19:38	1
Thallium	<0.00100		0.00100		mg/L		03/21/16 08:08	03/25/16 19:38	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		03/22/16 09:57	03/23/16 12:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**536**		60.0		mg/L			03/18/16 16:05	1

Client Sample ID: MW5

Date Collected: 03/14/16 10:27
Date Received: 03/18/16 09:45

Lab Sample ID: 310-76568-5

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**51.0**		5.00		mg/L			03/22/16 14:28	5
Fluoride	<0.500		0.500		mg/L			03/22/16 14:28	5
Sulfate	**611**		50.0		mg/L			03/23/16 13:32	50

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		03/22/16 08:00	03/22/16 17:26	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		03/21/16 08:08	03/25/16 19:41	1
Arsenic	<0.00200		0.00200		mg/L		03/21/16 08:08	03/25/16 19:41	1
Barium	**0.0295**		0.00200		mg/L		03/21/16 08:08	03/25/16 19:41	1
Beryllium	<0.00100		0.00100		mg/L		03/21/16 08:08	03/25/16 19:41	1
Boron	**3.73**		0.200		mg/L		03/21/16 08:08	03/25/16 19:41	1
Cadmium	<0.000500		0.000500		mg/L		03/21/16 08:08	03/25/16 19:41	1
Calcium	**210**		1.00		mg/L		03/21/16 08:08	03/25/16 23:43	5
Chromium	<0.00500		0.00500		mg/L		03/21/16 08:08	03/25/16 19:41	1
Cobalt	<0.000500		0.000500		mg/L		03/21/16 08:08	03/25/16 19:41	1
Lead	<0.000500		0.000500		mg/L		03/21/16 08:08	03/25/16 19:41	1
Molybdenum	**0.0237**		0.00200		mg/L		03/21/16 08:08	03/25/16 19:41	1
Selenium	<0.00500		0.00500		mg/L		03/21/16 08:08	03/25/16 19:41	1
Thallium	<0.00100		0.00100		mg/L		03/21/16 08:08	03/25/16 19:41	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		03/22/16 09:57	03/23/16 12:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1310**		60.0		mg/L			03/18/16 16:05	1

Client Sample ID: MW6

Date Collected: 03/14/16 11:16
Date Received: 03/18/16 09:45

Lab Sample ID: 310-76568-6

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**16.5**		5.00		mg/L			03/22/16 14:28	5
Fluoride	<0.500		0.500		mg/L			03/22/16 14:28	5
Sulfate	**314**		5.00		mg/L			03/22/16 14:28	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		03/22/16 08:00	03/22/16 17:35	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		03/21/16 08:08	03/25/16 20:03	1
Arsenic	<0.00200		0.00200		mg/L		03/21/16 08:08	03/25/16 20:03	1
Barium	**0.0818**		0.00200		mg/L		03/21/16 08:08	03/25/16 20:03	1
Beryllium	<0.00100		0.00100		mg/L		03/21/16 08:08	03/25/16 20:03	1
Boron	**3.83**		0.200		mg/L		03/21/16 08:08	03/25/16 20:03	1
Cadmium	<0.000500		0.000500		mg/L		03/21/16 08:08	03/25/16 20:03	1
Calcium	**134**		1.00		mg/L		03/21/16 08:08	03/25/16 23:52	5
Chromium	**0.00629**		0.00500		mg/L		03/21/16 08:08	03/25/16 20:03	1
Cobalt	<0.000500		0.000500		mg/L		03/21/16 08:08	03/25/16 20:03	1
Lead	<0.000500		0.000500		mg/L		03/21/16 08:08	03/25/16 20:03	1
Molybdenum	**0.0210**		0.00200		mg/L		03/21/16 08:08	03/25/16 20:03	1
Selenium	**0.00645**		0.00500		mg/L		03/21/16 08:08	03/25/16 20:03	1
Thallium	<0.00100		0.00100		mg/L		03/21/16 08:08	03/25/16 20:03	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		03/22/16 09:57	03/23/16 12:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**728**		60.0		mg/L			03/18/16 16:05	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-76568-1

Client Sample ID: MW13
Date Collected: 03/14/16 09:20
Date Received: 03/18/16 09:45

Lab Sample ID: 310-76568-7
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**11.4**		5.00		mg/L			03/23/16 03:16	5
Fluoride	<0.500		0.500		mg/L			03/23/16 03:16	5
Sulfate	**47.7**		5.00		mg/L			03/23/16 03:16	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		03/22/16 08:00	03/22/16 17:43	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		03/21/16 08:08	03/25/16 20:06	1
Arsenic	**0.00545**		0.00200		mg/L		03/21/16 08:08	03/25/16 20:06	1
Barium	**0.288**		0.00200		mg/L		03/21/16 08:08	03/25/16 20:06	1
Beryllium	<0.00100		0.00100		mg/L		03/21/16 08:08	03/25/16 20:06	1
Boron	<0.200		0.200		mg/L		03/21/16 08:08	03/25/16 20:06	1
Cadmium	<0.000500		0.000500		mg/L		03/21/16 08:08	03/25/16 20:06	1
Calcium	**90.6**		1.00		mg/L		03/21/16 08:08	03/25/16 23:55	5
Chromium	<0.00500		0.00500		mg/L		03/21/16 08:08	03/25/16 20:06	1
Cobalt	**0.00105**		0.000500		mg/L		03/21/16 08:08	03/25/16 20:06	1
Lead	<0.000500		0.000500		mg/L		03/21/16 08:08	03/25/16 20:06	1
Molybdenum	<0.00200		0.00200		mg/L		03/21/16 08:08	03/25/16 20:06	1
Selenium	<0.00500		0.00500		mg/L		03/21/16 08:08	03/25/16 20:06	1
Thallium	<0.00100		0.00100		mg/L		03/21/16 08:08	03/25/16 20:06	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		03/22/16 09:57	03/23/16 12:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**438**		30.0		mg/L			03/18/16 16:05	1

Client Sample ID: DUP

Date Collected: 03/14/16 11:51
Date Received: 03/18/16 09:45

Lab Sample ID: 310-76568-8

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			03/23/16 03:16	5
Fluoride	<0.500		0.500		mg/L			03/23/16 03:16	5
Sulfate	**19.2**		5.00		mg/L			03/23/16 03:16	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		03/22/16 08:00	03/22/16 17:45	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		03/21/16 08:08	03/25/16 20:09	1
Arsenic	**0.00634**		0.00200		mg/L		03/21/16 08:08	03/25/16 20:09	1
Barium	**0.252**		0.00200		mg/L		03/21/16 08:08	03/25/16 20:09	1
Beryllium	<0.00100		0.00100		mg/L		03/21/16 08:08	03/25/16 20:09	1
Boron	<0.200		0.200		mg/L		03/21/16 08:08	03/25/16 20:09	1
Cadmium	<0.000500		0.000500		mg/L		03/21/16 08:08	03/25/16 20:09	1
Calcium	**83.5**		1.00		mg/L		03/21/16 08:08	03/26/16 00:08	5
Chromium	<0.00500		0.00500		mg/L		03/21/16 08:08	03/25/16 20:09	1
Cobalt	<0.000500		0.000500		mg/L		03/21/16 08:08	03/25/16 20:09	1
Lead	<0.000500		0.000500		mg/L		03/21/16 08:08	03/25/16 20:09	1
Molybdenum	**0.00318**		0.00200		mg/L		03/21/16 08:08	03/25/16 20:09	1
Selenium	<0.00500		0.00500		mg/L		03/21/16 08:08	03/25/16 20:09	1
Thallium	<0.00100		0.00100		mg/L		03/21/16 08:08	03/25/16 20:09	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		03/22/16 09:57	03/23/16 12:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**338**		30.0		mg/L			03/18/16 16:05	1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.

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, 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 310-121368/3
Matrix: Water
Analysis Batch: 121368

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			03/22/16 06:28	1
Fluoride	<0.100		0.100		mg/L			03/22/16 06:28	1
Sulfate	<1.00		1.00		mg/L			03/22/16 06:28	1

Lab Sample ID: LCS 310-121368/4
Matrix: Water
Analysis Batch: 121368

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	6.918		mg/L		92	90 - 110
Fluoride	1.50	1.308	*	mg/L		87	90 - 110
Sulfate	7.50	7.045		mg/L		94	90 - 110

Lab Sample ID: MB 310-121447/3
Matrix: Water
Analysis Batch: 121447

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			03/22/16 14:28	1
Fluoride	<0.100		0.100		mg/L			03/22/16 14:28	1
Sulfate	<1.00		1.00		mg/L			03/22/16 14:28	1

Lab Sample ID: LCS 310-121447/4
Matrix: Water
Analysis Batch: 121447

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	7.561		mg/L		101	90 - 110
Fluoride	1.50	1.494		mg/L		100	90 - 110
Sulfate	7.50	7.631		mg/L		102	90 - 110

Lab Sample ID: 310-76568-5 MS
Matrix: Ground Water
Analysis Batch: 121447

Client Sample ID: MW5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	51.0		25.0	76.89		mg/L		104	80 - 120
Fluoride	<0.500		5.00	4.747		mg/L		95	80 - 120

Lab Sample ID: 310-76568-5 MSD
Matrix: Ground Water
Analysis Batch: 121447

Client Sample ID: MW5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	51.0		25.0	75.92		mg/L		100	80 - 120	1	15
Fluoride	<0.500		5.00	4.782		mg/L		96	80 - 120	1	15

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

Lab Sample ID: MB 310-121486/3
Matrix: Water
Analysis Batch: 121486

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			03/23/16 03:16	1
Fluoride	<0.100		0.100		mg/L			03/23/16 03:16	1
Sulfate	<1.00		1.00		mg/L			03/23/16 03:16	1

Lab Sample ID: LCS 310-121486/4
Matrix: Water
Analysis Batch: 121486

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	7.255		mg/L		97	90 - 110
Fluoride	1.50	1.412		mg/L		94	90 - 110
Sulfate	7.50	7.347		mg/L		98	90 - 110

Lab Sample ID: MB 310-121818/3
Matrix: Water
Analysis Batch: 121818

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			03/23/16 13:32	1
Fluoride	<0.100		0.100		mg/L			03/23/16 13:32	1
Sulfate	<1.00		1.00		mg/L			03/23/16 13:32	1

Lab Sample ID: LCS 310-121818/4
Matrix: Water
Analysis Batch: 121818

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	7.691		mg/L		103	90 - 110
Fluoride	1.50	1.447		mg/L		96	90 - 110
Sulfate	7.50	7.699		mg/L		103	90 - 110

Lab Sample ID: 310-76568-5 MS
Matrix: Ground Water
Analysis Batch: 121818

Client Sample ID: MW5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	611		250	838.2		mg/L		91	80 - 120

Lab Sample ID: 310-76568-5 MSD
Matrix: Ground Water
Analysis Batch: 121818

Client Sample ID: MW5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	611		250	833.2		mg/L		89	80 - 120	1	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 310-121227/1-A
Matrix: Water
Analysis Batch: 121584

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 121227

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		03/22/16 08:00	03/22/16 16:59	1

Lab Sample ID: LCS 310-121227/2-A
Matrix: Water
Analysis Batch: 121584

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 121227

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	2.00	2.005		mg/L		100	80 - 120

Lab Sample ID: 310-76568-5 MS
Matrix: Ground Water
Analysis Batch: 121584

Client Sample ID: MW5
Prep Type: Total/NA
Prep Batch: 121227

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	<0.0500		2.00	1.952		mg/L		97	75 - 125

Lab Sample ID: 310-76568-5 MSD
Matrix: Ground Water
Analysis Batch: 121584

Client Sample ID: MW5
Prep Type: Total/NA
Prep Batch: 121227

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lithium	<0.0500		2.00	1.949		mg/L		97	75 - 125	0	20

Lab Sample ID: 310-76568-6 DU
Matrix: Ground Water
Analysis Batch: 121584

Client Sample ID: MW6
Prep Type: Total/NA
Prep Batch: 121227

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 310-121115/1-A
Matrix: Water
Analysis Batch: 121960

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 121115

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		03/21/16 08:08	03/25/16 19:23	1
Arsenic	<0.00200		0.00200		mg/L		03/21/16 08:08	03/25/16 19:23	1
Barium	<0.00200		0.00200		mg/L		03/21/16 08:08	03/25/16 19:23	1
Beryllium	<0.00100		0.00100		mg/L		03/21/16 08:08	03/25/16 19:23	1
Boron	<0.200		0.200		mg/L		03/21/16 08:08	03/25/16 19:23	1
Cadmium	<0.000500		0.000500		mg/L		03/21/16 08:08	03/25/16 19:23	1
Calcium	<0.200		0.200		mg/L		03/21/16 08:08	03/25/16 19:23	1
Chromium	<0.00500		0.00500		mg/L		03/21/16 08:08	03/25/16 19:23	1
Cobalt	<0.000500		0.000500		mg/L		03/21/16 08:08	03/25/16 19:23	1
Lead	<0.000500		0.000500		mg/L		03/21/16 08:08	03/25/16 19:23	1
Molybdenum	<0.00200		0.00200		mg/L		03/21/16 08:08	03/25/16 19:23	1
Selenium	<0.00500		0.00500		mg/L		03/21/16 08:08	03/25/16 19:23	1

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

Lab Sample ID: MB 310-121115/1-A
Matrix: Water
Analysis Batch: 121960

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 121115

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	<0.00100		0.00100		mg/L		03/21/16 08:08	03/25/16 19:23	1

Lab Sample ID: LCS 310-121115/2-A
Matrix: Water
Analysis Batch: 121960

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 121115

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0200	0.01905		mg/L		95	80 - 120
Arsenic	0.0400	0.04179		mg/L		104	80 - 120
Barium	0.0400	0.03986		mg/L		100	80 - 120
Beryllium	0.0200	0.01953		mg/L		98	80 - 120
Boron	0.880	0.8357		mg/L		95	80 - 120
Cadmium	0.0200	0.02024		mg/L		101	80 - 120
Calcium	2.00	2.033		mg/L		102	80 - 120
Chromium	0.0400	0.03961		mg/L		99	80 - 120
Cobalt	0.0200	0.01955		mg/L		98	80 - 120
Lead	0.0200	0.01916		mg/L		96	80 - 120
Molybdenum	0.0400	0.03784		mg/L		95	80 - 120
Selenium	0.0400	0.03860		mg/L		97	80 - 120
Thallium	0.0160	0.01578		mg/L		99	80 - 120

Lab Sample ID: 310-76568-5 MS
Matrix: Ground Water
Analysis Batch: 121960

Client Sample ID: MW5
Prep Type: Total/NA
Prep Batch: 121115

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.00500		0.0200	0.02021		mg/L		101	75 - 125
Arsenic	<0.0100		0.0400	0.04739		mg/L		118	75 - 125
Barium	0.0295		0.0400	0.07289		mg/L		109	75 - 125
Beryllium	<0.00500		0.0200	0.02120		mg/L		106	75 - 125
Boron	3.58		0.880	4.938	4	mg/L		154	75 - 125
Cadmium	<0.00250		0.0200	0.02075		mg/L		104	75 - 125
Chromium	<0.0250		0.0400	0.04015		mg/L		100	75 - 125
Cobalt	<0.00250		0.0200	0.02029		mg/L		101	75 - 125
Lead	<0.00250		0.0200	0.01996		mg/L		100	75 - 125
Molybdenum	0.0221		0.0400	0.06586		mg/L		109	75 - 125
Selenium	<0.0250		0.0400	0.04253		mg/L		98	75 - 125
Thallium	<0.00500		0.0160	0.01555		mg/L		97	75 - 125

Lab Sample ID: 310-76568-5 MS
Matrix: Ground Water
Analysis Batch: 121960

Client Sample ID: MW5
Prep Type: Total/NA
Prep Batch: 121115

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	210		2.00	234.6	4	mg/L		1243	75 - 125

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

Lab Sample ID: 310-76568-5 MSD
Matrix: Ground Water
Analysis Batch: 121960

Client Sample ID: MW5
Prep Type: Total/NA
Prep Batch: 121115

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	<0.00500		0.0200	0.01967		mg/L		98	75 - 125	3	20
Arsenic	<0.0100		0.0400	0.04633		mg/L		116	75 - 125	2	20
Barium	0.0295		0.0400	0.06929		mg/L		100	75 - 125	5	20
Beryllium	<0.00500		0.0200	0.02037		mg/L		102	75 - 125	4	20
Boron	3.58		0.880	4.870	4	mg/L		146	75 - 125	1	20
Cadmium	<0.00250		0.0200	0.02039		mg/L		102	75 - 125	2	20
Chromium	<0.0250		0.0400	0.03990		mg/L		100	75 - 125	1	20
Cobalt	<0.00250		0.0200	0.02013		mg/L		101	75 - 125	1	20
Lead	<0.00250		0.0200	0.01997		mg/L		100	75 - 125	0	20
Molybdenum	0.0221		0.0400	0.06476		mg/L		107	75 - 125	2	20
Selenium	<0.0250		0.0400	0.04227		mg/L		98	75 - 125	1	20
Thallium	<0.00500		0.0160	0.01534		mg/L		96	75 - 125	1	20

Lab Sample ID: 310-76568-5 MSD
Matrix: Ground Water
Analysis Batch: 121960

Client Sample ID: MW5
Prep Type: Total/NA
Prep Batch: 121115

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	210		2.00	218.9	4	mg/L		456	75 - 125	7	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-121287/1-A
Matrix: Water
Analysis Batch: 121528

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 121287

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		03/22/16 09:57	03/23/16 12:03	1

Lab Sample ID: LCS 310-121287/2-A
Matrix: Water
Analysis Batch: 121528

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 121287

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00167	0.001477		mg/L		89	80 - 120

Lab Sample ID: 310-76568-5 MS
Matrix: Ground Water
Analysis Batch: 121528

Client Sample ID: MW5
Prep Type: Total/NA
Prep Batch: 121287

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.000200		0.00167	0.001675		mg/L		100	80 - 120

Lab Sample ID: 310-76568-5 MSD
Matrix: Ground Water
Analysis Batch: 121528

Client Sample ID: MW5
Prep Type: Total/NA
Prep Batch: 121287

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000200		0.00167	0.001669		mg/L		100	80 - 120	0	20

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

Lab Sample ID: MB 310-121032/1
Matrix: Water
Analysis Batch: 121032

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			03/18/16 13:07	1

Lab Sample ID: LCS 310-121032/2
Matrix: Water
Analysis Batch: 121032

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: 310-76568-5 DU
Matrix: Ground Water
Analysis Batch: 121032

Client Sample ID: MW5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	1310		1348		mg/L		2	20

HPLC/IC

Analysis Batch: 121368

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-76568-1	MW7	Total/NA	Ground Water	9056A	
310-76568-2	MW2	Total/NA	Ground Water	9056A	
310-76568-3	MW3	Total/NA	Ground Water	9056A	
310-76568-4	MW4	Total/NA	Ground Water	9056A	
LCS 310-121368/4	Lab Control Sample	Total/NA	Water	9056A	
MB 310-121368/3	Method Blank	Total/NA	Water	9056A	

Analysis Batch: 121447

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-76568-1	MW7	Total/NA	Ground Water	9056A	
310-76568-2	MW2	Total/NA	Ground Water	9056A	
310-76568-3	MW3	Total/NA	Ground Water	9056A	
310-76568-4	MW4	Total/NA	Ground Water	9056A	
310-76568-5	MW5	Total/NA	Ground Water	9056A	
310-76568-5 MS	MW5	Total/NA	Ground Water	9056A	
310-76568-5 MSD	MW5	Total/NA	Ground Water	9056A	
310-76568-6	MW6	Total/NA	Ground Water	9056A	
LCS 310-121447/4	Lab Control Sample	Total/NA	Water	9056A	
MB 310-121447/3	Method Blank	Total/NA	Water	9056A	

Analysis Batch: 121486

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-76568-7	MW13	Total/NA	Ground Water	9056A	
310-76568-8	DUP	Total/NA	Ground Water	9056A	
LCS 310-121486/4	Lab Control Sample	Total/NA	Water	9056A	
MB 310-121486/3	Method Blank	Total/NA	Water	9056A	

Analysis Batch: 121818

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-76568-2	MW2	Total/NA	Ground Water	9056A	
310-76568-5	MW5	Total/NA	Ground Water	9056A	
310-76568-5 MS	MW5	Total/NA	Ground Water	9056A	
310-76568-5 MSD	MW5	Total/NA	Ground Water	9056A	
LCS 310-121818/4	Lab Control Sample	Total/NA	Water	9056A	
MB 310-121818/3	Method Blank	Total/NA	Water	9056A	

Metals

Prep Batch: 121115

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-76568-1	MW7	Total/NA	Ground Water	3010A	
310-76568-2	MW2	Total/NA	Ground Water	3010A	
310-76568-3	MW3	Total/NA	Ground Water	3010A	
310-76568-4	MW4	Total/NA	Ground Water	3010A	
310-76568-5	MW5	Total/NA	Ground Water	3010A	
310-76568-5 MS	MW5	Total/NA	Ground Water	3010A	
310-76568-5 MSD	MW5	Total/NA	Ground Water	3010A	
310-76568-6	MW6	Total/NA	Ground Water	3010A	
310-76568-7	MW13	Total/NA	Ground Water	3010A	
310-76568-8	DUP	Total/NA	Ground Water	3010A	

Metals (Continued)

Prep Batch: 121115 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 310-121115/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 310-121115/1-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 121227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-76568-1	MW7	Total/NA	Ground Water	3010A	
310-76568-2	MW2	Total/NA	Ground Water	3010A	
310-76568-3	MW3	Total/NA	Ground Water	3010A	
310-76568-4	MW4	Total/NA	Ground Water	3010A	
310-76568-5	MW5	Total/NA	Ground Water	3010A	
310-76568-5 MS	MW5	Total/NA	Ground Water	3010A	
310-76568-5 MSD	MW5	Total/NA	Ground Water	3010A	
310-76568-6	MW6	Total/NA	Ground Water	3010A	
310-76568-6 DU	MW6	Total/NA	Ground Water	3010A	
310-76568-7	MW13	Total/NA	Ground Water	3010A	
310-76568-8	DUP	Total/NA	Ground Water	3010A	
LCS 310-121227/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 310-121227/1-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 121287

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-76568-1	MW7	Total/NA	Ground Water	7470A	
310-76568-2	MW2	Total/NA	Ground Water	7470A	
310-76568-3	MW3	Total/NA	Ground Water	7470A	
310-76568-4	MW4	Total/NA	Ground Water	7470A	
310-76568-5	MW5	Total/NA	Ground Water	7470A	
310-76568-5 MS	MW5	Total/NA	Ground Water	7470A	
310-76568-5 MSD	MW5	Total/NA	Ground Water	7470A	
310-76568-6	MW6	Total/NA	Ground Water	7470A	
310-76568-7	MW13	Total/NA	Ground Water	7470A	
310-76568-8	DUP	Total/NA	Ground Water	7470A	
LCS 310-121287/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 310-121287/1-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 121528

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-76568-1	MW7	Total/NA	Ground Water	7470A	121287
310-76568-2	MW2	Total/NA	Ground Water	7470A	121287
310-76568-3	MW3	Total/NA	Ground Water	7470A	121287
310-76568-4	MW4	Total/NA	Ground Water	7470A	121287
310-76568-5	MW5	Total/NA	Ground Water	7470A	121287
310-76568-5 MS	MW5	Total/NA	Ground Water	7470A	121287
310-76568-5 MSD	MW5	Total/NA	Ground Water	7470A	121287
310-76568-6	MW6	Total/NA	Ground Water	7470A	121287
310-76568-7	MW13	Total/NA	Ground Water	7470A	121287
310-76568-8	DUP	Total/NA	Ground Water	7470A	121287
LCS 310-121287/2-A	Lab Control Sample	Total/NA	Water	7470A	121287
MB 310-121287/1-A	Method Blank	Total/NA	Water	7470A	121287

Metals (Continued)

Analysis Batch: 121584

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-76568-1	MW7	Total/NA	Ground Water	6010C	121227
310-76568-2	MW2	Total/NA	Ground Water	6010C	121227
310-76568-3	MW3	Total/NA	Ground Water	6010C	121227
310-76568-4	MW4	Total/NA	Ground Water	6010C	121227
310-76568-5	MW5	Total/NA	Ground Water	6010C	121227
310-76568-5 MS	MW5	Total/NA	Ground Water	6010C	121227
310-76568-5 MSD	MW5	Total/NA	Ground Water	6010C	121227
310-76568-6	MW6	Total/NA	Ground Water	6010C	121227
310-76568-6 DU	MW6	Total/NA	Ground Water	6010C	121227
310-76568-7	MW13	Total/NA	Ground Water	6010C	121227
310-76568-8	DUP	Total/NA	Ground Water	6010C	121227
LCS 310-121227/2-A	Lab Control Sample	Total/NA	Water	6010C	121227
MB 310-121227/1-A	Method Blank	Total/NA	Water	6010C	121227

Analysis Batch: 121960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-76568-1	MW7	Total/NA	Ground Water	6020A	121115
310-76568-1	MW7	Total/NA	Ground Water	6020A	121115
310-76568-2	MW2	Total/NA	Ground Water	6020A	121115
310-76568-2	MW2	Total/NA	Ground Water	6020A	121115
310-76568-3	MW3	Total/NA	Ground Water	6020A	121115
310-76568-3	MW3	Total/NA	Ground Water	6020A	121115
310-76568-4	MW4	Total/NA	Ground Water	6020A	121115
310-76568-4	MW4	Total/NA	Ground Water	6020A	121115
310-76568-5	MW5	Total/NA	Ground Water	6020A	121115
310-76568-5	MW5	Total/NA	Ground Water	6020A	121115
310-76568-5 MS	MW5	Total/NA	Ground Water	6020A	121115
310-76568-5 MS	MW5	Total/NA	Ground Water	6020A	121115
310-76568-5 MSD	MW5	Total/NA	Ground Water	6020A	121115
310-76568-5 MSD	MW5	Total/NA	Ground Water	6020A	121115
310-76568-6	MW6	Total/NA	Ground Water	6020A	121115
310-76568-6	MW6	Total/NA	Ground Water	6020A	121115
310-76568-7	MW13	Total/NA	Ground Water	6020A	121115
310-76568-7	MW13	Total/NA	Ground Water	6020A	121115
310-76568-8	DUP	Total/NA	Ground Water	6020A	121115
310-76568-8	DUP	Total/NA	Ground Water	6020A	121115
LCS 310-121115/2-A	Lab Control Sample	Total/NA	Water	6020A	121115
MB 310-121115/1-A	Method Blank	Total/NA	Water	6020A	121115

General Chemistry

Analysis Batch: 121032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-76568-1	MW7	Total/NA	Ground Water	SM 2540C	
310-76568-2	MW2	Total/NA	Ground Water	SM 2540C	
310-76568-3	MW3	Total/NA	Ground Water	SM 2540C	
310-76568-4	MW4	Total/NA	Ground Water	SM 2540C	
310-76568-5	MW5	Total/NA	Ground Water	SM 2540C	
310-76568-5 DU	MW5	Total/NA	Ground Water	SM 2540C	
310-76568-6	MW6	Total/NA	Ground Water	SM 2540C	

General Chemistry (Continued)

Analysis Batch: 121032 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-76568-7	MW13	Total/NA	Ground Water	SM 2540C	
310-76568-8	DUP	Total/NA	Ground Water	SM 2540C	
LCS 310-121032/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 310-121032/1	Method Blank	Total/NA	Water	SM 2540C	

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-76568-1

Client Sample ID: MW7

Date Collected: 03/14/16 13:01
Date Received: 03/18/16 09:45

Lab Sample ID: 310-76568-1
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	121368	03/22/16 06:28	AJG	TAL CF
Total/NA	Analysis	9056A		1	121447	03/22/16 14:28	AJG	TAL CF
Total/NA	Prep	3010A			121227	03/22/16 08:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	121584	03/22/16 17:18	OAD	TAL CF
Total/NA	Prep	3010A			121115	03/21/16 08:08	JNR	TAL CF
Total/NA	Analysis	6020A		1	121960	03/25/16 19:29	OAD	TAL CF
Total/NA	Prep	3010A			121115	03/21/16 08:08	JNR	TAL CF
Total/NA	Analysis	6020A		5	121960	03/25/16 23:30	OAD	TAL CF
Total/NA	Prep	7470A			121287	03/22/16 09:57	SAD	TAL CF
Total/NA	Analysis	7470A		1	121528	03/23/16 12:06	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	121032	03/18/16 13:07	MDK	TAL CF

Client Sample ID: MW2

Date Collected: 03/14/16 12:21
Date Received: 03/18/16 09:45

Lab Sample ID: 310-76568-2
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	121368	03/22/16 06:28	AJG	TAL CF
Total/NA	Analysis	9056A		10	121447	03/22/16 14:28	AJG	TAL CF
Total/NA	Analysis	9056A		1	121818	03/23/16 13:32	AJG	TAL CF
Total/NA	Prep	3010A			121227	03/22/16 08:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	121584	03/22/16 17:20	OAD	TAL CF
Total/NA	Prep	3010A			121115	03/21/16 08:08	JNR	TAL CF
Total/NA	Analysis	6020A		1	121960	03/25/16 19:32	OAD	TAL CF
Total/NA	Prep	3010A			121115	03/21/16 08:08	JNR	TAL CF
Total/NA	Analysis	6020A		5	121960	03/25/16 23:33	OAD	TAL CF
Total/NA	Prep	7470A			121287	03/22/16 09:57	SAD	TAL CF
Total/NA	Analysis	7470A		1	121528	03/23/16 12:13	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	121032	03/18/16 16:05	MDK	TAL CF

Client Sample ID: MW3

Date Collected: 03/14/16 11:49
Date Received: 03/18/16 09:45

Lab Sample ID: 310-76568-3
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	121368	03/22/16 06:28	AJG	TAL CF
Total/NA	Analysis	9056A		1	121447	03/22/16 14:28	AJG	TAL CF
Total/NA	Prep	3010A			121227	03/22/16 08:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	121584	03/22/16 17:22	OAD	TAL CF
Total/NA	Prep	3010A			121115	03/21/16 08:08	JNR	TAL CF
Total/NA	Analysis	6020A		1	121960	03/25/16 19:35	OAD	TAL CF
Total/NA	Prep	3010A			121115	03/21/16 08:08	JNR	TAL CF

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-76568-1

Client Sample ID: MW3

Date Collected: 03/14/16 11:49
Date Received: 03/18/16 09:45

Lab Sample ID: 310-76568-3

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6020A		5	121960	03/25/16 23:37	OAD	TAL CF
Total/NA	Prep	7470A			121287	03/22/16 09:57	SAD	TAL CF
Total/NA	Analysis	7470A		1	121528	03/23/16 12:15	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	121032	03/18/16 16:05	MDK	TAL CF

Client Sample ID: MW4

Date Collected: 03/14/16 09:52
Date Received: 03/18/16 09:45

Lab Sample ID: 310-76568-4

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	121368	03/22/16 06:28	AJG	TAL CF
Total/NA	Analysis	9056A		1	121447	03/22/16 14:28	AJG	TAL CF
Total/NA	Prep	3010A			121227	03/22/16 08:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	121584	03/22/16 17:24	OAD	TAL CF
Total/NA	Prep	3010A			121115	03/21/16 08:08	JNR	TAL CF
Total/NA	Analysis	6020A		1	121960	03/25/16 19:38	OAD	TAL CF
Total/NA	Prep	3010A			121115	03/21/16 08:08	JNR	TAL CF
Total/NA	Analysis	6020A		5	121960	03/25/16 23:40	OAD	TAL CF
Total/NA	Prep	7470A			121287	03/22/16 09:57	SAD	TAL CF
Total/NA	Analysis	7470A		1	121528	03/23/16 12:16	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	121032	03/18/16 16:05	MDK	TAL CF

Client Sample ID: MW5

Date Collected: 03/14/16 10:27
Date Received: 03/18/16 09:45

Lab Sample ID: 310-76568-5

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	121447	03/22/16 14:28	AJG	TAL CF
Total/NA	Analysis	9056A		50	121818	03/23/16 13:32	AJG	TAL CF
Total/NA	Prep	3010A			121227	03/22/16 08:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	121584	03/22/16 17:26	OAD	TAL CF
Total/NA	Prep	3010A			121115	03/21/16 08:08	JNR	TAL CF
Total/NA	Analysis	6020A		1	121960	03/25/16 19:41	OAD	TAL CF
Total/NA	Prep	3010A			121115	03/21/16 08:08	JNR	TAL CF
Total/NA	Analysis	6020A		5	121960	03/25/16 23:43	OAD	TAL CF
Total/NA	Prep	7470A			121287	03/22/16 09:57	SAD	TAL CF
Total/NA	Analysis	7470A		1	121528	03/23/16 12:18	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	121032	03/18/16 16:05	MDK	TAL CF

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-76568-1

Client Sample ID: MW6

Date Collected: 03/14/16 11:16
Date Received: 03/18/16 09:45

Lab Sample ID: 310-76568-6

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	121447	03/22/16 14:28	AJG	TAL CF
Total/NA	Prep	3010A			121227	03/22/16 08:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	121584	03/22/16 17:35	OAD	TAL CF
Total/NA	Prep	3010A			121115	03/21/16 08:08	JNR	TAL CF
Total/NA	Analysis	6020A		1	121960	03/25/16 20:03	OAD	TAL CF
Total/NA	Prep	3010A			121115	03/21/16 08:08	JNR	TAL CF
Total/NA	Analysis	6020A		5	121960	03/25/16 23:52	OAD	TAL CF
Total/NA	Prep	7470A			121287	03/22/16 09:57	SAD	TAL CF
Total/NA	Analysis	7470A		1	121528	03/23/16 12:23	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	121032	03/18/16 16:05	MDK	TAL CF

Client Sample ID: MW13

Date Collected: 03/14/16 09:20
Date Received: 03/18/16 09:45

Lab Sample ID: 310-76568-7

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	121486	03/23/16 03:16	AJG	TAL CF
Total/NA	Prep	3010A			121227	03/22/16 08:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	121584	03/22/16 17:43	OAD	TAL CF
Total/NA	Prep	3010A			121115	03/21/16 08:08	JNR	TAL CF
Total/NA	Analysis	6020A		1	121960	03/25/16 20:06	OAD	TAL CF
Total/NA	Prep	3010A			121115	03/21/16 08:08	JNR	TAL CF
Total/NA	Analysis	6020A		5	121960	03/25/16 23:55	OAD	TAL CF
Total/NA	Prep	7470A			121287	03/22/16 09:57	SAD	TAL CF
Total/NA	Analysis	7470A		1	121528	03/23/16 12:24	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	121032	03/18/16 16:05	MDK	TAL CF

Client Sample ID: DUP

Date Collected: 03/14/16 11:51
Date Received: 03/18/16 09:45

Lab Sample ID: 310-76568-8

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	121486	03/23/16 03:16	AJG	TAL CF
Total/NA	Prep	3010A			121227	03/22/16 08:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	121584	03/22/16 17:45	OAD	TAL CF
Total/NA	Prep	3010A			121115	03/21/16 08:08	JNR	TAL CF
Total/NA	Analysis	6020A		1	121960	03/25/16 20:09	OAD	TAL CF
Total/NA	Prep	3010A			121115	03/21/16 08:08	JNR	TAL CF
Total/NA	Analysis	6020A		5	121960	03/26/16 00:08	OAD	TAL CF
Total/NA	Prep	7470A			121287	03/22/16 09:57	SAD	TAL CF
Total/NA	Analysis	7470A		1	121528	03/23/16 12:26	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	121032	03/18/16 16:05	MDK	TAL CF

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-76568-1

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 2 Landfill

TestAmerica Job ID: 310-76568-1

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 Unit 2 Landfill

TestAmerica Job ID: 310-76568-1

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

310-76568 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: OMAHA PUB POWER DIST

City/State: OMAHA | Project: NE CITY UNIT 2 LANDFILL

Receipt Information

Date/Time Received: 3/18/16 0945 | 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:
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: G	Correction Factor (°C): +0.2
Uncorrected Temp (°C): 1.9	Corrected Temp (°C): 2.1

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

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 | Project: NE CITY UNIT 2 LANDFILL

Receipt Information

Date/Time Received: 3/18/16 0945 | 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:
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: G	Correction Factor (°C): +0.2
Uncorrected Temp (°C): 2.1	Corrected Temp (°C): 2.3

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 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 2 Landfill CCR Q1 2016	TestAmerica Project #: 31007559			
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		
MW7	3/14/16	1301	G	W	N	N	2	1	1		
MW2		1221				N	2	1	1		
MW3		1149				N	2	1	1		
MW4		0952				N	2	1	1		
MW5		1027				N	2	1	1		
MW6		1116				N	2	1	1		
MW13		0920				N	2	1	1		
DUP		1151				N	2	1	1		
MS/MSD (mw5)		1029				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
	3/17/14 1200			3/18/16 945	TA CF
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:

3/30/2016

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MW7	310-76568-B-1	Plastic 250ml - with Nitric Acid	<2		
MW7	310-76568-C-1	Plastic 1 liter - Nitric Acid	<2		
MW7	310-76568-D-1	Plastic 1 liter - Nitric Acid	<2		
MW2	310-76568-B-2	Plastic 250ml - with Nitric Acid	<2		
MW2	310-76568-C-2	Plastic 1 liter - Nitric Acid	<2		
MW2	310-76568-D-2	Plastic 1 liter - Nitric Acid	<2		
MW3	310-76568-B-3	Plastic 250ml - with Nitric Acid	<2		
MW3	310-76568-C-3	Plastic 1 liter - Nitric Acid	<2		
MW3	310-76568-D-3	Plastic 1 liter - Nitric Acid	<2		
MW4	310-76568-B-4	Plastic 250ml - with Nitric Acid	<2		
MW4	310-76568-C-4	Plastic 1 liter - Nitric Acid	<2		
MW4	310-76568-D-4	Plastic 1 liter - Nitric Acid	<2		
MW5	310-76568-A-5 DU	Plastic 1 liter - Nitric Acid			
MW5	310-76568-B-5	Plastic 250ml - with Nitric Acid	<2		
MW5	310-76568-B-5 MS	Plastic 250ml - with Nitric Acid	<2		
MW5	310-76568-B-5 MSD	Plastic 250ml - with Nitric Acid	<2		
MW5	310-76568-C-5	Plastic 1 liter - Nitric Acid	<2		
MW5	310-76568-D-5	Plastic 1 liter - Nitric Acid	<2		
MW6	310-76568-B-6	Plastic 250ml - with Nitric Acid	<2		
MW6	310-76568-C-6	Plastic 1 liter - Nitric Acid	<2		
MW6	310-76568-D-6	Plastic 1 liter - Nitric Acid	<2		
MW13	310-76568-B-7	Plastic 250ml - with Nitric Acid	<2		
MW13	310-76568-C-7	Plastic 1 liter - Nitric Acid	<2		
MW13	310-76568-D-7	Plastic 1 liter - Nitric Acid	<2		
DUP	310-76568-B-8	Plastic 250ml - with Nitric Acid	<2		
DUP	310-76568-C-8	Plastic 1 liter - Nitric Acid	<2		
DUP	310-76568-D-8	Plastic 1 liter - Nitric Acid	<2		

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-76568-1
SDG Number:

Login Number: 76568
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

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: 310-76568-2
Client Project/Site: Nebraska City Unit 2 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:
4/20/2016 4:19:29 PM

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

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Case Narrative

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-76568-2

Job ID: 310-76568-2

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-76568-2

Comments
No additional comments.

Receipt
The samples were received on 3/18/2016 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 2.1° C and 2.3° 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 2 Landfill

TestAmerica Job ID: 310-76568-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-76568-1	MW7	Ground Water	03/14/16 13:01	03/18/16 09:45
310-76568-2	MW2	Ground Water	03/14/16 12:21	03/18/16 09:45
310-76568-3	MW3	Ground Water	03/14/16 11:49	03/18/16 09:45
310-76568-4	MW4	Ground Water	03/14/16 09:52	03/18/16 09:45
310-76568-5	MW5	Ground Water	03/14/16 10:27	03/18/16 09:45
310-76568-6	MW6	Ground Water	03/14/16 11:16	03/18/16 09:45
310-76568-7	MW13	Ground Water	03/14/16 09:20	03/18/16 09:45
310-76568-8	DUP	Ground Water	03/14/16 11:51	03/18/16 09:45

Detection Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-76568-2

Client Sample ID: MW7 — **Lab Sample ID: 310-76568-1**

No Detections.

Client Sample ID: MW2 — **Lab Sample ID: 310-76568-2**

No Detections.

Client Sample ID: MW3 — **Lab Sample ID: 310-76568-3**

No Detections.

Client Sample ID: MW4 — **Lab Sample ID: 310-76568-4**

No Detections.

Client Sample ID: MW5 — **Lab Sample ID: 310-76568-5**

Sample Analysis Not Complete.

Client Sample ID: MW6 — **Lab Sample ID: 310-76568-6**

No Detections.

Client Sample ID: MW13 — **Lab Sample ID: 310-76568-7**

No Detections.

Client Sample ID: DUP — **Lab Sample ID: 310-76568-8**

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-76568-2

Client Sample ID: MW7
Date Collected: 03/14/16 13:01
Date Received: 03/18/16 09:45

Lab Sample ID: 310-76568-1
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	0.606		0.146	0.156	1.00	0.118	pCi/L	03/23/16 20:28	04/14/16 07:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.3*		*40 - 110*	*03/23/16 20:28*	*04/14/16 07:09*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.821		0.276	0.286	1.00	0.366	pCi/L	03/23/16 19:35	04/12/16 11:48	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.3*		*40 - 110*	*03/23/16 19:35*	*04/12/16 11:48*	*1*
Y Carrier	*80.0*		*40 - 110*	*03/23/16 19:35*	*04/12/16 11:48*	*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	1.43		0.312	0.326	5.00	0.366	pCi/L		04/17/16 19:12	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-76568-2

Client Sample ID: MW2
Date Collected: 03/14/16 12:21
Date Received: 03/18/16 09:45

Lab Sample ID: 310-76568-2
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	0.251		0.102	0.104	1.00	0.107	pCi/L	03/23/16 20:28	04/14/16 07:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.0*		*40 - 110*	*03/23/16 20:28*	*04/14/16 07:09*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.716		0.278	0.285	1.00	0.386	pCi/L	03/23/16 19:35	04/12/16 11:48	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.0*		*40 - 110*	*03/23/16 19:35*	*04/12/16 11:48*	*1*
Y Carrier	*82.6*		*40 - 110*	*03/23/16 19:35*	*04/12/16 11:48*	*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	0.967		0.296	0.304	5.00	0.386	pCi/L		04/17/16 19:12	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-76568-2

Client Sample ID: MW3

Date Collected: 03/14/16 11:49
Date Received: 03/18/16 09:45

Lab Sample ID: 310-76568-3

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	0.218		0.0993	0.101	1.00	0.115	pCi/L	03/23/16 20:28	04/14/16 07:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.6*		*40 - 110*	*03/23/16 20:28*	*04/14/16 07:09*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.503		0.298	0.301	1.00	0.451	pCi/L	03/23/16 19:35	04/12/16 11:49	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.6*		*40 - 110*	*03/23/16 19:35*	*04/12/16 11:49*	*1*
Y Carrier	*69.5*		*40 - 110*	*03/23/16 19:35*	*04/12/16 11:49*	*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	0.721		0.314	0.318	5.00	0.451	pCi/L		04/17/16 19:12	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-76568-2

Client Sample ID: MW4
Date Collected: 03/14/16 09:52
Date Received: 03/18/16 09:45

Lab Sample ID: 310-76568-4
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	0.189		0.111	0.113	1.00	0.158	pCi/L	03/23/16 20:28	04/14/16 10:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.9*		*40 - 110*	*03/23/16 20:28*	*04/14/16 10:42*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.374	U	0.259	0.261	1.00	0.405	pCi/L	03/23/16 19:35	04/12/16 11:49	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.9*		*40 - 110*	*03/23/16 19:35*	*04/12/16 11:49*	*1*
Y Carrier	*83.7*		*40 - 110*	*03/23/16 19:35*	*04/12/16 11:49*	*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	0.563		0.282	0.284	5.00	0.405	pCi/L		04/17/16 19:12	1

Client Sample ID: MW5

Date Collected: 03/14/16 10:27
Date Received: 03/18/16 09:45

Lab Sample ID: 310-76568-5

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	0.0829	U	0.0782	0.0786	1.00	0.121	pCi/L	03/23/16 20:28	04/14/16 10:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.5*		*40 - 110*	*03/23/16 20:28*	*04/14/16 10:42*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.236	U	0.255	0.255	1.00	0.417	pCi/L	03/23/16 19:35	04/12/16 11:49	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.5*		*40 - 110*	*03/23/16 19:35*	*04/12/16 11:49*	*1*
Y Carrier	*83.7*		*40 - 110*	*03/23/16 19:35*	*04/12/16 11:49*	*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	0.318	U	0.266	0.267	5.00	0.417	pCi/L		04/17/16 19:12	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-76568-2

Client Sample ID: MW6

Date Collected: 03/14/16 11:16
Date Received: 03/18/16 09:45

Lab Sample ID: 310-76568-6

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	**0.145**		0.0915	0.0924	1.00	0.128	pCi/L	03/23/16 18:53	04/14/16 07:01	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*03/23/16 18:53*	*04/14/16 07:01*	*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	0.222	0.224	1.00	0.358	pCi/L	03/23/16 17:43	04/12/16 16:16	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*03/23/16 17:43*	*04/12/16 16:16*	*1*
Y Carrier	*82.2*		*40 - 110*	*03/23/16 17:43*	*04/12/16 16:16*	*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	**0.392**		0.241	0.242	5.00	0.358	pCi/L		04/17/16 19:12	1

Client Sample ID: MW13
Date Collected: 03/14/16 09:20
Date Received: 03/18/16 09:45

Lab Sample ID: 310-76568-7
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	**0.490**		0.134	0.141	1.00	0.118	pCi/L	03/23/16 18:53	04/14/16 07:01	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*03/23/16 18:53*	*04/14/16 07:01*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.251	U	0.223	0.224	1.00	0.358	pCi/L	03/23/16 17:43	04/12/16 16:21	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*03/23/16 17:43*	*04/12/16 16:21*	*1*
Y Carrier	*82.6*		*40 - 110*	*03/23/16 17:43*	*04/12/16 16:21*	*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	**0.741**		0.260	0.265	5.00	0.358	pCi/L		04/17/16 19:12	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-76568-2

Client Sample ID: DUP

Date Collected: 03/14/16 11:51
Date Received: 03/18/16 09:45

Lab Sample ID: 310-76568-8

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	0.0993	U	0.0867	0.0872	1.00	0.133	pCi/L	03/23/16 18:53	04/14/16 07:01	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.3*		*40 - 110*	*03/23/16 18:53*	*04/14/16 07:01*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.200	U	0.222	0.223	1.00	0.364	pCi/L	03/23/16 17:43	04/12/16 16:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.3*		*40 - 110*	*03/23/16 17:43*	*04/12/16 16:15*	*1*
Y Carrier	*83.0*		*40 - 110*	*03/23/16 17:43*	*04/12/16 16:15*	*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	0.299	U	0.238	0.239	5.00	0.364	pCi/L		04/17/16 19:12	1

Definitions/Glossary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-76568-2

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 160-241843/1-A
Matrix: Water
Analysis Batch: 245932

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 241843

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.02264	U	0.0585	0.0585	1.00	0.109	pCi/L	03/23/16 18:53	04/14/16 06:26	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*106*		*40 - 110*	*03/23/16 18:53*	*04/14/16 06:26*	*1*

Lab Sample ID: LCS 160-241843/2-A
Matrix: Water
Analysis Batch: 245932

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 241843

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.2	12.19		1.25	1.00	0.108	pCi/L	109	68 - 137		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*104*		*40 - 110*

Lab Sample ID: MB 160-241847/1-A
Matrix: Water
Analysis Batch: 245939

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 241847

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.005688	U	0.0855	0.0855	1.00	0.164	pCi/L	03/23/16 20:28	04/14/16 07:08	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*109*		*40 - 110*	*03/23/16 20:28*	*04/14/16 07:08*	*1*

Lab Sample ID: LCS 160-241847/2-A
Matrix: Water
Analysis Batch: 245939

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 241847

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.2	13.03		1.32	1.00	0.121	pCi/L	117	68 - 137		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*108*		*40 - 110*

Lab Sample ID: 310-76568-5 DU
Matrix: Ground Water
Analysis Batch: 245932

Client Sample ID: MW5
Prep Type: Total/NA
Prep Batch: 241847

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Radium-226	0.0829	U		0.02515	U	0.0558	1.00	0.103	pCi/L			0.43	1

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: 310-76568-5 DU
Matrix: Ground Water
Analysis Batch: 245932

Client Sample ID: MW5
Prep Type: Total/NA
Prep Batch: 241847

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	94.6		40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-241841/1-A
Matrix: Water
Analysis Batch: 245531

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 241841

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.06346	U	0.179	0.179	1.00	0.312	pCi/L	03/23/16 17:43	04/12/16 16:13	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110	03/23/16 17:43	04/12/16 16:13	1
Y Carrier	83.4		40 - 110	03/23/16 17:43	04/12/16 16:13	1

Lab Sample ID: LCS 160-241841/2-A
Matrix: Water
Analysis Batch: 245531

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 241841

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			15.3	16.24		1.71	1.00	0.354	pCi/L	106	56 - 140		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	104		40 - 110
Y Carrier	78.9		40 - 110

Lab Sample ID: MB 160-241845/1-A
Matrix: Water
Analysis Batch: 245531

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 241845

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1686	U	0.193	0.193	1.00	0.317	pCi/L	03/23/16 19:35	04/12/16 11:47	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	109		40 - 110	03/23/16 19:35	04/12/16 11:47	1
Y Carrier	80.4		40 - 110	03/23/16 19:35	04/12/16 11:47	1

Lab Sample ID: LCS 160-241845/2-A
Matrix: Water
Analysis Batch: 245531

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 241845

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			15.3	16.48		1.72	1.00	0.327	pCi/L	108	56 - 140		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	108		40 - 110
Y Carrier	82.6		40 - 110

Lab Sample ID: 310-76568-5 DU
Matrix: Ground Water
Analysis Batch: 245531

Client Sample ID: MW5
Prep Type: Total/NA
Prep Batch: 241845

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Radium-228	0.236	U		0.1111	U	0.226	1.00	0.386	pCi/L			0.26	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	94.6		40 - 110
Y Carrier	83.0		40 - 110

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

Lab Sample ID: 310-76568-5 DU
Matrix: Ground Water
Analysis Batch: 246268

Client Sample ID: MW5
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	0.318	U		0.1363	U	0.233	5.00	0.386	pCi/L			0.36	

Rad

Prep Batch: 241841

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-76568-6	MW6	Total/NA	Ground Water	PrecSep_0	
310-76568-7	MW13	Total/NA	Ground Water	PrecSep_0	
310-76568-8	DUP	Total/NA	Ground Water	PrecSep_0	
LCS 160-241841/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
MB 160-241841/1-A	Method Blank	Total/NA	Water	PrecSep_0	

Prep Batch: 241843

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-76568-6	MW6	Total/NA	Ground Water	PrecSep-21	
310-76568-7	MW13	Total/NA	Ground Water	PrecSep-21	
310-76568-8	DUP	Total/NA	Ground Water	PrecSep-21	
LCS 160-241843/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
MB 160-241843/1-A	Method Blank	Total/NA	Water	PrecSep-21	

Prep Batch: 241845

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-76568-1	MW7	Total/NA	Ground Water	PrecSep_0	
310-76568-2	MW2	Total/NA	Ground Water	PrecSep_0	
310-76568-3	MW3	Total/NA	Ground Water	PrecSep_0	
310-76568-4	MW4	Total/NA	Ground Water	PrecSep_0	
310-76568-5	MW5	Total/NA	Ground Water	PrecSep_0	
310-76568-5 DU	MW5	Total/NA	Ground Water	PrecSep_0	
LCS 160-241845/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
MB 160-241845/1-A	Method Blank	Total/NA	Water	PrecSep_0	

Prep Batch: 241847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-76568-1	MW7	Total/NA	Ground Water	PrecSep-21	
310-76568-2	MW2	Total/NA	Ground Water	PrecSep-21	
310-76568-3	MW3	Total/NA	Ground Water	PrecSep-21	
310-76568-4	MW4	Total/NA	Ground Water	PrecSep-21	
310-76568-5	MW5	Total/NA	Ground Water	PrecSep-21	
310-76568-5 DU	MW5	Total/NA	Ground Water	PrecSep-21	
LCS 160-241847/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
MB 160-241847/1-A	Method Blank	Total/NA	Water	PrecSep-21	

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-76568-2

Client Sample ID: MW7
Date Collected: 03/14/16 13:01
Date Received: 03/18/16 09:45

Lab Sample ID: 310-76568-1
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			241847	03/23/16 20:28	RTM	TAL SL
Total/NA	Analysis	9315		1	245939	04/14/16 07:09	RTM	TAL SL
Total/NA	Prep	PrecSep_0			241845	03/23/16 19:35	RTM	TAL SL
Total/NA	Analysis	9320		1	245531	04/12/16 11:48	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	246268	04/17/16 19:12	RTM	TAL SL

Client Sample ID: MW2
Date Collected: 03/14/16 12:21
Date Received: 03/18/16 09:45

Lab Sample ID: 310-76568-2
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			241847	03/23/16 20:28	RTM	TAL SL
Total/NA	Analysis	9315		1	245939	04/14/16 07:09	RTM	TAL SL
Total/NA	Prep	PrecSep_0			241845	03/23/16 19:35	RTM	TAL SL
Total/NA	Analysis	9320		1	245531	04/12/16 11:48	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	246268	04/17/16 19:12	RTM	TAL SL

Client Sample ID: MW3
Date Collected: 03/14/16 11:49
Date Received: 03/18/16 09:45

Lab Sample ID: 310-76568-3
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			241847	03/23/16 20:28	RTM	TAL SL
Total/NA	Analysis	9315		1	245939	04/14/16 07:09	RTM	TAL SL
Total/NA	Prep	PrecSep_0			241845	03/23/16 19:35	RTM	TAL SL
Total/NA	Analysis	9320		1	245531	04/12/16 11:49	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	246268	04/17/16 19:12	RTM	TAL SL

Client Sample ID: MW4
Date Collected: 03/14/16 09:52
Date Received: 03/18/16 09:45

Lab Sample ID: 310-76568-4
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			241847	03/23/16 20:28	RTM	TAL SL
Total/NA	Analysis	9315		1	245932	04/14/16 10:42	RTM	TAL SL
Total/NA	Prep	PrecSep_0			241845	03/23/16 19:35	RTM	TAL SL
Total/NA	Analysis	9320		1	245531	04/12/16 11:49	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	246268	04/17/16 19:12	RTM	TAL SL

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-76568-2

Client Sample ID: MW5

Date Collected: 03/14/16 10:27
Date Received: 03/18/16 09:45

Lab Sample ID: 310-76568-5
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			241847	03/23/16 20:28	RTM	TAL SL
Total/NA	Analysis	9315		1	245932	04/14/16 10:42	RTM	TAL SL
Total/NA	Prep	PrecSep_0			241845	03/23/16 19:35	RTM	TAL SL
Total/NA	Analysis	9320		1	245531	04/12/16 11:49	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	246268	04/17/16 19:12	RTM	TAL SL

Client Sample ID: MW6

Date Collected: 03/14/16 11:16
Date Received: 03/18/16 09:45

Lab Sample ID: 310-76568-6
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			241843	03/23/16 18:53	RTM	TAL SL
Total/NA	Analysis	9315		1	245939	04/14/16 07:01	RTM	TAL SL
Total/NA	Prep	PrecSep_0			241841	03/23/16 17:43	RTM	TAL SL
Total/NA	Analysis	9320		1	245531	04/12/16 16:16	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	246268	04/17/16 19:12	RTM	TAL SL

Client Sample ID: MW13

Date Collected: 03/14/16 09:20
Date Received: 03/18/16 09:45

Lab Sample ID: 310-76568-7
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			241843	03/23/16 18:53	RTM	TAL SL
Total/NA	Analysis	9315		1	245939	04/14/16 07:01	RTM	TAL SL
Total/NA	Prep	PrecSep_0			241841	03/23/16 17:43	RTM	TAL SL
Total/NA	Analysis	9320		1	245531	04/12/16 16:21	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	246268	04/17/16 19:12	RTM	TAL SL

Client Sample ID: DUP

Date Collected: 03/14/16 11:51
Date Received: 03/18/16 09:45

Lab Sample ID: 310-76568-8
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			241843	03/23/16 18:53	RTM	TAL SL
Total/NA	Analysis	9315		1	245939	04/14/16 07:01	RTM	TAL SL
Total/NA	Prep	PrecSep_0			241841	03/23/16 17:43	RTM	TAL SL
Total/NA	Analysis	9320		1	245531	04/12/16 16:15	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	246268	04/17/16 19:12	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 2 Landfill

TestAmerica Job ID: 310-76568-2

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 Unit 2 Landfill

TestAmerica Job ID: 310-76568-2

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

310-76568 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: OMAHA PUB POWER DIST

City/State: OMAHA | Project: NE CITY UNIT 2 LANDFILL

Receipt Information

Date/Time Received: 3/18/16 0945 | 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:
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: G	Correction Factor (°C): +0.2
Uncorrected Temp (°C): 1.9	Corrected Temp (°C): 2.1

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

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 | Project: NE CITY UNIT 2 LANDFILL

Receipt Information

Date/Time Received: 3/18/16 0945 | 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:
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: G | Correction Factor (°C): +0.2

Uncorrected Temp (°C): 2.1 | Corrected Temp (°C): 2.3

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 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 2 Landfill CCR Q1 2016	TestAmerica Project #: 31007559			
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		
MW7	3/14/16	1301	G	W	N	N	2	1	1		
MW2		1221				N	2	1	1		
MW3		1149				N	2	1	1		
MW4		0952				N	2	1	1		
MW5		1027				N	2	1	1		
MW6		1116				N	2	1	1		
MW13		0920				N	2	1	1		
DUP		1151				N	2	1	1		
MS/MSD (mw5)	↓	1029	↓	↓	↓	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
	3/17/14 1200			3/18/16 945	TA CF
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 #
MW7	310-76568-B-1	Plastic 250ml - with Nitric Acid	<2		
MW7	310-76568-C-1	Plastic 1 liter - Nitric Acid	<2		
MW7	310-76568-D-1	Plastic 1 liter - Nitric Acid	<2		
MW2	310-76568-B-2	Plastic 250ml - with Nitric Acid	<2		
MW2	310-76568-C-2	Plastic 1 liter - Nitric Acid	<2		
MW2	310-76568-D-2	Plastic 1 liter - Nitric Acid	<2		
MW3	310-76568-B-3	Plastic 250ml - with Nitric Acid	<2		
MW3	310-76568-C-3	Plastic 1 liter - Nitric Acid	<2		
MW3	310-76568-D-3	Plastic 1 liter - Nitric Acid	<2		
MW4	310-76568-B-4	Plastic 250ml - with Nitric Acid	<2		
MW4	310-76568-C-4	Plastic 1 liter - Nitric Acid	<2		
MW4	310-76568-D-4	Plastic 1 liter - Nitric Acid	<2		
MW5	310-76568-A-5 DU	Plastic 1 liter - Nitric Acid			
MW5	310-76568-B-5	Plastic 250ml - with Nitric Acid	<2		
MW5	310-76568-B-5 MS	Plastic 250ml - with Nitric Acid	<2		
MW5	310-76568-B-5 MSD	Plastic 250ml - with Nitric Acid	<2		
MW5	310-76568-C-5	Plastic 1 liter - Nitric Acid	<2		
MW5	310-76568-D-5	Plastic 1 liter - Nitric Acid	<2		
MW6	310-76568-B-6	Plastic 250ml - with Nitric Acid	<2		
MW6	310-76568-C-6	Plastic 1 liter - Nitric Acid	<2		
MW6	310-76568-D-6	Plastic 1 liter - Nitric Acid	<2		
MW13	310-76568-B-7	Plastic 250ml - with Nitric Acid	<2		
MW13	310-76568-C-7	Plastic 1 liter - Nitric Acid	<2		
MW13	310-76568-D-7	Plastic 1 liter - Nitric Acid	<2		
DUP	310-76568-B-8	Plastic 250ml - with Nitric Acid	<2		
DUP	310-76568-C-8	Plastic 1 liter - Nitric Acid	<2		
DUP	310-76568-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

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Hayes, Shawn M	Carrier Tracking No(s):	COC No: 310-6271.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: shawn.hayes@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		**Analysis Requested**		Job #: 310-76568-2
Address: 13715 Rider Trail North,	**Due Date Requested:** 4/15/2016			
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 2 Landfill	Project #: 31007559			
Site: 310 OPPD Nebraska City Unit 2	SSOW#:			

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:							
MW7 (310-76568-1)	3/14/16	13:01 Central		Water			X	X	X	2	
MW2 (310-76568-2)	3/14/16	12:21 Central		Water			X	X	X	2	
MW3 (310-76568-3)	3/14/16	11:49 Central		Water			X	X	X	2	
MW4 (310-76568-4)	3/14/16	09:52 Central		Water			X	X	X	2	
MW5 (310-76568-5)	3/14/16	10:27 Central		Water			X	X	X	2	Client Specified Sample Duplicate
MW5 (310-76568-5DU)	3/14/16	10:27 Central	DU	Water			X	X	X	1	
MW6 (310-76568-6)	3/14/16	11:16 Central		Water			X	X	X	2	
MW13 (310-76568-7)	3/14/16	09:20 Central		Water			X	X	X	2	
DUP (310-76568-8)	3/14/16	11:51 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: T. Pelk	Date/Time: 3/21/16 1416	Company	Received by: Jill Clark	Date/Time: 3.22.16 0915	Company: TAST	
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: 310-76568-2
SDG Number:

Login Number: 76568
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: 310-76568-2
SDG Number:

Login Number: 76568
List Number: 2
Creator: Clarke, Jill C

List Source: TestAmerica St. Louis
List Creation: 03/22/16 10:59 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	19.0
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 2 Landfill

TestAmerica Job ID: 310-76568-2

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)
310-76568-1	MW7	98.3
310-76568-2	MW2	94.0
310-76568-3	MW3	94.6
310-76568-4	MW4	98.9
310-76568-5	MW5	91.5
310-76568-5 DU	MW5	94.6
310-76568-6	MW6	103
310-76568-7	MW13	103
310-76568-8	DUP	98.3

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 160-241843/2-A	Lab Control Sample	104
LCS 160-241847/2-A	Lab Control Sample	108
MB 160-241843/1-A	Method Blank	106
MB 160-241847/1-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)	
Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
310-76568-1	MW7	98.3	80.0
310-76568-2	MW2	94.0	82.6
310-76568-3	MW3	94.6	69.5
310-76568-4	MW4	98.9	83.7
310-76568-5	MW5	91.5	83.7
310-76568-5 DU	MW5	94.6	83.0
310-76568-6	MW6	103	82.2
310-76568-7	MW13	103	82.6
310-76568-8	DUP	98.3	83.0

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

Tracer/Carrier Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-76568-2

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 160-241841/2-A	Lab Control Sample	104	78.9								
LCS 160-241845/2-A	Lab Control Sample	108	82.6								
MB 160-241841/1-A	Method Blank	106	83.4								
MB 160-241845/1-A	Method Blank	109	80.4								

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: 310-82368-1
Client Project/Site: Nebraska City Unit 2 Landfill
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 1:01:41 PM

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

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Job ID: 310-82368-1

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-82368-1

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 0.9º C and 1.0º 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: 310-82368-2

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-82368-2

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 2 Landfill

TestAmerica Job ID: 310-82368-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-82368-1	MW7	Ground Water	06/03/16 13:14	06/09/16 09:25
310-82368-2	MW2	Ground Water	06/03/16 12:24	06/09/16 09:25
310-82368-3	MW3	Ground Water	06/03/16 11:41	06/09/16 09:25
310-82368-4	MW4	Ground Water	06/03/16 09:41	06/09/16 09:25
310-82368-5	MW5	Ground Water	06/03/16 10:16	06/09/16 09:25
310-82368-6	MW6	Ground Water	06/03/16 10:52	06/09/16 09:25
310-82368-7	MW13	Ground Water	06/03/16 09:09	06/09/16 09:25
310-82368-8	DUP	Ground Water	06/03/16 12:26	06/09/16 09:25

Client Sample ID: MW7

Date Collected: 06/03/16 13:14
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82368-1

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7.63**		5.00		mg/L			06/09/16 09:16	5
Fluoride	<0.500		0.500		mg/L			06/09/16 09:16	5
Sulfate	<5.00		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	**0.0542**		0.0500		mg/L		06/10/16 08:08	06/13/16 13:47	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 23:32	1
Arsenic	**0.0529**		0.00200		mg/L		06/10/16 07:54	07/09/16 23:32	1
Barium	**0.591**		0.00200		mg/L		06/10/16 07:54	07/09/16 23:32	1
Beryllium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:32	1
Boron	<0.200		0.200		mg/L		06/10/16 07:54	07/09/16 23:32	1
Cadmium	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 23:32	1
Calcium	**128**		0.200		mg/L		06/10/16 07:54	07/12/16 00:33	1
Chromium	<0.00500		0.00500		mg/L		06/10/16 07:54	07/12/16 00:33	1
Cobalt	<0.000500		0.000500		mg/L		06/10/16 07:54	07/12/16 00:33	1
Lead	**0.00166**	**B**	0.000500		mg/L		06/10/16 07:54	07/12/16 00:33	1
Molybdenum	<0.00200		0.00200		mg/L		06/10/16 07:54	07/12/16 00:33	1
Selenium	<0.00500		0.00500		mg/L		06/10/16 07:54	07/09/16 23:32	1
Thallium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:32	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 12:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**690**		150		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	**0.587**		0.111	0.123	1.00	0.0789	pCi/L	06/15/16 13:40	07/07/16 11:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.3*		*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	**0.555**		0.280	0.284	1.00	0.418	pCi/L	06/15/16 14:37	06/30/16 18:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.3*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:31*	*1*
Y Carrier	*91.6*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:31*	*1*

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-82368-1

Client Sample ID: MW7
Date Collected: 06/03/16 13:14
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82368-1
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	1.14		0.301	0.310	5.00	0.418	pCi/L		07/08/16 20:20	1

Client Sample ID: MW2

Date Collected: 06/03/16 12:24
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82368-2

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			06/09/16 09:16	5
Fluoride	<0.500		0.500		mg/L			06/09/16 09:16	5
Sulfate	**336**		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 14:02	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.00944**		0.00100		mg/L		06/10/16 07:54	07/09/16 23:35	1
Arsenic	<0.00200		0.00200		mg/L		06/10/16 07:54	07/09/16 23:35	1
Barium	**0.0679**		0.00200		mg/L		06/10/16 07:54	07/09/16 23:35	1
Beryllium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:35	1
Boron	**0.301**		0.200		mg/L		06/10/16 07:54	07/09/16 23:35	1
Cadmium	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 23:35	1
Calcium	**196**		0.200		mg/L		06/10/16 07:54	07/12/16 00:36	1
Chromium	<0.00500		0.00500		mg/L		06/10/16 07:54	07/12/16 00:36	1
Cobalt	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 23:35	1
Lead	**0.000538**	**B**	0.000500		mg/L		06/10/16 07:54	07/12/16 00:36	1
Molybdenum	**0.00507**		0.00200		mg/L		06/10/16 07:54	07/12/16 00:36	1
Selenium	<0.00500		0.00500		mg/L		06/10/16 07:54	07/09/16 23:35	1
Thallium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:35	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/13/16 09:16	06/14/16 12:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**972**		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	**0.210**		0.0717	0.0742	1.00	0.0731	pCi/L	06/15/16 13:40	07/07/16 11:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.5*		*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	0.269	U	0.238	0.239	1.00	0.381	pCi/L	06/15/16 14:37	06/30/16 18:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.5*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:31*	*1*
Y Carrier	*93.1*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:31*	*1*

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-82368-1

Client Sample ID: MW2
Date Collected: 06/03/16 12:24
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82368-2
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	0.479		0.248	0.250	5.00	0.381	pCi/L		07/08/16 20:20	1

Client Sample ID: MW3

Date Collected: 06/03/16 11:41
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82368-3

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			06/09/16 09:16	5
Fluoride	<0.500		0.500		mg/L			06/09/16 09:16	5
Sulfate	**19.6**		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 14:04	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:38	1
Arsenic	**0.0191**		0.00200		mg/L		06/10/16 07:54	07/09/16 23:38	1
Barium	**0.362**		0.00200		mg/L		06/10/16 07:54	07/09/16 23:38	1
Beryllium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:38	1
Boron	<0.200		0.200		mg/L		06/10/16 07:54	07/09/16 23:38	1
Cadmium	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 23:38	1
Calcium	**121**		0.200		mg/L		06/10/16 07:54	07/12/16 00:39	1
Chromium	<0.00500		0.00500		mg/L		06/10/16 07:54	07/12/16 00:39	1
Cobalt	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 23:38	1
Lead	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 23:38	1
Molybdenum	**0.00377**		0.00200		mg/L		06/10/16 07:54	07/12/16 00:39	1
Selenium	<0.00500		0.00500		mg/L		06/10/16 07:54	07/09/16 23:38	1
Thallium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:38	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 12:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**500**		150		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	**0.275**		0.0874	0.0908	1.00	0.0900	pCi/L	06/15/16 13:40	07/07/16 11:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*83.5*		*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	**0.673**		0.266	0.273	1.00	0.361	pCi/L	06/15/16 14:37	06/30/16 18:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*83.5*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:31*	*1*
Y Carrier	*87.9*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:31*	*1*

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-82368-1

Client Sample ID: MW3
Date Collected: 06/03/16 11:41
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82368-3
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	0.948		0.280	0.287	5.00	0.361	pCi/L		07/08/16 20:20	1

Client Sample ID: MW4

Date Collected: 06/03/16 09:41
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82368-4

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	**46.8**		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 14:07	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:41	1
Arsenic	<0.00200		0.00200		mg/L		06/10/16 07:54	07/09/16 23:41	1
Barium	**0.288**		0.00200		mg/L		06/10/16 07:54	07/09/16 23:41	1
Beryllium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:41	1
Boron	<0.200		0.200		mg/L		06/10/16 07:54	07/09/16 23:41	1
Cadmium	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 23:41	1
Calcium	**130**		0.200		mg/L		06/10/16 07:54	07/12/16 00:42	1
Chromium	<0.00500		0.00500		mg/L		06/10/16 07:54	07/12/16 00:42	1
Cobalt	<0.000500		0.000500		mg/L		06/10/16 07:54	07/12/16 00:42	1
Lead	**0.000737**	**B**	0.000500		mg/L		06/10/16 07:54	07/12/16 00:42	1
Molybdenum	**0.00252**		0.00200		mg/L		06/10/16 07:54	07/12/16 00:42	1
Selenium	<0.00500		0.00500		mg/L		06/10/16 07:54	07/09/16 23:41	1
Thallium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:41	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 12:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**668**		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	**0.317**		0.0844	0.0891	1.00	0.0734	pCi/L	06/15/16 13:40	07/07/16 11:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.0*		*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	**0.422**		0.218	0.222	1.00	0.320	pCi/L	06/15/16 14:37	06/30/16 18:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.0*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:31*	*1*
Y Carrier	*93.5*		*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 2 Landfill

TestAmerica Job ID: 310-82368-1

Client Sample ID: MW4
Date Collected: 06/03/16 09:41
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82368-4
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	0.739		0.234	0.239	5.00	0.320	pCi/L		07/08/16 20:20	1

Client Sample ID: MW5
Date Collected: 06/03/16 10:16
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82368-5
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**36.6**		5.00		mg/L			06/10/16 11:22	5
Fluoride	<0.500		0.500		mg/L			06/10/16 11:22	5
Sulfate	**590**		20.0		mg/L			06/14/16 11:18	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 14:12	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:44	1
Arsenic	**0.00291**		0.00200		mg/L		06/10/16 07:54	07/09/16 23:44	1
Barium	**0.0384**		0.00200		mg/L		06/10/16 07:54	07/09/16 23:44	1
Beryllium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:44	1
Boron	**3.98**		0.200		mg/L		06/10/16 07:54	07/09/16 23:44	1
Cadmium	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 23:44	1
Calcium	**217**		0.200		mg/L		06/10/16 07:54	07/12/16 00:45	1
Chromium	<0.00500		0.00500		mg/L		06/10/16 07:54	07/12/16 00:45	1
Cobalt	<0.000500		0.000500		mg/L		06/10/16 07:54	07/12/16 00:45	1
Lead	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 23:44	1
Molybdenum	**0.0243**		0.00200		mg/L		06/10/16 07:54	07/12/16 00:45	1
Selenium	<0.00500		0.00500		mg/L		06/10/16 07:54	07/09/16 23:44	1
Thallium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:44	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 12:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1390**		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	0.0410	U	0.0523	0.0525	1.00	0.0871	pCi/L	06/15/16 13:40	07/07/16 11:23	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*78.6*		*40 - 110*	*06/15/16 13:40*	*07/07/16 11:23*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.313	U	0.250	0.251	1.00	0.395	pCi/L	06/15/16 14:37	06/30/16 18:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*78.6*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:31*	*1*
Y Carrier	*94.2*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:31*	*1*

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-82368-1

Client Sample ID: MW5
Date Collected: 06/03/16 10:16
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82368-5
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	0.354	U	0.255	0.257	5.00	0.395	pCi/L		07/08/16 20:20	1

Client Sample ID: MW6

Date Collected: 06/03/16 10:52
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82368-6

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6.16**		5.00		mg/L			06/10/16 11:22	5
Fluoride	<0.500		0.500		mg/L			06/10/16 11:22	5
Sulfate	**171**		5.00		mg/L			06/10/16 11:22	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 14:15	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:47	1
Arsenic	<0.00200		0.00200		mg/L		06/10/16 07:54	07/09/16 23:47	1
Barium	**0.0823**		0.00200		mg/L		06/10/16 07:54	07/09/16 23:47	1
Beryllium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:47	1
Boron	**4.14**		0.200		mg/L		06/10/16 07:54	07/09/16 23:47	1
Cadmium	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 23:47	1
Calcium	**93.0**		0.200		mg/L		06/10/16 07:54	07/12/16 00:58	1
Chromium	**0.00535**		0.00500		mg/L		06/10/16 07:54	07/12/16 00:58	1
Cobalt	<0.000500		0.000500		mg/L		06/10/16 07:54	07/12/16 00:58	1
Lead	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 23:47	1
Molybdenum	**0.0593**		0.00200		mg/L		06/10/16 07:54	07/12/16 00:58	1
Selenium	<0.00500		0.00500		mg/L		06/10/16 07:54	07/09/16 23:47	1
Thallium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:47	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 12:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**608**		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	**0.155**		0.0743	0.0756	1.00	0.0973	pCi/L	06/15/16 13:40	07/07/16 11:23	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.7*		*40 - 110*	*06/15/16 13:40*	*07/07/16 11:23*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.448**		0.259	0.263	1.00	0.394	pCi/L	06/15/16 14:37	06/30/16 18:32	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.7*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:32*	*1*
Y Carrier	*90.5*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:32*	*1*

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-82368-1

Client Sample ID: MW6
Date Collected: 06/03/16 10:52
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82368-6
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	0.603		0.270	0.273	5.00	0.394	pCi/L		07/08/16 20:20	1

Client Sample ID: MW13

Date Collected: 06/03/16 09:09
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82368-7

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**12.0**		5.00		mg/L			06/10/16 11:22	5
Fluoride	<0.500		0.500		mg/L			06/10/16 11:22	5
Sulfate	**37.6**		5.00		mg/L			06/10/16 11:22	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 14:17	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:50	1
Arsenic	**0.00607**		0.00200		mg/L		06/10/16 07:54	07/09/16 23:50	1
Barium	**0.324**		0.00200		mg/L		06/10/16 07:54	07/09/16 23:50	1
Beryllium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:50	1
Boron	<0.200		0.200		mg/L		06/10/16 07:54	07/09/16 23:50	1
Cadmium	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 23:50	1
Calcium	**87.9**		0.200		mg/L		06/10/16 07:54	07/12/16 01:01	1
Chromium	<0.00500		0.00500		mg/L		06/10/16 07:54	07/12/16 01:01	1
Cobalt	**0.00122**		0.000500		mg/L		06/10/16 07:54	07/12/16 01:01	1
Lead	**0.000704**	**B**	0.000500		mg/L		06/10/16 07:54	07/12/16 01:01	1
Molybdenum	**0.00216**		0.00200		mg/L		06/10/16 07:54	07/12/16 01:01	1
Selenium	<0.00500		0.00500		mg/L		06/10/16 07:54	07/09/16 23:50	1
Thallium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:50	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 12:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**360**		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	**0.393**		0.0901	0.0968	1.00	0.0657	pCi/L	06/15/16 13:40	07/07/16 11:23	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.6*		*40 - 110*	*06/15/16 13:40*	*07/07/16 11:23*	*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**		0.265	0.271	1.00	0.382	pCi/L	06/15/16 14:37	06/30/16 18:32	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.6*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:32*	*1*
Y Carrier	*92.3*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:32*	*1*

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-82368-1

Client Sample ID: MW13
Date Collected: 06/03/16 09:09
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82368-7
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	1.01		0.280	0.288	5.00	0.382	pCi/L		07/08/16 20:20	1

Client Sample ID: DUP

Date Collected: 06/03/16 12:26
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82368-8

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			06/10/16 11:22	5
Fluoride	<0.500		0.500		mg/L			06/10/16 11:22	5
Sulfate	**307**		20.0		mg/L			06/14/16 11:18	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 14:19	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.00968**		0.00100		mg/L		06/10/16 07:54	07/09/16 23:54	1
Arsenic	<0.00200		0.00200		mg/L		06/10/16 07:54	07/09/16 23:54	1
Barium	**0.0679**		0.00200		mg/L		06/10/16 07:54	07/09/16 23:54	1
Beryllium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:54	1
Boron	**0.328**		0.200		mg/L		06/10/16 07:54	07/09/16 23:54	1
Cadmium	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 23:54	1
Calcium	**200**		0.200		mg/L		06/10/16 07:54	07/12/16 01:04	1
Chromium	**0.0153**		0.00500		mg/L		06/10/16 07:54	07/12/16 01:04	1
Cobalt	<0.000500		0.000500		mg/L		06/10/16 07:54	07/09/16 23:54	1
Lead	**0.000656**	**B**	0.000500		mg/L		06/10/16 07:54	07/12/16 01:04	1
Molybdenum	**0.00602**		0.00200		mg/L		06/10/16 07:54	07/12/16 01:04	1
Selenium	<0.00500		0.00500		mg/L		06/10/16 07:54	07/09/16 23:54	1
Thallium	<0.00100		0.00100		mg/L		06/10/16 07:54	07/09/16 23:54	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 12:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**976**		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	**0.215**		0.0817	0.0840	1.00	0.0973	pCi/L	06/15/16 13:40	07/07/16 11:23	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.8*		*40 - 110*	*06/15/16 13:40*	*07/07/16 11:23*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.397	U	0.269	0.271	1.00	0.419	pCi/L	06/15/16 14:37	06/30/16 18:32	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.8*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:32*	*1*
Y Carrier	*92.0*		*40 - 110*	*06/15/16 14:37*	*06/30/16 18:32*	*1*

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-82368-1

Client Sample ID: DUP
Date Collected: 06/03/16 12:26
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82368-8
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	0.611		0.281	0.284	5.00	0.419	pCi/L		07/08/16 20:20	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

Lab Sample ID: MB 310-130647/3
Matrix: Water
Analysis Batch: 130647

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 11:22	1
Fluoride	<0.100		0.100		mg/L			06/10/16 11:22	1
Sulfate	<1.00		1.00		mg/L			06/10/16 11:22	1

Lab Sample ID: LCS 310-130647/4
Matrix: Water
Analysis Batch: 130647

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	8.136		mg/L		108	90 - 110
Fluoride	1.50	1.583		mg/L		106	90 - 110
Sulfate	7.50	8.106		mg/L		108	90 - 110

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

Lab Sample ID: MB 310-131097/3
Matrix: Water
Analysis Batch: 131097

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			06/14/16 11:18	1
Sulfate	<1.00		1.00		mg/L			06/14/16 11:18	1

Lab Sample ID: LCS 310-131097/4
Matrix: Water
Analysis Batch: 131097

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	7.745		mg/L		103	90 - 110
Sulfate	7.50	7.854		mg/L		105	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: 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

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

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

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

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: 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

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*

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*

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
310-82368-1	MW7	Total/NA	Ground Water	9056A	
310-82368-2	MW2	Total/NA	Ground Water	9056A	
310-82368-3	MW3	Total/NA	Ground Water	9056A	
310-82368-4	MW4	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
310-82368-2	MW2	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	

Analysis Batch: 130647

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82368-5	MW5	Total/NA	Ground Water	9056A	
310-82368-6	MW6	Total/NA	Ground Water	9056A	
310-82368-7	MW13	Total/NA	Ground Water	9056A	
310-82368-8	DUP	Total/NA	Ground Water	9056A	
LCS 310-130647/4	Lab Control Sample	Total/NA	Water	9056A	
MB 310-130647/3	Method Blank	Total/NA	Water	9056A	

Analysis Batch: 131097

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82368-5	MW5	Total/NA	Ground Water	9056A	
310-82368-8	DUP	Total/NA	Ground Water	9056A	
LCS 310-131097/4	Lab Control Sample	Total/NA	Water	9056A	
MB 310-131097/3	Method Blank	Total/NA	Water	9056A	

Metals

Prep Batch: 130496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82368-1	MW7	Total/NA	Ground Water	3010A	
310-82368-2	MW2	Total/NA	Ground Water	3010A	
310-82368-3	MW3	Total/NA	Ground Water	3010A	
310-82368-4	MW4	Total/NA	Ground Water	3010A	
310-82368-5	MW5	Total/NA	Ground Water	3010A	
310-82368-6	MW6	Total/NA	Ground Water	3010A	
310-82368-7	MW13	Total/NA	Ground Water	3010A	
310-82368-8	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
310-82368-1	MW7	Total/NA	Ground Water	3010A	
310-82368-2	MW2	Total/NA	Ground Water	3010A	
310-82368-3	MW3	Total/NA	Ground Water	3010A	
310-82368-4	MW4	Total/NA	Ground Water	3010A	

Metals (Continued)

Prep Batch: 130502 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82368-5	MW5	Total/NA	Ground Water	3010A	
310-82368-6	MW6	Total/NA	Ground Water	3010A	
310-82368-7	MW13	Total/NA	Ground Water	3010A	
310-82368-8	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
310-82368-1	MW7	Total/NA	Ground Water	7470A	
310-82368-2	MW2	Total/NA	Ground Water	7470A	
310-82368-3	MW3	Total/NA	Ground Water	7470A	
310-82368-4	MW4	Total/NA	Ground Water	7470A	
310-82368-5	MW5	Total/NA	Ground Water	7470A	
310-82368-6	MW6	Total/NA	Ground Water	7470A	
310-82368-7	MW13	Total/NA	Ground Water	7470A	
310-82368-8	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
310-82368-1	MW7	Total/NA	Ground Water	6010C	130502
310-82368-2	MW2	Total/NA	Ground Water	6010C	130502
310-82368-3	MW3	Total/NA	Ground Water	6010C	130502
310-82368-4	MW4	Total/NA	Ground Water	6010C	130502
310-82368-5	MW5	Total/NA	Ground Water	6010C	130502
310-82368-6	MW6	Total/NA	Ground Water	6010C	130502
310-82368-7	MW13	Total/NA	Ground Water	6010C	130502
310-82368-8	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
310-82368-1	MW7	Total/NA	Ground Water	7470A	130707
310-82368-2	MW2	Total/NA	Ground Water	7470A	130707
310-82368-3	MW3	Total/NA	Ground Water	7470A	130707
310-82368-4	MW4	Total/NA	Ground Water	7470A	130707
310-82368-5	MW5	Total/NA	Ground Water	7470A	130707
310-82368-6	MW6	Total/NA	Ground Water	7470A	130707
310-82368-7	MW13	Total/NA	Ground Water	7470A	130707
310-82368-8	DUP	Total/NA	Ground Water	7470A	130707
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
310-82368-1	MW7	Total/NA	Ground Water	6020A	130496
310-82368-2	MW2	Total/NA	Ground Water	6020A	130496
310-82368-3	MW3	Total/NA	Ground Water	6020A	130496

Metals (Continued)

Analysis Batch: 133568 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82368-4	MW4	Total/NA	Ground Water	6020A	130496
310-82368-5	MW5	Total/NA	Ground Water	6020A	130496
310-82368-6	MW6	Total/NA	Ground Water	6020A	130496
310-82368-7	MW13	Total/NA	Ground Water	6020A	130496
310-82368-8	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
310-82368-1	MW7	Total/NA	Ground Water	6020A	130496
310-82368-2	MW2	Total/NA	Ground Water	6020A	130496
310-82368-3	MW3	Total/NA	Ground Water	6020A	130496
310-82368-4	MW4	Total/NA	Ground Water	6020A	130496
310-82368-5	MW5	Total/NA	Ground Water	6020A	130496
310-82368-6	MW6	Total/NA	Ground Water	6020A	130496
310-82368-7	MW13	Total/NA	Ground Water	6020A	130496
310-82368-8	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
310-82368-1	MW7	Total/NA	Ground Water	SM 2540C	
310-82368-2	MW2	Total/NA	Ground Water	SM 2540C	
310-82368-3	MW3	Total/NA	Ground Water	SM 2540C	
310-82368-4	MW4	Total/NA	Ground Water	SM 2540C	
310-82368-5	MW5	Total/NA	Ground Water	SM 2540C	
310-82368-6	MW6	Total/NA	Ground Water	SM 2540C	
310-82368-7	MW13	Total/NA	Ground Water	SM 2540C	
310-82368-8	DUP	Total/NA	Ground Water	SM 2540C	
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
310-82368-1	MW7	Total/NA	Ground Water	PrecSep-21	
310-82368-2	MW2	Total/NA	Ground Water	PrecSep-21	
310-82368-3	MW3	Total/NA	Ground Water	PrecSep-21	
310-82368-4	MW4	Total/NA	Ground Water	PrecSep-21	
310-82368-5	MW5	Total/NA	Ground Water	PrecSep-21	
310-82368-6	MW6	Total/NA	Ground Water	PrecSep-21	
310-82368-7	MW13	Total/NA	Ground Water	PrecSep-21	
310-82368-8	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	

Rad (Continued)

Prep Batch: 256526 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
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
310-82368-1	MW7	Total/NA	Ground Water	PrecSep_0	
310-82368-2	MW2	Total/NA	Ground Water	PrecSep_0	
310-82368-3	MW3	Total/NA	Ground Water	PrecSep_0	
310-82368-4	MW4	Total/NA	Ground Water	PrecSep_0	
310-82368-5	MW5	Total/NA	Ground Water	PrecSep_0	
310-82368-6	MW6	Total/NA	Ground Water	PrecSep_0	
310-82368-7	MW13	Total/NA	Ground Water	PrecSep_0	
310-82368-8	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	

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-82368-1

Client Sample ID: MW7

Date Collected: 06/03/16 13:14
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82368-1

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	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 13:47	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 23:32	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 00:33	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 12:28	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: MW2

Date Collected: 06/03/16 12:24
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82368-2

Matrix: Ground Water

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 14:02	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 23:35	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 00:36	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 12:29	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

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-82368-1

Client Sample ID: MW3

Date Collected: 06/03/16 11:41
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82368-3

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	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 14:04	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 23:38	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 00:39	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 12:31	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: MW4

Date Collected: 06/03/16 09:41
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82368-4

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	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 14:07	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 23:41	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 00:42	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 12:33	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: MW5

Date Collected: 06/03/16 10:16
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82368-5

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		20	131097	06/14/16 11:18	AJG	TAL CF

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-82368-1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	130647	06/10/16 11:22	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 14:12	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 23:44	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 00:45	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 12:37	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 11:23	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: 06/03/16 10:52
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82368-6
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	130647	06/10/16 11:22	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 14:15	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 23:47	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 00:58	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 12:39	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 11:23	RTM	TAL SL
Total/NA	Prep	PrecSep_0			256540	06/15/16 14:37	MCJ	TAL SL
Total/NA	Analysis	9320		1	258632	06/30/16 18:32	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	259792	07/08/16 20:20	RTM	TAL SL

Client Sample ID: MW13

Date Collected: 06/03/16 09:09
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82368-7
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	130647	06/10/16 11:22	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 14:17	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 23:50	OAD	TAL CF

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-82368-1

Client Sample ID: MW13

Date Collected: 06/03/16 09:09
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82368-7

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			130496	06/10/16 07:54	JNR	TAL CF
Total/NA	Analysis	6020A		1	133747	07/12/16 01:01	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 12:41	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 11:23	RTM	TAL SL
Total/NA	Prep	PrecSep_0			256540	06/15/16 14:37	MCJ	TAL SL
Total/NA	Analysis	9320		1	258632	06/30/16 18:32	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	259792	07/08/16 20:20	RTM	TAL SL

Client Sample ID: DUP

Date Collected: 06/03/16 12:26
Date Received: 06/09/16 09:25

Lab Sample ID: 310-82368-8

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		20	131097	06/14/16 11:18	AJG	TAL CF
Total/NA	Analysis	9056A		5	130647	06/10/16 11:22	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 14:19	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 23:54	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 01:04	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 12:42	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 11:23	RTM	TAL SL
Total/NA	Prep	PrecSep_0			256540	06/15/16 14:37	MCJ	TAL SL
Total/NA	Analysis	9320		1	258632	06/30/16 18:32	ALS	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 2 Landfill

TestAmerica Job ID: 310-82368-1

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 2 Landfill

TestAmerica Job ID: 310-82368-1

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 2 Landfill CCR	TestAmerica Project #: 31007559			
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		
MW7	6/3/16	1314	G	GW	N	N	2	1	1		
MW2		1224	G	GW							
MW3		1141	G	GW							
MW4		0941	G	GW							
MW5		1016	G	GW							
MW6		1052	G	GW							
MW13		0909	G	GW							
DUP		1226	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:	Company	Received by:	Date/Time:	Company
	6/8/16 1000	OPPD		6.9.16 945	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:

7/12/2016

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

310-82368 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Omaha Public Power District

City/State: | Project:

Receipt Information

Date/Time Received: 6/9/16 9:45 | Received By: To Nebraska City Unit 2

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: 5M0.7

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): +0.1

Uncorrected Temp (°C): 0.9 | Corrected Temp (°C): 1.0

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:

Receipt Information

Date/Time Received: 6/9/16 9:45 | Received By: To Nebraska City Unit 2

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: 2T.6

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: 14 | Correction Factor (°C): +0.1

Uncorrected Temp (°C): 6.8 | Corrected Temp (°C): 6.9

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

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MW7	310-82368-A-1	Plastic 250ml - with Nitric Acid	<2		
MW7	310-82368-B-1	Plastic 1 liter - Nitric Acid	<2		
MW7	310-82368-C-1	Plastic 1 liter - Nitric Acid	<2		
MW2	310-82368-A-2	Plastic 250ml - with Nitric Acid	<2		
MW2	310-82368-B-2	Plastic 1 liter - Nitric Acid	<2		
MW2	310-82368-C-2	Plastic 1 liter - Nitric Acid	<2		
MW3	310-82368-A-3	Plastic 250ml - with Nitric Acid	<2		
MW3	310-82368-B-3	Plastic 1 liter - Nitric Acid	<2		
MW3	310-82368-C-3	Plastic 1 liter - Nitric Acid	<2		
MW4	310-82368-A-4	Plastic 250ml - with Nitric Acid	<2		
MW4	310-82368-B-4	Plastic 1 liter - Nitric Acid	<2		
MW4	310-82368-C-4	Plastic 1 liter - Nitric Acid	<2		
MW5	310-82368-A-5	Plastic 250ml - with Nitric Acid	<2		
MW5	310-82368-B-5	Plastic 1 liter - Nitric Acid	<2		
MW5	310-82368-C-5	Plastic 1 liter - Nitric Acid	<2		
MW6	310-82368-A-6	Plastic 250ml - with Nitric Acid	<2		
MW6	310-82368-B-6	Plastic 1 liter - Nitric Acid	<2		
MW6	310-82368-C-6	Plastic 1 liter - Nitric Acid	<2		
MW13	310-82368-A-7	Plastic 250ml - with Nitric Acid	<2		
MW13	310-82368-B-7	Plastic 1 liter - Nitric Acid	<2		
MW13	310-82368-C-7	Plastic 1 liter - Nitric Acid	<2		
DUP	310-82368-A-8	Plastic 250ml - with Nitric Acid	<2		
DUP	310-82368-B-8	Plastic 1 liter - Nitric Acid	<2		
DUP	310-82368-C-8	Plastic 1 liter - Nitric Acid	<2		

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-82368-1

Login Number: 82368
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 2 Landfill

TestAmerica Job ID: 310-82368-1

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)
310-82368-1	MW7	90.3
310-82368-2	MW2	89.5
310-82368-3	MW3	83.5
310-82368-4	MW4	94.0
310-82368-5	MW5	78.6
310-82368-6	MW6	89.7
310-82368-7	MW13	94.6
310-82368-8	DUP	85.8

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)
310-82368-1	MW7	90.3	91.6
310-82368-2	MW2	89.5	93.1
310-82368-3	MW3	83.5	87.9
310-82368-4	MW4	94.0	93.5
310-82368-5	MW5	78.6	94.2
310-82368-6	MW6	89.7	90.5
310-82368-7	MW13	94.6	92.3
310-82368-8	DUP	85.8	92.0

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

Tracer/Carrier Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-82368-1

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: 310-88790-2
Client Project/Site: Nebraska City Unit 2 Landfill CCR
Sampling Event: CCR and Landfill Parameters 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:
10/13/2016 5:10:58 PM

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

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Case Narrative

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-88790-2

Job ID: 310-88790-2

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-88790-2

Comments
No additional comments.

Receipt
The samples were received on 9/8/2016 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 0.3º C and 1.7º C.

RAD
Method(s) 9315: Radium-226 Prep Batch 160-269920:
The method blank (MB) has radium-226 activity above the MDC and the detection goal. The following associated samples are non-detect for the contaminant, therefore, re-analysis is not required. The data have been qualified and reported. MW7 (310-88790-1), MW2 (310-88790-2), MW3 (310-88790-3), MW4 (310-88790-4), MW5 (310-88790-5), MW6 (310-88790-6), MW13 (310-88790-7), DUP (310-88790-8), (LCS 160-269920/2-A), (MB 160-269920/1-A), (160-18998-B-22-A), (160-18998-B-22-B MS) and (160-18998-B-22-C MSD).

Method(s) 9320: Radium-228 Prep Batch 160-269924:
The method blank (MB) has radium-228 activity above the requested limit. The following associated samples are non-detect for the contaminant therefore, re-analysis is not required. The data have been qualified and reported. MW7 (310-88790-1), MW2 (310-88790-2), MW4 (310-88790-4), MW5 (310-88790-5), MW6 (310-88790-6), MW13 (310-88790-7), DUP (310-88790-8), (LCS 160-269924/2-A), (MB 160-269924/1-A), (160-18998-B-22-D), (160-18998-B-22-E MS) and (160-18998-B-22-F MSD).

Method(s) PrecSep_0: Radium-228 Prep Batch: 160-273543:
The following samples were prepared at a reduced aliquot due to limited volume MW3 (310-88790-3). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep-21: Radium-226 Prep Batch 160-269920:
The following samples were run at a reduced aliquot due to cloudiness and sediment in the samples: MW3 (310-88790-3).

Method(s) PrecSep-21: Radium-226 Prep Batch 160-269920:
The barium carrier recovery is outside the upper control limit (110%) for the following sample: MW3 (310-88790-3). The QC samples associated with the batch have acceptable carrier recovery indicating the presence of matrix interference.

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 2 Landfill CCR

TestAmerica Job ID: 310-88790-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-88790-1	MW7	Ground Water	08/31/16 14:04	09/08/16 09:25
310-88790-2	MW2	Ground Water	08/31/16 13:19	09/08/16 09:25
310-88790-3	MW3	Ground Water	08/31/16 12:44	09/08/16 09:25
310-88790-4	MW4	Ground Water	08/31/16 10:52	09/08/16 09:25
310-88790-5	MW5	Ground Water	08/31/16 11:30	09/08/16 09:25
310-88790-6	MW6	Ground Water	08/31/16 11:55	09/08/16 09:25
310-88790-7	MW13	Ground Water	08/31/16 10:12	09/08/16 09:25
310-88790-8	DUP	Ground Water	08/31/16 14:06	09/08/16 09:25

Client Sample ID: MW7
Date Collected: 08/31/16 14:04
Date Received: 09/08/16 09:25

Lab Sample ID: 310-88790-1
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	**0.602**		0.181	0.189	1.00	0.161	pCi/L	09/14/16 16:56	10/06/16 06:56	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.7*		*40 - 110*	*09/14/16 16:56*	*10/06/16 06:56*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.244	U	0.216	0.217	1.00	0.344	pCi/L	09/14/16 17:28	10/05/16 14:37	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.7*		*40 - 110*	*09/14/16 17:28*	*10/05/16 14:37*	*1*
Y Carrier	*96.8*		*40 - 110*	*09/14/16 17:28*	*10/05/16 14:37*	*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	**0.847**		0.281	0.287	5.00	0.344	pCi/L		10/12/16 12:36	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-88790-2

Client Sample ID: MW2
Date Collected: 08/31/16 13:19
Date Received: 09/08/16 09:25

Lab Sample ID: 310-88790-2
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	**0.245**		0.136	0.138	1.00	0.182	pCi/L	09/14/16 16:56	10/06/16 06:56	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.3*		*40 - 110*	*09/14/16 16:56*	*10/06/16 06:56*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.290	U	0.228	0.230	1.00	0.360	pCi/L	09/14/16 17:28	10/05/16 14:37	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.3*		*40 - 110*	*09/14/16 17:28*	*10/05/16 14:37*	*1*
Y Carrier	*93.5*		*40 - 110*	*09/14/16 17:28*	*10/05/16 14:37*	*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	**0.535**		0.266	0.268	5.00	0.360	pCi/L		10/12/16 12:36	1

Client Sample ID: MW3
Date Collected: 08/31/16 12:44
Date Received: 09/08/16 09:25

Lab Sample ID: 310-88790-3
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	**0.906**		0.367	0.376	1.00	0.457	pCi/L	09/14/16 16:56	10/06/16 06:56	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*120*	*X*	*40 - 110*	*09/14/16 16:56*	*10/06/16 06:56*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0183	U	0.392	0.392	1.00	0.697	pCi/L	10/06/16 20:45	10/11/16 18:26	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*82.1*		*40 - 110*	*10/06/16 20:45*	*10/11/16 18:26*	*1*
Y Carrier	*84.5*		*40 - 110*	*10/06/16 20:45*	*10/11/16 18:26*	*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	**0.924**		0.537	0.543	5.00	0.697	pCi/L		10/12/16 12:36	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-88790-2

Client Sample ID: MW4
Date Collected: 08/31/16 10:52
Date Received: 09/08/16 09:25

Lab Sample ID: 310-88790-4
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	0.378		0.159	0.162	1.00	0.193	pCi/L	09/14/16 16:56	10/06/16 06:56	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.4*		*40 - 110*	*09/14/16 16:56*	*10/06/16 06:56*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.665		0.249	0.256	1.00	0.339	pCi/L	09/14/16 17:28	10/05/16 14:38	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.4*		*40 - 110*	*09/14/16 17:28*	*10/05/16 14:38*	*1*
Y Carrier	*95.0*		*40 - 110*	*09/14/16 17:28*	*10/05/16 14:38*	*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	1.04		0.295	0.303	5.00	0.339	pCi/L		10/12/16 12:36	1

Client Sample ID: MW5
Date Collected: 08/31/16 11:30
Date Received: 09/08/16 09:25

Lab Sample ID: 310-88790-5
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	0.102	U	0.143	0.143	1.00	0.241	pCi/L	09/14/16 16:56	10/06/16 06:57	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.5*		*40 - 110*	*09/14/16 16:56*	*10/06/16 06:57*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.262	U	0.249	0.251	1.00	0.403	pCi/L	09/14/16 17:28	10/05/16 14:38	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.5*		*40 - 110*	*09/14/16 17:28*	*10/05/16 14:38*	*1*
Y Carrier	*91.2*		*40 - 110*	*09/14/16 17:28*	*10/05/16 14:38*	*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	0.365	U	0.288	0.289	5.00	0.403	pCi/L		10/12/16 12:36	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-88790-2

Client Sample ID: MW6
Date Collected: 08/31/16 11:55
Date Received: 09/08/16 09:25

Lab Sample ID: 310-88790-6
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	0.264		0.142	0.144	1.00	0.190	pCi/L	09/14/16 16:56	10/06/16 06:57	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.4*		*40 - 110*	*09/14/16 16:56*	*10/06/16 06:57*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.764		0.264	0.274	1.00	0.354	pCi/L	09/14/16 17:28	10/05/16 14:38	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.4*		*40 - 110*	*09/14/16 17:28*	*10/05/16 14:38*	*1*
Y Carrier	*95.3*		*40 - 110*	*09/14/16 17:28*	*10/05/16 14:38*	*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	1.03		0.300	0.309	5.00	0.354	pCi/L		10/12/16 12:36	1

Client Sample ID: MW13
Date Collected: 08/31/16 10:12
Date Received: 09/08/16 09:25

Lab Sample ID: 310-88790-7
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	**0.600**		0.181	0.188	1.00	0.160	pCi/L	09/14/16 16:56	10/06/16 06:57	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.2*		*40 - 110*	*09/14/16 16:56*	*10/06/16 06:57*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.492	U	0.325	0.328	1.00	0.508	pCi/L	09/14/16 17:28	10/05/16 14:38	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.2*		*40 - 110*	*09/14/16 17:28*	*10/05/16 14:38*	*1*
Y Carrier	*94.6*		*40 - 110*	*09/14/16 17:28*	*10/05/16 14:38*	*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	**1.09**		0.372	0.378	5.00	0.508	pCi/L		10/12/16 12:36	1

Client Sample ID: DUP

Date Collected: 08/31/16 14:06
Date Received: 09/08/16 09:25

Lab Sample ID: 310-88790-8

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	0.610		0.179	0.187	1.00	0.169	pCi/L	09/14/16 16:56	10/06/16 06:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.6*		*40 - 110*	*09/14/16 16:56*	*10/06/16 06:58*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.683		0.261	0.268	1.00	0.363	pCi/L	09/14/16 17:28	10/05/16 14:38	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.6*		*40 - 110*	*09/14/16 17:28*	*10/05/16 14:38*	*1*
Y Carrier	*95.3*		*40 - 110*	*09/14/16 17:28*	*10/05/16 14:38*	*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	1.29		0.316	0.327	5.00	0.363	pCi/L		10/12/16 12:36	1

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.
X	Carrier 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 160-269920/1-A
Matrix: Water
Analysis Batch: 273460

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 269920

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.445		0.267	0.297	1.00	0.228	pCi/L	09/14/16 16:56	10/06/16 17:58	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.3*		*40 - 110*	*09/14/16 16:56*	*10/06/16 17:58*	*1*

Lab Sample ID: LCS 160-269920/2-A
Matrix: Water
Analysis Batch: 273460

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 269920

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.1	13.25		1.39	1.00	0.212	pCi/L	119	68 - 137		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*90.0*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-269924/1-A
Matrix: Water
Analysis Batch: 273248

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 269924

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.469		0.396	0.419	1.00	0.522	pCi/L	09/14/16 17:28	10/05/16 14:27	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.3*		*40 - 110*	*09/14/16 17:28*	*10/05/16 14:27*	*1*
Y Carrier	*86.4*		*40 - 110*	*09/14/16 17:28*	*10/05/16 14:27*	*1*

Lab Sample ID: LCS 160-269924/2-A
Matrix: Water
Analysis Batch: 273248

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 269924

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			14.5	17.78		1.88	1.00	0.430	pCi/L	123	56 - 140		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*90.0*		*40 - 110*
Y Carrier	*90.1*		*40 - 110*

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

Lab Sample ID: MB 160-273543/1-A
Matrix: Water
Analysis Batch: 274023

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 273543

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.5168	U	0.464	0.466	1.00	0.744	pCi/L	10/06/16 20:45	10/11/16 18:26	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*71.8*		*40 - 110*	*10/06/16 20:45*	*10/11/16 18:26*	*1*
Y Carrier	*81.9*		*40 - 110*	*10/06/16 20:45*	*10/11/16 18:26*	*1*

Lab Sample ID: LCS 160-273543/2-A
Matrix: Water
Analysis Batch: 274023

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 273543

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			19.2	21.67		2.42	1.00	0.690	pCi/L	113	56 - 140		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*72.9*		*40 - 110*
Y Carrier	*86.7*		*40 - 110*

Lab Sample ID: LCSD 160-273543/3-A
Matrix: Water
Analysis Batch: 274023

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 273543

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			19.2	21.63		2.62	1.00	0.954	pCi/L	112	56 - 140	0.01	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*54.4*		*40 - 110*
Y Carrier	*80.7*		*40 - 110*

Rad

Prep Batch: 269920

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-88790-1	MW7	Total/NA	Ground Water	PrecSep-21	
310-88790-2	MW2	Total/NA	Ground Water	PrecSep-21	
310-88790-3	MW3	Total/NA	Ground Water	PrecSep-21	
310-88790-4	MW4	Total/NA	Ground Water	PrecSep-21	
310-88790-5	MW5	Total/NA	Ground Water	PrecSep-21	
310-88790-6	MW6	Total/NA	Ground Water	PrecSep-21	
310-88790-7	MW13	Total/NA	Ground Water	PrecSep-21	
310-88790-8	DUP	Total/NA	Ground Water	PrecSep-21	
MB 160-269920/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-269920/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 269924

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-88790-1	MW7	Total/NA	Ground Water	PrecSep_0	
310-88790-2	MW2	Total/NA	Ground Water	PrecSep_0	
310-88790-4	MW4	Total/NA	Ground Water	PrecSep_0	
310-88790-5	MW5	Total/NA	Ground Water	PrecSep_0	
310-88790-6	MW6	Total/NA	Ground Water	PrecSep_0	
310-88790-7	MW13	Total/NA	Ground Water	PrecSep_0	
310-88790-8	DUP	Total/NA	Ground Water	PrecSep_0	
MB 160-269924/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-269924/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Prep Batch: 273543

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-88790-3	MW3	Total/NA	Ground Water	PrecSep_0	
MB 160-273543/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-273543/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-273543/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-88790-2

Client Sample ID: MW7

Lab Sample ID: 310-88790-1

Date Collected: 08/31/16 14:04

Matrix: Ground Water

Date Received: 09/08/16 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			269920	09/14/16 16:56	MCJ	TAL SL
Total/NA	Analysis	9315		1	273463	10/06/16 06:56	RTM	TAL SL
Total/NA	Prep	PrecSep_0			269924	09/14/16 17:28	MCJ	TAL SL
Total/NA	Analysis	9320		1	273252	10/05/16 14:37	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274214	10/12/16 12:36	RTM	TAL SL

Client Sample ID: MW2

Lab Sample ID: 310-88790-2

Date Collected: 08/31/16 13:19

Matrix: Ground Water

Date Received: 09/08/16 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			269920	09/14/16 16:56	MCJ	TAL SL
Total/NA	Analysis	9315		1	273463	10/06/16 06:56	RTM	TAL SL
Total/NA	Prep	PrecSep_0			269924	09/14/16 17:28	MCJ	TAL SL
Total/NA	Analysis	9320		1	273252	10/05/16 14:37	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274214	10/12/16 12:36	RTM	TAL SL

Client Sample ID: MW3

Lab Sample ID: 310-88790-3

Date Collected: 08/31/16 12:44

Matrix: Ground Water

Date Received: 09/08/16 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			269920	09/14/16 16:56	MCJ	TAL SL
Total/NA	Analysis	9315		1	273463	10/06/16 06:56	RTM	TAL SL
Total/NA	Prep	PrecSep_0			273543	10/06/16 20:45	MCJ	TAL SL
Total/NA	Analysis	9320		1	274023	10/11/16 18:26	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274214	10/12/16 12:36	RTM	TAL SL

Client Sample ID: MW4

Lab Sample ID: 310-88790-4

Date Collected: 08/31/16 10:52

Matrix: Ground Water

Date Received: 09/08/16 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			269920	09/14/16 16:56	MCJ	TAL SL
Total/NA	Analysis	9315		1	273463	10/06/16 06:56	RTM	TAL SL
Total/NA	Prep	PrecSep_0			269924	09/14/16 17:28	MCJ	TAL SL
Total/NA	Analysis	9320		1	273252	10/05/16 14:38	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274214	10/12/16 12:36	RTM	TAL SL

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-88790-2

Client Sample ID: MW5

Lab Sample ID: 310-88790-5

Date Collected: 08/31/16 11:30
Matrix: Ground Water
Date Received: 09/08/16 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			269920	09/14/16 16:56	MCJ	TAL SL
Total/NA	Analysis	9315		1	273463	10/06/16 06:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			269924	09/14/16 17:28	MCJ	TAL SL
Total/NA	Analysis	9320		1	273252	10/05/16 14:38	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274214	10/12/16 12:36	RTM	TAL SL

Client Sample ID: MW6

Lab Sample ID: 310-88790-6

Date Collected: 08/31/16 11:55
Matrix: Ground Water
Date Received: 09/08/16 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			269920	09/14/16 16:56	MCJ	TAL SL
Total/NA	Analysis	9315		1	273463	10/06/16 06:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			269924	09/14/16 17:28	MCJ	TAL SL
Total/NA	Analysis	9320		1	273252	10/05/16 14:38	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274214	10/12/16 12:36	RTM	TAL SL

Client Sample ID: MW13

Lab Sample ID: 310-88790-7

Date Collected: 08/31/16 10:12
Matrix: Ground Water
Date Received: 09/08/16 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			269920	09/14/16 16:56	MCJ	TAL SL
Total/NA	Analysis	9315		1	273463	10/06/16 06:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			269924	09/14/16 17:28	MCJ	TAL SL
Total/NA	Analysis	9320		1	273252	10/05/16 14:38	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274214	10/12/16 12:36	RTM	TAL SL

Client Sample ID: DUP

Lab Sample ID: 310-88790-8

Date Collected: 08/31/16 14:06
Matrix: Ground Water
Date Received: 09/08/16 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			269920	09/14/16 16:56	MCJ	TAL SL
Total/NA	Analysis	9315		1	273463	10/06/16 06:58	RTM	TAL SL
Total/NA	Prep	PrecSep_0			269924	09/14/16 17:28	MCJ	TAL SL
Total/NA	Analysis	9320		1	273252	10/05/16 14:38	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274214	10/12/16 12:36	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 2 Landfill CCR

TestAmerica Job ID: 310-88790-2

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	09-29-17
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

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	06-30-16 *
Texas	NELAP	6	T104704193-16-10	07-31-17
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 2 Landfill CCR

TestAmerica Job ID: 310-88790-2

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

310-88790 Chain of Custody

310503

Cooler/Sample Receipt and Temperatur

Client Information

Client: Omaha Public Power

City/State:

Project: Neb. City Unit 2 LF

Receipt Information

Date/Time Received: 9-08-16 925

Received By: GL

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 # 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: G

Correction Factor (°C): -0.1

Uncorrected Temp (°C): 1.8

Corrected Temp (°C): 1.7

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: | Project: Neb. City Unit 2 LF

Receipt Information

Date/Time Received: 9-08-16 925 | Received By: GL

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-18

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: G | Correction Factor (°C): -0.1

Uncorrected Temp (°C): 0.4 | 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 Cedar Falls
70‡ 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 2 Landfill CCR	TestAmerica Project #: 31007559			
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		
MW7	8/31/16	1404	G	GW	N	N	X	X	X		
MW2		1319	G	GW			X	X	X		
MW3		1244	G	GW			X	X	X		
MW4		1052	G	GW			X	X	X		
MW5		1130	G	GW			X	X	X		
MW6		1155	G	GW			X	X	X		
MW13		1012	G	GW			X	X	X		
DUP	↓	1406	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		9/1/16 1230		Britta Berry	9.8.16 925	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 #
MW7	310-88790-A-1	Plastic 1 liter - Nitric Acid	<2		
MW7	310-88790-B-1	Plastic 1 liter - Nitric Acid	<2		
MW7	310-88790-C-1	Plastic 250ml - with Nitric Acid	<2		
MW2	310-88790-A-2	Plastic 1 liter - Nitric Acid	<2		
MW2	310-88790-B-2	Plastic 1 liter - Nitric Acid	<2		
MW2	310-88790-C-2	Plastic 250ml - with Nitric Acid	<2		
MW3	310-88790-A-3	Plastic 1 liter - Nitric Acid	>2	3mL	
MW3	310-88790-B-3	Plastic 1 liter - Nitric Acid	<2		
MW3	310-88790-C-3	Plastic 250ml - with Nitric Acid	<2		
MW4	310-88790-A-4	Plastic 1 liter - Nitric Acid	<2		
MW4	310-88790-B-4	Plastic 1 liter - Nitric Acid	<2		
MW4	310-88790-C-4	Plastic 250ml - with Nitric Acid	<2		
MW5	310-88790-A-5	Plastic 1 liter - Nitric Acid	<2		
MW5	310-88790-B-5	Plastic 1 liter - Nitric Acid	<2		
MW5	310-88790-C-5	Plastic 250ml - with Nitric Acid	<2		
MW6	310-88790-A-6	Plastic 1 liter - Nitric Acid	<2		
MW6	310-88790-B-6	Plastic 1 liter - Nitric Acid	<2		
MW6	310-88790-C-6	Plastic 250ml - with Nitric Acid	<2		
MW13	310-88790-A-7	Plastic 1 liter - Nitric Acid	<2		
MW13	310-88790-B-7	Plastic 1 liter - Nitric Acid	<2		
MW13	310-88790-C-7	Plastic 250ml - with Nitric Acid	<2		
DUP	310-88790-A-8	Plastic 1 liter - Nitric Acid	<2		
DUP	310-88790-B-8	Plastic 1 liter - Nitric Acid	<2		
DUP	310-88790-C-8	Plastic 250ml - with Nitric Acid	<2		

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

310-88790 Chain of Custody

310503

Cooler/Sample Receipt and Temperatur

Client Information

Client: Omaha Public Power

City/State:

Project: Neb. City Unit 2 LF

Receipt Information

Date/Time Received: 9-08-16 925

Received By: GL

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 # 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: G

Correction Factor (°C): -0.1

Uncorrected Temp (°C): 1.8

Corrected Temp (°C): 1.7

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: | Project: Neb. City Unit 2 LF

Receipt Information

Date/Time Received: 9-08-16 925 | Received By: GL

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-18

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: G | Correction Factor (°C): -0.1

Uncorrected Temp (°C): 0.4 | 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 Cedar Falls
70⅘ 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 2 Landfill CCR	TestAmerica Project #: 31007559	
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		
MW7	8/31/16	1404	G	GW	N	N	X	X	X		
MW2		1319	G	GW			X	X	X		
MW3		1244	G	GW			X	X	X		
MW4		1052	G	GW			X	X	X		
MW5		1130	G	GW			X	X	X		
MW6		1155	G	GW			X	X	X		
MW13		1012	G	GW			X	X	X		
DUP	↓	1406	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:	9/1/16 1230		Received by: Britta Berry	9.8.16 925	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:

10/13/2016

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MW7	310-88790-A-1	Plastic 1 liter - Nitric Acid	<2		
MW7	310-88790-B-1	Plastic 1 liter - Nitric Acid	<2		
MW7	310-88790-C-1	Plastic 250ml - with Nitric Acid	<2		
MW2	310-88790-A-2	Plastic 1 liter - Nitric Acid	<2		
MW2	310-88790-B-2	Plastic 1 liter - Nitric Acid	<2		
MW2	310-88790-C-2	Plastic 250ml - with Nitric Acid	<2		
MW3	310-88790-A-3	Plastic 1 liter - Nitric Acid	>2	3mL	
MW3	310-88790-B-3	Plastic 1 liter - Nitric Acid	<2		
MW3	310-88790-C-3	Plastic 250ml - with Nitric Acid	<2		
MW4	310-88790-A-4	Plastic 1 liter - Nitric Acid	<2		
MW4	310-88790-B-4	Plastic 1 liter - Nitric Acid	<2		
MW4	310-88790-C-4	Plastic 250ml - with Nitric Acid	<2		
MW5	310-88790-A-5	Plastic 1 liter - Nitric Acid	<2		
MW5	310-88790-B-5	Plastic 1 liter - Nitric Acid	<2		
MW5	310-88790-C-5	Plastic 250ml - with Nitric Acid	<2		
MW6	310-88790-A-6	Plastic 1 liter - Nitric Acid	<2		
MW6	310-88790-B-6	Plastic 1 liter - Nitric Acid	<2		
MW6	310-88790-C-6	Plastic 250ml - with Nitric Acid	<2		
MW13	310-88790-A-7	Plastic 1 liter - Nitric Acid	<2		
MW13	310-88790-B-7	Plastic 1 liter - Nitric Acid	<2		
MW13	310-88790-C-7	Plastic 250ml - with Nitric Acid	<2		
DUP	310-88790-A-8	Plastic 1 liter - Nitric Acid	<2		
DUP	310-88790-B-8	Plastic 1 liter - Nitric Acid	<2		
DUP	310-88790-C-8	Plastic 250ml - with Nitric Acid	<2		

HNO3
LOT #
1280305

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

Chain of Custody Record

310-88790 Chain of Custody

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Hayes, Shawn M	Job: 7424.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: shawn.hayes@testamericainc.com	Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Analysis Requested	Job #: 310-88790-2
Address: 13715 Rider Trail North, ,	Due Date Requested: 9/20/2016		Preservation Codes:
City: Earth City	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 - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
State, Zip: MO, 63045			
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:		Other:
Email:	WO #:		
Project Name: Nebraska City Unit 2 Landfill CCR	Project #: 31007559		
Site: 310 OPPD Nebraska City Unit 2	SSOW#:		

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:								
MW7 (310-88790-1)	8/31/16	14:04 Central		Water			X	X	X	2	
MW2 (310-88790-2)	8/31/16	13:19 Central		Water			X	X	X	2	
MW3 (310-88790-3)	8/31/16	12:44 Central		Water			X	X	X	2	
MW4 (310-88790-4)	8/31/16	10:52 Central		Water			X	X	X	2	
MW5 (310-88790-5)	8/31/16	11:30 Central		Water			X	X	X	2	
MW6 (310-88790-6)	8/31/16	11:55 Central		Water			X	X	X	2	
MW13 (310-88790-7)	8/31/16	10:12 Central		Water			X	X	X	2	
DUP (310-88790-8)	8/31/16	14:06 Central		Water			X	X	X	2	

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ 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. Delk	8/31/16 1545		[illegible]	9/9/16 0910	TAL-STL
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:

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-88790-2

Login Number: 88790

List Source: TestAmerica Cedar Falls

List Number: 1

Creator: Berry, Brita K

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)	False	TDS received past the analytical holding time
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: 310-88790-2

Login Number: 88790
List Number: 2
Creator: Clarke, Jill C

List Source: TestAmerica St. Louis
List Creation: 09/09/16 02:33 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.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.3, 3.2, 3.0, 3.3
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 2 Landfill CCR

TestAmerica Job ID: 310-88790-2

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)
310-88790-1	MW7	87.7
310-88790-2	MW2	94.3
310-88790-3	MW3	120 X
310-88790-4	MW4	95.4
310-88790-5	MW5	89.5
310-88790-6	MW6	93.4
310-88790-7	MW13	85.2
310-88790-8	DUP	96.6

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 160-269920/2-A	Lab Control Sample	90.0
MB 160-269920/1-A	Method Blank	88.3

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)
310-88790-1	MW7	87.7	96.8
310-88790-2	MW2	94.3	93.5
310-88790-3	MW3	82.1	84.5
310-88790-4	MW4	95.4	95.0
310-88790-5	MW5	89.5	91.2
310-88790-6	MW6	93.4	95.3
310-88790-7	MW13	85.2	94.6
310-88790-8	DUP	96.6	95.3

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

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 160-269924/2-A	Lab Control Sample	90.0	90.1

Tracer/Carrier Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-88790-2

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

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)									
Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)								
LCS 160-273543/2-A	Lab Control Sample	72.9	86.7								
LCSD 160-273543/3-A	Lab Control Sample Dup	54.4	80.7								
MB 160-269924/1-A	Method Blank	88.3	86.4								
MB 160-273543/1-A	Method Blank	71.8	81.9								

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: 310-88790-1
Client Project/Site: Nebraska City Unit 2 Landfill CCR
Sampling Event: CCR and Landfill Parameters 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:
9/13/2016 4:15:00 PM

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

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Job ID: 310-88790-1

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-88790-1

Comments
No additional comments.

Receipt
The samples were received on 9/8/2016 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 0.3º C and 1.7º C.

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

General Chemistry
Method(s) SM 2540C TDS: The following samples were received outside of holding time: MW7 (310-88790-1), MW2 (310-88790-2), MW3 (310-88790-3), MW4 (310-88790-4), MW5 (310-88790-5), MW6 (310-88790-6), MW13 (310-88790-7), DUP (310-88790-8).

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 2 Landfill CCR

TestAmerica Job ID: 310-88790-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-88790-1	MW7	Ground Water	08/31/16 14:04	09/08/16 09:25
310-88790-2	MW2	Ground Water	08/31/16 13:19	09/08/16 09:25
310-88790-3	MW3	Ground Water	08/31/16 12:44	09/08/16 09:25
310-88790-4	MW4	Ground Water	08/31/16 10:52	09/08/16 09:25
310-88790-5	MW5	Ground Water	08/31/16 11:30	09/08/16 09:25
310-88790-6	MW6	Ground Water	08/31/16 11:55	09/08/16 09:25
310-88790-7	MW13	Ground Water	08/31/16 10:12	09/08/16 09:25
310-88790-8	DUP	Ground Water	08/31/16 14:06	09/08/16 09:25

Detection Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-88790-1

Client Sample ID: MW7 — Lab Sample ID: 310-88790-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.68		5.00		mg/L	5		9056A	Total/NA
Lithium	0.0581		0.0500		mg/L	1		6010C	Total/NA
Arsenic	0.0418		0.00200		mg/L	1		6020A	Total/NA
Barium	0.526		0.00200		mg/L	1		6020A	Total/NA
Calcium	100		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000681		0.000500		mg/L	1		6020A	Total/NA
Iron	21.4		0.100		mg/L	1		6020A	Total/NA
Total Dissolved Solids	534	H	30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW2 — Lab Sample ID: 310-88790-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	151		5.00		mg/L	5		9056A	Total/NA
Antimony	0.00812		0.00100		mg/L	1		6020A	Total/NA
Barium	0.0814		0.00200		mg/L	1		6020A	Total/NA
Boron	0.511		0.200		mg/L	1		6020A	Total/NA
Calcium	130		0.200		mg/L	1		6020A	Total/NA
Lead	0.000872		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00757		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	696	H	30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW3 — Lab Sample ID: 310-88790-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	7.35		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.0103		0.00200		mg/L	1		6020A	Total/NA
Barium	0.211		0.00200		mg/L	1		6020A	Total/NA
Calcium	51.3		0.200		mg/L	1		6020A	Total/NA
Iron	2.38		0.100		mg/L	1		6020A	Total/NA
Lead	0.000692		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00301		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	296	H	30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW4 — Lab Sample ID: 310-88790-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.13		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.646		0.500		mg/L	5		9056A	Total/NA
Sulfate	29.7		5.00		mg/L	5		9056A	Total/NA
Barium	0.296		0.00200		mg/L	1		6020A	Total/NA
Calcium	91.1		0.200		mg/L	1		6020A	Total/NA
Iron	0.131		0.100		mg/L	1		6020A	Total/NA
Lead	0.00162		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00597		0.00200		mg/L	1		6020A	Total/NA
Silver	0.00116		0.00100		mg/L	1		6020A	Total/NA
Total Dissolved Solids	574	H	30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW5 — Lab Sample ID: 310-88790-5

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW5 (Continued) — Lab Sample ID: 310-88790-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	21.5		5.00		mg/L	5		9056A	Total/NA
Sulfate	455		50.0		mg/L	50		9056A	Total/NA
Barium	0.0414		0.00200		mg/L	1		6020A	Total/NA
Boron	4.08		1.00		mg/L	5		6020A	Total/NA
Calcium	159		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.0204		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1280	H	60.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW6 — Lab Sample ID: 310-88790-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	149		5.00		mg/L	5		9056A	Total/NA
Barium	0.122		0.00200		mg/L	1		6020A	Total/NA
Boron	4.79		1.00		mg/L	5		6020A	Total/NA
Calcium	90.4		0.200		mg/L	1		6020A	Total/NA
Iron	0.371		0.100		mg/L	1		6020A	Total/NA
Molybdenum	0.0677		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	592	H	30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW13 — Lab Sample ID: 310-88790-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	11.1		5.00		mg/L	5		9056A	Total/NA
Sulfate	31.3		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.00623		0.00200		mg/L	1		6020A	Total/NA
Barium	0.342		0.00200		mg/L	1		6020A	Total/NA
Calcium	66.6		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.00107		0.000500		mg/L	1		6020A	Total/NA
Iron	0.789		0.100		mg/L	1		6020A	Total/NA
Molybdenum	0.00258		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	414	H	30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP — Lab Sample ID: 310-88790-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.85		5.00		mg/L	5		9056A	Total/NA
Lithium	0.0606		0.0500		mg/L	1		6010C	Total/NA
Arsenic	0.0442		0.00200		mg/L	1		6020A	Total/NA
Barium	0.539		0.00200		mg/L	1		6020A	Total/NA
Calcium	103		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000739		0.000500		mg/L	1		6020A	Total/NA
Iron	22.1		0.100		mg/L	1		6020A	Total/NA
Total Dissolved Solids	532	H	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 2 Landfill CCR

TestAmerica Job ID: 310-88790-1

Client Sample ID: MW7
Date Collected: 08/31/16 14:04
Date Received: 09/08/16 09:25

Lab Sample ID: 310-88790-1
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6.68**		5.00		mg/L			09/09/16 11:58	5
Fluoride	<0.500	F1	0.500		mg/L			09/09/16 11:58	5
Sulfate	<5.00		5.00		mg/L			09/09/16 11:58	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	**0.0581**		0.0500		mg/L		09/09/16 10:00	09/09/16 18:25	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 16:50	1
Arsenic	**0.0418**		0.00200		mg/L		09/09/16 10:00	09/09/16 16:50	1
Barium	**0.526**		0.00200		mg/L		09/09/16 10:00	09/09/16 16:50	1
Beryllium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 16:50	1
Boron	<0.200		0.200		mg/L		09/09/16 10:00	09/13/16 11:18	1
Cadmium	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 16:50	1
Calcium	**100**		0.200		mg/L		09/09/16 10:00	09/09/16 16:50	1
Chromium	<0.00500		0.00500		mg/L		09/09/16 10:00	09/09/16 16:50	1
Cobalt	**0.000681**		0.000500		mg/L		09/09/16 10:00	09/09/16 16:50	1
Iron	**21.4**		0.100		mg/L		09/09/16 10:00	09/09/16 16:50	1
Lead	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 16:50	1
Molybdenum	<0.00200		0.00200		mg/L		09/09/16 10:00	09/09/16 16:50	1
Selenium	<0.00500		0.00500		mg/L		09/09/16 10:00	09/09/16 16:50	1
Silver	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 16:50	1
Thallium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 16:50	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		09/09/16 11:15	09/12/16 10:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**534**	**H**	30.0		mg/L			09/08/16 16:35	1

Client Sample ID: MW2

Date Collected: 08/31/16 13:19
Date Received: 09/08/16 09:25

Lab Sample ID: 310-88790-2

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			09/09/16 11:58	5
Fluoride	<0.500		0.500		mg/L			09/09/16 11:58	5
Sulfate	**151**		5.00		mg/L			09/09/16 11:58	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		09/09/16 10:00	09/09/16 18:27	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.00812**		0.00100		mg/L		09/09/16 10:00	09/09/16 17:12	1
Arsenic	<0.00200		0.00200		mg/L		09/09/16 10:00	09/09/16 17:12	1
Barium	**0.0814**		0.00200		mg/L		09/09/16 10:00	09/09/16 17:12	1
Beryllium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:12	1
Boron	**0.511**		0.200		mg/L		09/09/16 10:00	09/13/16 11:27	1
Cadmium	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 17:12	1
Calcium	**130**		0.200		mg/L		09/09/16 10:00	09/09/16 17:12	1
Chromium	<0.00500		0.00500		mg/L		09/09/16 10:00	09/09/16 17:12	1
Cobalt	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 17:12	1
Iron	<0.100		0.100		mg/L		09/09/16 10:00	09/09/16 17:12	1
Lead	**0.000872**		0.000500		mg/L		09/09/16 10:00	09/09/16 17:12	1
Molybdenum	**0.00757**		0.00200		mg/L		09/09/16 10:00	09/09/16 17:12	1
Selenium	<0.00500		0.00500		mg/L		09/09/16 10:00	09/09/16 17:12	1
Silver	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:12	1
Thallium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:12	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		09/09/16 11:15	09/12/16 10:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**696**	**H**	30.0		mg/L			09/08/16 16:35	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-88790-1

Client Sample ID: MW3
Date Collected: 08/31/16 12:44
Date Received: 09/08/16 09:25

Lab Sample ID: 310-88790-3
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			09/09/16 11:58	5
Fluoride	<0.500		0.500		mg/L			09/09/16 11:58	5
Sulfate	**7.35**		5.00		mg/L			09/09/16 11:58	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		09/09/16 10:00	09/09/16 18:39	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:15	1
Arsenic	**0.0103**		0.00200		mg/L		09/09/16 10:00	09/09/16 17:15	1
Barium	**0.211**		0.00200		mg/L		09/09/16 10:00	09/09/16 17:15	1
Beryllium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:15	1
Boron	<0.200		0.200		mg/L		09/09/16 10:00	09/13/16 11:30	1
Cadmium	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 17:15	1
Calcium	**51.3**		0.200		mg/L		09/09/16 10:00	09/09/16 17:15	1
Chromium	<0.00500		0.00500		mg/L		09/09/16 10:00	09/09/16 17:15	1
Cobalt	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 17:15	1
Iron	**2.38**		0.100		mg/L		09/09/16 10:00	09/09/16 17:15	1
Lead	**0.000692**		0.000500		mg/L		09/09/16 10:00	09/09/16 17:15	1
Molybdenum	**0.00301**		0.00200		mg/L		09/09/16 10:00	09/09/16 17:15	1
Selenium	<0.00500		0.00500		mg/L		09/09/16 10:00	09/09/16 17:15	1
Silver	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:15	1
Thallium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:15	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		09/09/16 11:15	09/12/16 10:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**296**	**H**	30.0		mg/L			09/08/16 16:35	1

Client Sample ID: MW4

Date Collected: 08/31/16 10:52
Date Received: 09/08/16 09:25

Lab Sample ID: 310-88790-4

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7.13**		5.00		mg/L			09/09/16 11:58	5
Fluoride	**0.646**		0.500		mg/L			09/09/16 11:58	5
Sulfate	**29.7**		5.00		mg/L			09/09/16 11:58	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		09/09/16 10:00	09/09/16 18:41	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:18	1
Arsenic	<0.00200		0.00200		mg/L		09/09/16 10:00	09/09/16 17:18	1
Barium	**0.296**		0.00200		mg/L		09/09/16 10:00	09/09/16 17:18	1
Beryllium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:18	1
Boron	<0.200		0.200		mg/L		09/09/16 10:00	09/13/16 11:33	1
Cadmium	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 17:18	1
Calcium	**91.1**		0.200		mg/L		09/09/16 10:00	09/09/16 17:18	1
Chromium	<0.00500		0.00500		mg/L		09/09/16 10:00	09/09/16 17:18	1
Cobalt	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 17:18	1
Iron	**0.131**		0.100		mg/L		09/09/16 10:00	09/09/16 17:18	1
Lead	**0.00162**		0.000500		mg/L		09/09/16 10:00	09/09/16 17:18	1
Molybdenum	**0.00597**		0.00200		mg/L		09/09/16 10:00	09/09/16 17:18	1
Selenium	<0.00500		0.00500		mg/L		09/09/16 10:00	09/09/16 17:18	1
Silver	**0.00116**		0.00100		mg/L		09/09/16 10:00	09/09/16 17:18	1
Thallium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:18	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		09/09/16 11:15	09/12/16 10:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**574**	**H**	30.0		mg/L			09/08/16 16:35	1

Client Sample ID: MW5

Date Collected: 08/31/16 11:30
Date Received: 09/08/16 09:25

Lab Sample ID: 310-88790-5

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**21.5**		5.00		mg/L			09/09/16 11:58	5
Fluoride	<0.500		0.500		mg/L			09/09/16 11:58	5
Sulfate	**455**		50.0		mg/L			09/12/16 12:17	50

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		09/09/16 10:00	09/09/16 18:43	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:21	1
Arsenic	<0.00200		0.00200		mg/L		09/09/16 10:00	09/09/16 17:21	1
Barium	**0.0414**		0.00200		mg/L		09/09/16 10:00	09/09/16 17:21	1
Beryllium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:21	1
Boron	**4.08**		1.00		mg/L		09/09/16 10:00	09/13/16 11:36	5
Cadmium	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 17:21	1
Calcium	**159**		0.200		mg/L		09/09/16 10:00	09/09/16 17:21	1
Chromium	<0.00500		0.00500		mg/L		09/09/16 10:00	09/09/16 17:21	1
Cobalt	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 17:21	1
Iron	<0.100		0.100		mg/L		09/09/16 10:00	09/09/16 17:21	1
Lead	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 17:21	1
Molybdenum	**0.0204**		0.00200		mg/L		09/09/16 10:00	09/09/16 17:21	1
Selenium	<0.00500		0.00500		mg/L		09/09/16 10:00	09/09/16 17:21	1
Silver	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:21	1
Thallium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:21	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		09/09/16 11:15	09/12/16 10:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1280**	**H**	60.0		mg/L			09/08/16 16:35	1

Client Sample ID: MW6
Date Collected: 08/31/16 11:55
Date Received: 09/08/16 09:25

Lab Sample ID: 310-88790-6
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			09/09/16 11:58	5
Fluoride	<0.500		0.500		mg/L			09/09/16 11:58	5
Sulfate	**149**		5.00		mg/L			09/09/16 11:58	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		09/09/16 10:00	09/09/16 18:45	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:25	1
Arsenic	<0.00200		0.00200		mg/L		09/09/16 10:00	09/09/16 17:25	1
Barium	**0.122**		0.00200		mg/L		09/09/16 10:00	09/09/16 17:25	1
Beryllium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:25	1
Boron	**4.79**		1.00		mg/L		09/09/16 10:00	09/13/16 11:39	5
Cadmium	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 17:25	1
Calcium	**90.4**		0.200		mg/L		09/09/16 10:00	09/09/16 17:25	1
Chromium	<0.00500		0.00500		mg/L		09/09/16 10:00	09/09/16 17:25	1
Cobalt	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 17:25	1
Iron	**0.371**		0.100		mg/L		09/09/16 10:00	09/09/16 17:25	1
Lead	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 17:25	1
Molybdenum	**0.0677**		0.00200		mg/L		09/09/16 10:00	09/09/16 17:25	1
Selenium	<0.00500		0.00500		mg/L		09/09/16 10:00	09/09/16 17:25	1
Silver	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:25	1
Thallium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:25	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		09/09/16 11:15	09/12/16 10:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**592**	**H**	30.0		mg/L			09/08/16 16:35	1

Client Sample ID: MW13

Date Collected: 08/31/16 10:12
Date Received: 09/08/16 09:25

Lab Sample ID: 310-88790-7

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**11.1**		5.00		mg/L			09/09/16 11:58	5
Fluoride	<0.500		0.500		mg/L			09/09/16 11:58	5
Sulfate	**31.3**		5.00		mg/L			09/09/16 11:58	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		09/09/16 10:00	09/09/16 18:47	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:28	1
Arsenic	**0.00623**		0.00200		mg/L		09/09/16 10:00	09/09/16 17:28	1
Barium	**0.342**		0.00200		mg/L		09/09/16 10:00	09/09/16 17:28	1
Beryllium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:28	1
Boron	<0.200		0.200		mg/L		09/09/16 10:00	09/13/16 11:51	1
Cadmium	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 17:28	1
Calcium	**66.6**		0.200		mg/L		09/09/16 10:00	09/09/16 17:28	1
Chromium	<0.00500		0.00500		mg/L		09/09/16 10:00	09/09/16 17:28	1
Cobalt	**0.00107**		0.000500		mg/L		09/09/16 10:00	09/09/16 17:28	1
Iron	**0.789**		0.100		mg/L		09/09/16 10:00	09/09/16 17:28	1
Lead	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 17:28	1
Molybdenum	**0.00258**		0.00200		mg/L		09/09/16 10:00	09/09/16 17:28	1
Selenium	<0.00500		0.00500		mg/L		09/09/16 10:00	09/09/16 17:28	1
Silver	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:28	1
Thallium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:28	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		09/09/16 11:15	09/12/16 10:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**414**	**H**	30.0		mg/L			09/08/16 16:35	1

Client Sample ID: DUP
Date Collected: 08/31/16 14:06
Date Received: 09/08/16 09:25

Lab Sample ID: 310-88790-8
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7.85**		5.00		mg/L			09/09/16 11:58	5
Fluoride	<0.500		0.500		mg/L			09/09/16 11:58	5
Sulfate	<5.00		5.00		mg/L			09/09/16 11:58	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	**0.0606**		0.0500		mg/L		09/09/16 10:00	09/09/16 18:49	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:31	1
Arsenic	**0.0442**		0.00200		mg/L		09/09/16 10:00	09/09/16 17:31	1
Barium	**0.539**		0.00200		mg/L		09/09/16 10:00	09/09/16 17:31	1
Beryllium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:31	1
Boron	<0.200		0.200		mg/L		09/09/16 10:00	09/13/16 11:54	1
Cadmium	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 17:31	1
Calcium	**103**		0.200		mg/L		09/09/16 10:00	09/09/16 17:31	1
Chromium	<0.00500		0.00500		mg/L		09/09/16 10:00	09/09/16 17:31	1
Cobalt	**0.000739**		0.000500		mg/L		09/09/16 10:00	09/09/16 17:31	1
Iron	**22.1**		0.100		mg/L		09/09/16 10:00	09/09/16 17:31	1
Lead	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 17:31	1
Molybdenum	<0.00200		0.00200		mg/L		09/09/16 10:00	09/09/16 17:31	1
Selenium	<0.00500		0.00500		mg/L		09/09/16 10:00	09/09/16 17:31	1
Silver	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:31	1
Thallium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:31	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		09/09/16 11:15	09/12/16 10:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**532**	**H**	30.0		mg/L			09/08/16 16:35	1

Definitions/Glossary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-88790-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.

Metals

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

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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 310-140842/19
Matrix: Water
Analysis Batch: 140842

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.00		1.00		mg/L			09/09/16 11:58	1
Fluoride	<0.100		0.100		mg/L			09/09/16 11:58	1
Sulfate	<1.00		1.00		mg/L			09/09/16 11:58	1

Lab Sample ID: LCS 310-140842/20
Matrix: Water
Analysis Batch: 140842

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	7.475		mg/L		100	90 - 110
Fluoride	1.50	1.480		mg/L		99	90 - 110
Sulfate	7.50	7.013		mg/L		94	90 - 110

Lab Sample ID: 310-88790-1 MS
Matrix: Ground Water
Analysis Batch: 140842

Client Sample ID: MW7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	6.68		25.0	36.67		mg/L		120	80 - 120
Fluoride	<0.500	F1	5.00	6.209	F1	mg/L		124	80 - 120
Sulfate	<5.00		25.0	25.66		mg/L		89	80 - 120

Lab Sample ID: 310-88790-1 MSD
Matrix: Ground Water
Analysis Batch: 140842

Client Sample ID: MW7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	6.68		25.0	32.26		mg/L		102	80 - 120	13	15
Fluoride	<0.500	F1	5.00	5.389		mg/L		108	80 - 120	14	15
Sulfate	<5.00		25.0	25.47		mg/L		89	80 - 120	1	15

Lab Sample ID: MB 310-141108/31
Matrix: Water
Analysis Batch: 141108

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.00		1.00		mg/L			09/12/16 12:17	1
Sulfate	<1.00		1.00		mg/L			09/12/16 12:17	1

Lab Sample ID: LCS 310-141108/32
Matrix: Water
Analysis Batch: 141108

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	7.398		mg/L		99	90 - 110
Sulfate	7.50	6.732		mg/L		90	90 - 110

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 310-140652/1-A
Matrix: Water
Analysis Batch: 140888

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 140652

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		09/09/16 10:00	09/09/16 18:20	1

Lab Sample ID: LCS 310-140652/2-A
Matrix: Water
Analysis Batch: 140888

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 140652

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	2.00	1.885		mg/L		94	80 - 120

Lab Sample ID: 310-88790-2 MS
Matrix: Ground Water
Analysis Batch: 140888

Client Sample ID: MW2
Prep Type: Total/NA
Prep Batch: 140652

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	<0.0500		2.00	1.877		mg/L		92	75 - 125

Lab Sample ID: 310-88790-2 MSD
Matrix: Ground Water
Analysis Batch: 140888

Client Sample ID: MW2
Prep Type: Total/NA
Prep Batch: 140652

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lithium	<0.0500		2.00	1.890		mg/L		93	75 - 125	1	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 310-140650/1-A
Matrix: Water
Analysis Batch: 140862

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 140650

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 16:44	1
Arsenic	<0.00200		0.00200		mg/L		09/09/16 10:00	09/09/16 16:44	1
Barium	<0.00200		0.00200		mg/L		09/09/16 10:00	09/09/16 16:44	1
Beryllium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 16:44	1
Cadmium	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 16:44	1
Calcium	<0.200		0.200		mg/L		09/09/16 10:00	09/09/16 16:44	1
Chromium	<0.00500		0.00500		mg/L		09/09/16 10:00	09/09/16 16:44	1
Cobalt	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 16:44	1
Iron	<0.100		0.100		mg/L		09/09/16 10:00	09/09/16 16:44	1
Lead	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 16:44	1
Molybdenum	<0.00200		0.00200		mg/L		09/09/16 10:00	09/09/16 16:44	1
Selenium	<0.00500		0.00500		mg/L		09/09/16 10:00	09/09/16 16:44	1
Silver	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 16:44	1
Thallium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 16:44	1

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

Lab Sample ID: MB 310-140650/1-A
Matrix: Water
Analysis Batch: 141122

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 140650

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.200		0.200		mg/L		09/09/16 10:00	09/13/16 11:11	1

Lab Sample ID: LCS 310-140650/2-A
Matrix: Water
Analysis Batch: 140862

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 140650

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0200	0.01964		mg/L		98	80 - 120
Arsenic	0.0400	0.03930		mg/L		98	80 - 120
Barium	0.0400	0.04146		mg/L		104	80 - 120
Beryllium	0.0200	0.02348		mg/L		117	80 - 120
Cadmium	0.0200	0.02114		mg/L		106	80 - 120
Calcium	2.00	1.945		mg/L		97	80 - 120
Chromium	0.0400	0.04321		mg/L		108	80 - 120
Cobalt	0.0200	0.02141		mg/L		107	80 - 120
Iron	2.00	2.229		mg/L		111	80 - 120
Lead	0.0200	0.02059		mg/L		103	80 - 120
Molybdenum	0.0400	0.04214		mg/L		105	80 - 120
Selenium	0.0400	0.04096		mg/L		102	80 - 120
Silver	0.0200	0.02033		mg/L		102	80 - 120
Thallium	0.0160	0.01572		mg/L		98	80 - 120

Lab Sample ID: LCS 310-140650/2-A
Matrix: Water
Analysis Batch: 141122

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 140650

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.880	0.8819		mg/L		100	80 - 120

Lab Sample ID: 310-88790-1 MS
Matrix: Ground Water
Analysis Batch: 140862

Client Sample ID: MW7
Prep Type: Total/NA
Prep Batch: 140650

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.00100		0.0200	0.01964		mg/L		98	75 - 125
Arsenic	0.0418		0.0400	0.08146		mg/L		99	75 - 125
Barium	0.526		0.0400	0.5701	4	mg/L		109	75 - 125
Beryllium	<0.00100		0.0200	0.02300		mg/L		115	75 - 125
Cadmium	<0.000500		0.0200	0.02020		mg/L		101	75 - 125
Calcium	100		2.00	104.4	4	mg/L		198	75 - 125
Chromium	<0.00500		0.0400	0.04248		mg/L		106	75 - 125
Cobalt	0.000681		0.0200	0.02128		mg/L		103	75 - 125
Iron	21.4		2.00	22.99	4	mg/L		78	75 - 125
Lead	<0.000500		0.0200	0.02027		mg/L		100	75 - 125
Molybdenum	<0.00200		0.0400	0.04404		mg/L		105	75 - 125
Selenium	<0.00500		0.0400	0.04000		mg/L		100	75 - 125
Silver	<0.00100		0.0200	0.02010		mg/L		101	75 - 125
Thallium	<0.00100		0.0160	0.01560		mg/L		97	75 - 125

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

Lab Sample ID: 310-88790-1 MS
Matrix: Ground Water
Analysis Batch: 141122

Client Sample ID: MW7
Prep Type: Total/NA
Prep Batch: 140650

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Boron	<0.200		0.880	1.054		mg/L		103	75 - 125		

Lab Sample ID: 310-88790-1 MSD
Matrix: Ground Water
Analysis Batch: 140862

Client Sample ID: MW7
Prep Type: Total/NA
Prep Batch: 140650

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	<0.00100		0.0200	0.01940		mg/L		97	75 - 125	1	20
Arsenic	0.0418		0.0400	0.08055		mg/L		97	75 - 125	1	20
Barium	0.526		0.0400	0.5841	4	mg/L		144	75 - 125	2	20
Beryllium	<0.00100		0.0200	0.02229		mg/L		111	75 - 125	3	20
Cadmium	<0.000500		0.0200	0.01998		mg/L		100	75 - 125	1	20
Calcium	100		2.00	102.9	4	mg/L		125	75 - 125	1	20
Chromium	<0.00500		0.0400	0.04189		mg/L		105	75 - 125	1	20
Cobalt	0.000681		0.0200	0.02095		mg/L		101	75 - 125	2	20
Iron	21.4		2.00	23.30	4	mg/L		93	75 - 125	1	20
Lead	<0.000500		0.0200	0.01976		mg/L		98	75 - 125	3	20
Molybdenum	<0.00200		0.0400	0.04353		mg/L		104	75 - 125	1	20
Selenium	<0.00500		0.0400	0.03965		mg/L		99	75 - 125	1	20
Silver	<0.00100		0.0200	0.01978		mg/L		99	75 - 125	2	20
Thallium	<0.00100		0.0160	0.01526		mg/L		95	75 - 125	2	20

Lab Sample ID: 310-88790-1 MSD
Matrix: Ground Water
Analysis Batch: 141122

Client Sample ID: MW7
Prep Type: Total/NA
Prep Batch: 140650

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	<0.200		0.880	1.027		mg/L		100	75 - 125	3	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-140777/1-A
Matrix: Water
Analysis Batch: 140956

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 140777

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		09/09/16 11:15	09/12/16 10:06	1

Lab Sample ID: LCS 310-140777/2-A
Matrix: Water
Analysis Batch: 140956

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 140777

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			0.00167	0.001428		mg/L		86	80 - 120		

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

Lab Sample ID: MB 310-140679/1
Matrix: Water
Analysis Batch: 140679

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			09/08/16 16:35	1

Lab Sample ID: LCS 310-140679/2
Matrix: Water
Analysis Batch: 140679

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	1016		mg/L		102	90 - 110		

Lab Sample ID: 310-88790-1 DU
Matrix: Ground Water
Analysis Batch: 140679

Client Sample ID: MW7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	534	H		534.0		mg/L				0	20

HPLC/IC

Analysis Batch: 140842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-88790-1	MW7	Total/NA	Ground Water	9056A	
310-88790-2	MW2	Total/NA	Ground Water	9056A	
310-88790-3	MW3	Total/NA	Ground Water	9056A	
310-88790-4	MW4	Total/NA	Ground Water	9056A	
310-88790-5	MW5	Total/NA	Ground Water	9056A	
310-88790-6	MW6	Total/NA	Ground Water	9056A	
310-88790-7	MW13	Total/NA	Ground Water	9056A	
310-88790-8	DUP	Total/NA	Ground Water	9056A	
MB 310-140842/19	Method Blank	Total/NA	Water	9056A	
LCS 310-140842/20	Lab Control Sample	Total/NA	Water	9056A	
310-88790-1 MS	MW7	Total/NA	Ground Water	9056A	
310-88790-1 MSD	MW7	Total/NA	Ground Water	9056A	

Analysis Batch: 141108

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-88790-5	MW5	Total/NA	Ground Water	9056A	
MB 310-141108/31	Method Blank	Total/NA	Water	9056A	
LCS 310-141108/32	Lab Control Sample	Total/NA	Water	9056A	

Metals

Prep Batch: 140650

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-88790-1	MW7	Total/NA	Ground Water	3010A	
310-88790-2	MW2	Total/NA	Ground Water	3010A	
310-88790-3	MW3	Total/NA	Ground Water	3010A	
310-88790-4	MW4	Total/NA	Ground Water	3010A	
310-88790-5	MW5	Total/NA	Ground Water	3010A	
310-88790-6	MW6	Total/NA	Ground Water	3010A	
310-88790-7	MW13	Total/NA	Ground Water	3010A	
310-88790-8	DUP	Total/NA	Ground Water	3010A	
MB 310-140650/1-A	Method Blank	Total/NA	Water	3010A	
LCS 310-140650/2-A	Lab Control Sample	Total/NA	Water	3010A	
310-88790-1 MS	MW7	Total/NA	Ground Water	3010A	
310-88790-1 MSD	MW7	Total/NA	Ground Water	3010A	

Prep Batch: 140652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-88790-1	MW7	Total/NA	Ground Water	3010A	
310-88790-2	MW2	Total/NA	Ground Water	3010A	
310-88790-3	MW3	Total/NA	Ground Water	3010A	
310-88790-4	MW4	Total/NA	Ground Water	3010A	
310-88790-5	MW5	Total/NA	Ground Water	3010A	
310-88790-6	MW6	Total/NA	Ground Water	3010A	
310-88790-7	MW13	Total/NA	Ground Water	3010A	
310-88790-8	DUP	Total/NA	Ground Water	3010A	
MB 310-140652/1-A	Method Blank	Total/NA	Water	3010A	
LCS 310-140652/2-A	Lab Control Sample	Total/NA	Water	3010A	
310-88790-2 MS	MW2	Total/NA	Ground Water	3010A	
310-88790-2 MSD	MW2	Total/NA	Ground Water	3010A	

Metals (Continued)

Prep Batch: 140777

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-88790-1	MW7	Total/NA	Ground Water	7470A	
310-88790-2	MW2	Total/NA	Ground Water	7470A	
310-88790-3	MW3	Total/NA	Ground Water	7470A	
310-88790-4	MW4	Total/NA	Ground Water	7470A	
310-88790-5	MW5	Total/NA	Ground Water	7470A	
310-88790-6	MW6	Total/NA	Ground Water	7470A	
310-88790-7	MW13	Total/NA	Ground Water	7470A	
310-88790-8	DUP	Total/NA	Ground Water	7470A	
MB 310-140777/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-140777/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 140862

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-88790-1	MW7	Total/NA	Ground Water	6020A	140650
310-88790-2	MW2	Total/NA	Ground Water	6020A	140650
310-88790-3	MW3	Total/NA	Ground Water	6020A	140650
310-88790-4	MW4	Total/NA	Ground Water	6020A	140650
310-88790-5	MW5	Total/NA	Ground Water	6020A	140650
310-88790-6	MW6	Total/NA	Ground Water	6020A	140650
310-88790-7	MW13	Total/NA	Ground Water	6020A	140650
310-88790-8	DUP	Total/NA	Ground Water	6020A	140650
MB 310-140650/1-A	Method Blank	Total/NA	Water	6020A	140650
LCS 310-140650/2-A	Lab Control Sample	Total/NA	Water	6020A	140650
310-88790-1 MS	MW7	Total/NA	Ground Water	6020A	140650
310-88790-1 MSD	MW7	Total/NA	Ground Water	6020A	140650

Analysis Batch: 140888

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-88790-1	MW7	Total/NA	Ground Water	6010C	140652
310-88790-2	MW2	Total/NA	Ground Water	6010C	140652
310-88790-3	MW3	Total/NA	Ground Water	6010C	140652
310-88790-4	MW4	Total/NA	Ground Water	6010C	140652
310-88790-5	MW5	Total/NA	Ground Water	6010C	140652
310-88790-6	MW6	Total/NA	Ground Water	6010C	140652
310-88790-7	MW13	Total/NA	Ground Water	6010C	140652
310-88790-8	DUP	Total/NA	Ground Water	6010C	140652
MB 310-140652/1-A	Method Blank	Total/NA	Water	6010C	140652
LCS 310-140652/2-A	Lab Control Sample	Total/NA	Water	6010C	140652
310-88790-2 MS	MW2	Total/NA	Ground Water	6010C	140652
310-88790-2 MSD	MW2	Total/NA	Ground Water	6010C	140652

Analysis Batch: 140956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-88790-1	MW7	Total/NA	Ground Water	7470A	140777
310-88790-2	MW2	Total/NA	Ground Water	7470A	140777
310-88790-3	MW3	Total/NA	Ground Water	7470A	140777
310-88790-4	MW4	Total/NA	Ground Water	7470A	140777
310-88790-5	MW5	Total/NA	Ground Water	7470A	140777
310-88790-6	MW6	Total/NA	Ground Water	7470A	140777
310-88790-7	MW13	Total/NA	Ground Water	7470A	140777
310-88790-8	DUP	Total/NA	Ground Water	7470A	140777

Metals (Continued)

Analysis Batch: 140956 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-140777/1-A	Method Blank	Total/NA	Water	7470A	140777
LCS 310-140777/2-A	Lab Control Sample	Total/NA	Water	7470A	140777

Analysis Batch: 141122

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-88790-1	MW7	Total/NA	Ground Water	6020A	140650
310-88790-2	MW2	Total/NA	Ground Water	6020A	140650
310-88790-3	MW3	Total/NA	Ground Water	6020A	140650
310-88790-4	MW4	Total/NA	Ground Water	6020A	140650
310-88790-5	MW5	Total/NA	Ground Water	6020A	140650
310-88790-6	MW6	Total/NA	Ground Water	6020A	140650
310-88790-7	MW13	Total/NA	Ground Water	6020A	140650
310-88790-8	DUP	Total/NA	Ground Water	6020A	140650
MB 310-140650/1-A	Method Blank	Total/NA	Water	6020A	140650
LCS 310-140650/2-A	Lab Control Sample	Total/NA	Water	6020A	140650
310-88790-1 MS	MW7	Total/NA	Ground Water	6020A	140650
310-88790-1 MSD	MW7	Total/NA	Ground Water	6020A	140650

General Chemistry

Analysis Batch: 140679

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-88790-1	MW7	Total/NA	Ground Water	SM 2540C	
310-88790-2	MW2	Total/NA	Ground Water	SM 2540C	
310-88790-3	MW3	Total/NA	Ground Water	SM 2540C	
310-88790-4	MW4	Total/NA	Ground Water	SM 2540C	
310-88790-5	MW5	Total/NA	Ground Water	SM 2540C	
310-88790-6	MW6	Total/NA	Ground Water	SM 2540C	
310-88790-7	MW13	Total/NA	Ground Water	SM 2540C	
310-88790-8	DUP	Total/NA	Ground Water	SM 2540C	
MB 310-140679/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-140679/2	Lab Control Sample	Total/NA	Water	SM 2540C	
310-88790-1 DU	MW7	Total/NA	Ground Water	SM 2540C	

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-88790-1

Client Sample ID: MW7

Date Collected: 08/31/16 14:04
Date Received: 09/08/16 09:25

Lab Sample ID: 310-88790-1

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	140842	09/09/16 11:58	AJG	TAL CF
Total/NA	Prep	3010A			140652	09/09/16 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	140888	09/09/16 18:25	OAD	TAL CF
Total/NA	Prep	3010A			140650	09/09/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	140862	09/09/16 16:50	OAD	TAL CF
Total/NA	Prep	3010A			140650	09/09/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	141122	09/13/16 11:18	OAD	TAL CF
Total/NA	Prep	7470A			140777	09/09/16 11:15	SAD	TAL CF
Total/NA	Analysis	7470A		1	140956	09/12/16 10:18	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	140679	09/08/16 16:35	SAS	TAL CF

Client Sample ID: MW2

Date Collected: 08/31/16 13:19
Date Received: 09/08/16 09:25

Lab Sample ID: 310-88790-2

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	140842	09/09/16 11:58	AJG	TAL CF
Total/NA	Prep	3010A			140652	09/09/16 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	140888	09/09/16 18:27	OAD	TAL CF
Total/NA	Prep	3010A			140650	09/09/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	140862	09/09/16 17:12	OAD	TAL CF
Total/NA	Prep	3010A			140650	09/09/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	141122	09/13/16 11:27	OAD	TAL CF
Total/NA	Prep	7470A			140777	09/09/16 11:15	SAD	TAL CF
Total/NA	Analysis	7470A		1	140956	09/12/16 10:19	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	140679	09/08/16 16:35	SAS	TAL CF

Client Sample ID: MW3

Date Collected: 08/31/16 12:44
Date Received: 09/08/16 09:25

Lab Sample ID: 310-88790-3

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	140842	09/09/16 11:58	AJG	TAL CF
Total/NA	Prep	3010A			140652	09/09/16 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	140888	09/09/16 18:39	OAD	TAL CF
Total/NA	Prep	3010A			140650	09/09/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	140862	09/09/16 17:15	OAD	TAL CF
Total/NA	Prep	3010A			140650	09/09/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	141122	09/13/16 11:30	OAD	TAL CF
Total/NA	Prep	7470A			140777	09/09/16 11:15	SAD	TAL CF
Total/NA	Analysis	7470A		1	140956	09/12/16 10:21	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	140679	09/08/16 16:35	SAS	TAL CF

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-88790-1

Client Sample ID: MW4

Date Collected: 08/31/16 10:52
Date Received: 09/08/16 09:25

Lab Sample ID: 310-88790-4

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	140842	09/09/16 11:58	AJG	TAL CF
Total/NA	Prep	3010A			140652	09/09/16 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	140888	09/09/16 18:41	OAD	TAL CF
Total/NA	Prep	3010A			140650	09/09/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	140862	09/09/16 17:18	OAD	TAL CF
Total/NA	Prep	3010A			140650	09/09/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	141122	09/13/16 11:33	OAD	TAL CF
Total/NA	Prep	7470A			140777	09/09/16 11:15	SAD	TAL CF
Total/NA	Analysis	7470A		1	140956	09/12/16 10:25	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	140679	09/08/16 16:35	SAS	TAL CF

Client Sample ID: MW5

Date Collected: 08/31/16 11:30
Date Received: 09/08/16 09:25

Lab Sample ID: 310-88790-5

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		50	141108	09/12/16 12:17	AJG	TAL CF
Total/NA	Analysis	9056A		5	140842	09/09/16 11:58	AJG	TAL CF
Total/NA	Prep	3010A			140652	09/09/16 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	140888	09/09/16 18:43	OAD	TAL CF
Total/NA	Prep	3010A			140650	09/09/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	140862	09/09/16 17:21	OAD	TAL CF
Total/NA	Prep	3010A			140650	09/09/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		5	141122	09/13/16 11:36	OAD	TAL CF
Total/NA	Prep	7470A			140777	09/09/16 11:15	SAD	TAL CF
Total/NA	Analysis	7470A		1	140956	09/12/16 10:27	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	140679	09/08/16 16:35	SAS	TAL CF

Client Sample ID: MW6

Date Collected: 08/31/16 11:55
Date Received: 09/08/16 09:25

Lab Sample ID: 310-88790-6

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	140842	09/09/16 11:58	AJG	TAL CF
Total/NA	Prep	3010A			140652	09/09/16 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	140888	09/09/16 18:45	OAD	TAL CF
Total/NA	Prep	3010A			140650	09/09/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	140862	09/09/16 17:25	OAD	TAL CF
Total/NA	Prep	3010A			140650	09/09/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		5	141122	09/13/16 11:39	OAD	TAL CF
Total/NA	Prep	7470A			140777	09/09/16 11:15	SAD	TAL CF
Total/NA	Analysis	7470A		1	140956	09/12/16 10:29	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	140679	09/08/16 16:35	SAS	TAL CF

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-88790-1

Client Sample ID: MW13

Date Collected: 08/31/16 10:12
Date Received: 09/08/16 09:25

Lab Sample ID: 310-88790-7

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	140842	09/09/16 11:58	AJG	TAL CF
Total/NA	Prep	3010A			140652	09/09/16 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	140888	09/09/16 18:47	OAD	TAL CF
Total/NA	Prep	3010A			140650	09/09/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	140862	09/09/16 17:28	OAD	TAL CF
Total/NA	Prep	3010A			140650	09/09/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	141122	09/13/16 11:51	OAD	TAL CF
Total/NA	Prep	7470A			140777	09/09/16 11:15	SAD	TAL CF
Total/NA	Analysis	7470A		1	140956	09/12/16 10:30	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	140679	09/08/16 16:35	SAS	TAL CF

Client Sample ID: DUP

Date Collected: 08/31/16 14:06
Date Received: 09/08/16 09:25

Lab Sample ID: 310-88790-8

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	140842	09/09/16 11:58	AJG	TAL CF
Total/NA	Prep	3010A			140652	09/09/16 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	140888	09/09/16 18:49	OAD	TAL CF
Total/NA	Prep	3010A			140650	09/09/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	140862	09/09/16 17:31	OAD	TAL CF
Total/NA	Prep	3010A			140650	09/09/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	141122	09/13/16 11:54	OAD	TAL CF
Total/NA	Prep	7470A			140777	09/09/16 11:15	SAD	TAL CF
Total/NA	Analysis	7470A		1	140956	09/12/16 10:32	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	140679	09/08/16 16:35	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 2 Landfill CCR

TestAmerica Job ID: 310-88790-1

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	01-31-17
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 Unit 2 Landfill CCR

TestAmerica Job ID: 310-88790-1

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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310-88790 Chain of Custody

310503

Cooler/Sample Receipt and Temperatur

Client Information

Client: Omaha Public Power

City/State:

Project: Neb. City Unit 2 LF

Receipt Information

Date/Time Received: 9-08-16 925

Received By: GL

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 # 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: G

Correction Factor (°C): -0.1

Uncorrected Temp (°C): 1.8

Corrected Temp (°C): 1.7

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

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Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Omaha Public Power

City/State: | Project: Neb. City Unit 2 LF

Receipt Information

Date/Time Received: 9-08-16 925 | Received By: GL

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-18

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: G | Correction Factor (°C): -0.1

Uncorrected Temp (°C): 0.4 | 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 Cedar Falls
70‡ Enterprise Drive
Cedar Falls, IA 50613
Phone (319) 277-2401 Fax (319) 277-2425

Chain of Custody Record

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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 2 Landfill CCR	TestAmerica Project #: 31007559			
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		
MW7	8/31/16	1404	G	GW	N	N	X	X	X		
MW2		1319	G	GW			X	X	X		
MW3		1244	G	GW			X	X	X		
MW4		1052	G	GW			X	X	X		
MW5		1130	G	GW			X	X	X		
MW6		1155	G	GW			X	X	X		
MW13		1012	G	GW			X	X	X		
DUP	↓	1406	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:	9/1/16 1230		Britta Berry	9.8.16 925	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 #
MW7	310-88790-A-1	Plastic 1 liter - Nitric Acid	<2		
MW7	310-88790-B-1	Plastic 1 liter - Nitric Acid	<2		
MW7	310-88790-C-1	Plastic 250ml - with Nitric Acid	<2		
MW2	310-88790-A-2	Plastic 1 liter - Nitric Acid	<2		
MW2	310-88790-B-2	Plastic 1 liter - Nitric Acid	<2		
MW2	310-88790-C-2	Plastic 250ml - with Nitric Acid	<2		
MW3	310-88790-A-3	Plastic 1 liter - Nitric Acid	>2	3mL	
MW3	310-88790-B-3	Plastic 1 liter - Nitric Acid	<2		
MW3	310-88790-C-3	Plastic 250ml - with Nitric Acid	<2		
MW4	310-88790-A-4	Plastic 1 liter - Nitric Acid	<2		
MW4	310-88790-B-4	Plastic 1 liter - Nitric Acid	<2		
MW4	310-88790-C-4	Plastic 250ml - with Nitric Acid	<2		
MW5	310-88790-A-5	Plastic 1 liter - Nitric Acid	<2		
MW5	310-88790-B-5	Plastic 1 liter - Nitric Acid	<2		
MW5	310-88790-C-5	Plastic 250ml - with Nitric Acid	<2		
MW6	310-88790-A-6	Plastic 1 liter - Nitric Acid	<2		
MW6	310-88790-B-6	Plastic 1 liter - Nitric Acid	<2		
MW6	310-88790-C-6	Plastic 250ml - with Nitric Acid	<2		
MW13	310-88790-A-7	Plastic 1 liter - Nitric Acid	<2		
MW13	310-88790-B-7	Plastic 1 liter - Nitric Acid	<2		
MW13	310-88790-C-7	Plastic 250ml - with Nitric Acid	<2		
DUP	310-88790-A-8	Plastic 1 liter - Nitric Acid	<2		
DUP	310-88790-B-8	Plastic 1 liter - Nitric Acid	<2		
DUP	310-88790-C-8	Plastic 250ml - with Nitric Acid	<2		

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-88790-1

Login Number: 88790
List Number: 1
Creator: Berry, Brita 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)	False	TDS received past the analytical holding time
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: 310-94455-2
Client Project/Site: Nebraska City Unit 2 Landfill
Sampling Event: CCR and Landfill Parameters 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 5:43:51 PM

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

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Case Narrative

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-94455-2

Job ID: 310-94455-2

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-94455-2

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 0.4° C and 0.4° 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 2 Landfill

TestAmerica Job ID: 310-94455-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-94455-1	MW7	Ground Water	11/17/16 12:02	11/22/16 09:45
310-94455-2	MW2	Ground Water	11/17/16 11:06	11/22/16 09:45
310-94455-3	MW3	Ground Water	11/17/16 10:39	11/22/16 09:45
310-94455-4	MW4	Ground Water	11/17/16 08:49	11/22/16 09:45
310-94455-5	MW5	Ground Water	11/17/16 09:30	11/22/16 09:45
310-94455-6	MW6	Ground Water	11/17/16 09:59	11/22/16 09:45
310-94455-7	MW13	Ground Water	11/17/16 08:19	11/22/16 09:45
310-94455-8	DUP	Ground Water	11/17/16 11:08	11/22/16 09:45

Client Sample ID: MW7
Date Collected: 11/17/16 12:02
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94455-1
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	0.267	0.268	1.00	0.445	pCi/L	12/01/16 09:39	01/04/17 23:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.6*		*40 - 110*	*12/01/16 09:39*	*01/04/17 23:53*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.643**		0.282	0.289	1.00	0.404	pCi/L	12/01/16 11:48	01/04/17 18:07	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.6*		*40 - 110*	*12/01/16 11:48*	*01/04/17 18:07*	*1*
Y Carrier	*88.2*		*40 - 110*	*12/01/16 11:48*	*01/04/17 18:07*	*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	**0.851**		0.389	0.394	5.00	0.445	pCi/L		01/05/17 16:11	1

Client Sample ID: MW2
Date Collected: 11/17/16 11:06
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94455-2
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	0.312	U	0.251	0.252	1.00	0.375	pCi/L	12/01/16 09:39	01/05/17 07:08	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*84.3*		*40 - 110*	*12/01/16 09:39*	*01/05/17 07:08*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.684**		0.328	0.334	1.00	0.483	pCi/L	12/01/16 11:48	01/04/17 18:08	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*84.3*		*40 - 110*	*12/01/16 11:48*	*01/04/17 18:08*	*1*
Y Carrier	*82.2*		*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	**0.996**		0.413	0.419	5.00	0.483	pCi/L		01/05/17 16:11	1

Client Sample ID: MW3
Date Collected: 11/17/16 10:39
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94455-3
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	0.207	U	0.257	0.258	1.00	0.426	pCi/L	12/01/16 09:39	01/05/17 07:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*79.5*		*40 - 110*	*12/01/16 09:39*	*01/05/17 07:09*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.239	U	0.354	0.355	1.00	0.591	pCi/L	12/01/16 11:48	01/04/17 18:08	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*79.5*		*40 - 110*	*12/01/16 11:48*	*01/04/17 18:08*	*1*
Y Carrier	*87.9*		*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	0.446	U	0.437	0.438	5.00	0.591	pCi/L		01/05/17 16:11	1

Client Sample ID: MW4
Date Collected: 11/17/16 08:49
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94455-4
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	0.370	U	0.276	0.278	1.00	0.405	pCi/L	12/01/16 09:39	01/05/17 07:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*81.5*		*40 - 110*	*12/01/16 09:39*	*01/05/17 07:09*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.659**		0.320	0.326	1.00	0.472	pCi/L	12/01/16 11:48	01/04/17 18:08	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*81.5*		*40 - 110*	*12/01/16 11:48*	*01/04/17 18:08*	*1*
Y Carrier	*88.6*		*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	**1.03**		0.422	0.428	5.00	0.472	pCi/L		01/05/17 16:11	1

Client Sample ID: MW5
Date Collected: 11/17/16 09:30
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94455-5
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	0.194	U	0.214	0.215	1.00	0.344	pCi/L	12/01/16 09:39	01/05/17 07:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*82.1*		*40 - 110*	*12/01/16 09:39*	*01/05/17 07:09*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.282	U	0.289	0.290	1.00	0.470	pCi/L	12/01/16 11:48	01/04/17 18:08	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*82.1*		*40 - 110*	*12/01/16 11:48*	*01/04/17 18:08*	*1*
Y Carrier	*86.7*		*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	**0.476**		0.359	0.361	5.00	0.470	pCi/L		01/05/17 16:11	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-94455-2

Client Sample ID: MW6
Date Collected: 11/17/16 09:59
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94455-6
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	0.144	U	0.263	0.263	1.00	0.462	pCi/L	12/01/16 09:39	01/05/17 07:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*68.7*		*40 - 110*	*12/01/16 09:39*	*01/05/17 07:09*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**1.33**		0.442	0.458	1.00	0.584	pCi/L	12/01/16 11:48	01/04/17 18:08	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*68.7*		*40 - 110*	*12/01/16 11:48*	*01/04/17 18:08*	*1*
Y Carrier	*77.0*		*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	**1.48**		0.514	0.529	5.00	0.584	pCi/L		01/05/17 16:11	1

Client Sample ID: MW13
Date Collected: 11/17/16 08:19
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94455-7
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	0.389		0.250	0.252	1.00	0.337	pCi/L	12/01/16 09:39	01/05/17 07:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*84.3*		*40 - 110*	*12/01/16 09:39*	*01/05/17 07:09*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.977		0.313	0.326	1.00	0.405	pCi/L	12/01/16 11:48	01/04/17 18:08	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*84.3*		*40 - 110*	*12/01/16 11:48*	*01/04/17 18:08*	*1*
Y Carrier	*86.7*		*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	1.37		0.401	0.412	5.00	0.405	pCi/L		01/05/17 16:11	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-94455-2

Client Sample ID: DUP
Date Collected: 11/17/16 11:08
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94455-8
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	0.232	U	0.234	0.235	1.00	0.366	pCi/L	12/01/16 09:39	01/05/17 07:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*73.2*		*40 - 110*	*12/01/16 09:39*	*01/05/17 07:09*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.847**		0.333	0.342	1.00	0.457	pCi/L	12/01/16 11:48	01/04/17 18:08	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*73.2*		*40 - 110*	*12/01/16 11:48*	*01/04/17 18:08*	*1*
Y Carrier	*88.6*		*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	**1.08**		0.406	0.414	5.00	0.457	pCi/L		01/05/17 16:11	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-94455-2

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
Matrix: Water
Analysis Batch: 286428

Client Sample ID: Method Blank
Prep Type: Total/NA
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
Matrix: Water
Analysis Batch: 286428

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
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
Matrix: Water
Analysis Batch: 286428

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
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
Matrix: Water
Analysis Batch: 286427

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

TestAmerica Job ID: 310-94455-2

Rad

Prep Batch: 281858

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94455-1	MW7	Total/NA	Ground Water	PrecSep-21	
310-94455-2	MW2	Total/NA	Ground Water	PrecSep-21	
310-94455-3	MW3	Total/NA	Ground Water	PrecSep-21	
310-94455-4	MW4	Total/NA	Ground Water	PrecSep-21	
310-94455-5	MW5	Total/NA	Ground Water	PrecSep-21	
310-94455-6	MW6	Total/NA	Ground Water	PrecSep-21	
310-94455-7	MW13	Total/NA	Ground Water	PrecSep-21	
310-94455-8	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
310-94455-1	MW7	Total/NA	Ground Water	PrecSep_0	
310-94455-2	MW2	Total/NA	Ground Water	PrecSep_0	
310-94455-3	MW3	Total/NA	Ground Water	PrecSep_0	
310-94455-4	MW4	Total/NA	Ground Water	PrecSep_0	
310-94455-5	MW5	Total/NA	Ground Water	PrecSep_0	
310-94455-6	MW6	Total/NA	Ground Water	PrecSep_0	
310-94455-7	MW13	Total/NA	Ground Water	PrecSep_0	
310-94455-8	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 2 Landfill

TestAmerica Job ID: 310-94455-2

Client Sample ID: MW7

Lab Sample ID: 310-94455-1

Date Collected: 11/17/16 12:02

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	286045	01/04/17 23:53	ALD	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 18:07	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: 310-94455-2

Date Collected: 11/17/16 11:06

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 07:08	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: MW3

Lab Sample ID: 310-94455-3

Date Collected: 11/17/16 10:39

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 07:09	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: MW4

Lab Sample ID: 310-94455-4

Date Collected: 11/17/16 08:49

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 07:09	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

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-94455-2

Client Sample ID: MW5

Lab Sample ID: 310-94455-5

Date Collected: 11/17/16 09:30
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 07:09	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: MW6

Lab Sample ID: 310-94455-6

Date Collected: 11/17/16 09:59
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 07:09	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: MW13

Lab Sample ID: 310-94455-7

Date Collected: 11/17/16 08:19
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 07:09	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: DUP

Lab Sample ID: 310-94455-8

Date Collected: 11/17/16 11:08
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 07:09	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

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 2 Landfill

TestAmerica Job ID: 310-94455-2

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 2 Landfill

TestAmerica Job ID: 310-94455-2

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

310-94455 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: OPPD

City/State: Omaha, NE | Project: Nebraska City Unit 2 Landfill

Receipt Information

Date/Time Received: 11/22/16 945 | Received By: TG

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: TG
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): 0.4 | Corrected Temp (°C): 0.4

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

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: CSSD

City/State: Omaha, NE | Project: Nebraska CCE Unit 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: AA44
Multiple Coolers?	☑ Yes	☐ No	*If yes:* Cooler # 2 of 4
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): 0.4 | Corrected Temp (°C): 0.4

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 Enter[illegible]
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 2 Landfill CCR	TestAmerica Project #: 31007559
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		
MW7	11/17/16	1202	G	GW			X	X	X		
MW2		1106	G	GW			X	X	X		
MW3		1039	G	GW			X	X	X		
MW4		0844	G	GW			X	X	X		
MW5		0930	G	GW			X	X	X		
MW6		0957	G	GW			X	X	X		
MW13		0819	G	GW			X	X	X		
DUP		1108	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: Gwadhar	Date/Time: 11/22/16 945	Company TACF
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:

1/5/2017

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MW7	310-94455-A-1	Plastic 250ml - with Nitric Acid	<2		
MW7	310-94455-B-1	Plastic 1 liter - Nitric Acid	<2		
MW7	310-94455-C-1	Plastic 1 liter - Nitric Acid	<2		
MW2	310-94455-A-2	Plastic 250ml - with Nitric Acid	<2		
MW2	310-94455-B-2	Plastic 1 liter - Nitric Acid	<2		
MW2	310-94455-C-2	Plastic 1 liter - Nitric Acid	<2		
MW3	310-94455-A-3	Plastic 250ml - with Nitric Acid	<2		
MW3	310-94455-B-3	Plastic 1 liter - Nitric Acid	<2		
MW3	310-94455-C-3	Plastic 1 liter - Nitric Acid	<2		
MW4	310-94455-A-4	Plastic 250ml - with Nitric Acid	<2		
MW4	310-94455-B-4	Plastic 1 liter - Nitric Acid	<2		
MW4	310-94455-C-4	Plastic 1 liter - Nitric Acid	<2		
MW5	310-94455-A-5	Plastic 250ml - with Nitric Acid	<2		
MW5	310-94455-B-5	Plastic 1 liter - Nitric Acid	<2		
MW5	310-94455-C-5	Plastic 1 liter - Nitric Acid	<2		
MW6	310-94455-A-6	Plastic 250ml - with Nitric Acid	<2		
MW6	310-94455-B-6	Plastic 1 liter - Nitric Acid	<2		
MW6	310-94455-C-6	Plastic 1 liter - Nitric Acid	<2		
MW13	310-94455-A-7	Plastic 250ml - with Nitric Acid	<2		
MW13	310-94455-B-7	Plastic 1 liter - Nitric Acid	<2		
MW13	310-94455-C-7	Plastic 1 liter - Nitric Acid	<2		
DUP	310-94455-A-8	Plastic 250ml - with Nitric Acid	<2		
DUP	310-94455-B-8	Plastic 1 liter - Nitric Acid	<2		
DUP	310-94455-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

310-94455 Chain of Custody

testAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Hayes, Shawn M	C No: 0-7972.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: shawn.hayes@testamericainc.com	State: Nebraska
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):	Page: Page 1 of 1
Address: 13715 Rider Trail North, ,	Due Date Requested: 12/21/2016		Job #: 310-94455-2
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 2 Landfill CCR	Project #: 31007559		
Site: 310 OPPD Nebraska City Unit 2	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:								
MW7 (310-94455-1)	11/17/16	12:02 Central		Water			X	X	X	2	
MW2 (310-94455-2)	11/17/16	11:06 Central		Water			X	X	X	2	
MW3 (310-94455-3)	11/17/16	10:39 Central		Water			X	X	X	2	
MW4 (310-94455-4)	11/17/16	08:49 Central		Water			X	X	X	2	
MW5 (310-94455-5)	11/17/16	09:30 Central		Water			X	X	X	2	
MW6 (310-94455-6)	11/17/16	09:59 Central		Water			X	X	X	2	
MW13 (310-94455-7)	11/17/16	08:19 Central		Water			X	X	X	2	
DUP (310-94455-8)	11/17/16	11:08 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: 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: 310-94455-2

Login Number: 94455

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.	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: 310-94455-2

Login Number: 94455
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.	False	

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-94455-2

Login Number: 94455
List Number: 3
Creator: Clarke, Jill C

List Source: TestAmerica St. Louis
List Creation: 11/23/16 11:35 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.	N/A	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	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.	False	

Tracer/Carrier Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-94455-2

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)
310-94455-1	MW7	88.6
310-94455-2	MW2	84.3
310-94455-3	MW3	79.5
310-94455-4	MW4	81.5
310-94455-5	MW5	82.1
310-94455-6	MW6	68.7
310-94455-7	MW13	84.3
310-94455-8	DUP	73.2

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)
310-94455-1	MW7	88.6	88.2
310-94455-2	MW2	84.3	82.2
310-94455-3	MW3	79.5	87.9
310-94455-4	MW4	81.5	88.6
310-94455-5	MW5	82.1	86.7
310-94455-6	MW6	68.7	77.0
310-94455-7	MW13	84.3	86.7
310-94455-8	DUP	73.2	88.6

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Tracer/Carrier Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-94455-2

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: 310-94455-1
Client Project/Site: Nebraska City Unit 2 Landfill CCR
Sampling Event: CCR and Landfill Parameters 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 11:26:30 AM

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

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Case Narrative

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-94455-1

Job ID: 310-94455-1

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-94455-1

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 0.4° C and 0.4° 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 2 Landfill CCR

TestAmerica Job ID: 310-94455-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-94455-1	MW7	Ground Water	11/17/16 12:02	11/22/16 09:45
310-94455-2	MW2	Ground Water	11/17/16 11:06	11/22/16 09:45
310-94455-3	MW3	Ground Water	11/17/16 10:39	11/22/16 09:45
310-94455-4	MW4	Ground Water	11/17/16 08:49	11/22/16 09:45
310-94455-5	MW5	Ground Water	11/17/16 09:30	11/22/16 09:45
310-94455-6	MW6	Ground Water	11/17/16 09:59	11/22/16 09:45
310-94455-7	MW13	Ground Water	11/17/16 08:19	11/22/16 09:45
310-94455-8	DUP	Ground Water	11/17/16 11:08	11/22/16 09:45

Detection Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-94455-1

Client Sample ID: MW7 — Lab Sample ID: 310-94455-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.73		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.544		0.500		mg/L	5		9056A	Total/NA
Lithium	0.0613		0.0500		mg/L	1		6010C	Total/NA
Arsenic	0.0473		0.00200		mg/L	1		6020A	Total/NA
Barium	0.544		0.00200		mg/L	1		6020A	Total/NA
Calcium	138		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	510		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW2 — Lab Sample ID: 310-94455-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	298		20.0		mg/L	20		9056A	Total/NA
Antimony	0.00452		0.00100		mg/L	1		6020A	Total/NA
Barium	0.122		0.00200		mg/L	1		6020A	Total/NA
Boron	0.302		0.200		mg/L	1		6020A	Total/NA
Calcium	236		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.00519		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1030		60.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW3 — Lab Sample ID: 310-94455-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	1.28		0.500		mg/L	5		9056A	Total/NA
Sulfate	5.59		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.0113		0.00200		mg/L	1		6020A	Total/NA
Barium	0.234		0.00200		mg/L	1		6020A	Total/NA
Calcium	91.0		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	354		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW4 — Lab Sample ID: 310-94455-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	1.28		0.500		mg/L	5		9056A	Total/NA
Sulfate	34.0		5.00		mg/L	5		9056A	Total/NA
Barium	0.284		0.00200		mg/L	1		6020A	Total/NA
Calcium	130		0.200		mg/L	1		6020A	Total/NA
Lead	0.000536		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00393		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	548		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW5 — Lab Sample ID: 310-94455-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	21.6		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.89		0.500		mg/L	5		9056A	Total/NA
Sulfate	414		20.0		mg/L	20		9056A	Total/NA
Arsenic	0.00218		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0558		0.00200		mg/L	1		6020A	Total/NA
Boron	4.27		0.200		mg/L	1		6020A	Total/NA
Calcium	228		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 2 Landfill CCR

TestAmerica Job ID: 310-94455-1

Client Sample ID: MW5 (Continued) — Lab Sample ID: 310-94455-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Molybdenum	0.0168		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1170		60.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW6 — Lab Sample ID: 310-94455-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	15.0		5.00		mg/L	5		9056A	Total/NA
Fluoride	6.53		0.500		mg/L	5		9056A	Total/NA
Sulfate	165		5.00		mg/L	5		9056A	Total/NA
Barium	0.109		0.00200		mg/L	1		6020A	Total/NA
Boron	5.11		1.00		mg/L	5		6020A	Total/NA
Calcium	125		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.0455		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	588		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW13 — Lab Sample ID: 310-94455-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.33		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.803		0.500		mg/L	5		9056A	Total/NA
Sulfate	34.7		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.00515		0.00200		mg/L	1		6020A	Total/NA
Barium	0.322		0.00200		mg/L	1		6020A	Total/NA
Calcium	84.2		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000873		0.000500		mg/L	1		6020A	Total/NA
Lead	0.000890		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00221		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	430		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP — Lab Sample ID: 310-94455-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	284		20.0		mg/L	20		9056A	Total/NA
Antimony	0.00464		0.00100		mg/L	1		6020A	Total/NA
Barium	0.123		0.00200		mg/L	1		6020A	Total/NA
Boron	0.306		0.200		mg/L	1		6020A	Total/NA
Calcium	238		0.200		mg/L	1		6020A	Total/NA
Lead	0.000538		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00532		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	980		60.0		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW7

Date Collected: 11/17/16 12:02
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94455-1

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5.73**		5.00		mg/L			11/25/16 22:58	5
Fluoride	**0.544**		0.500		mg/L			11/25/16 22:58	5
Sulfate	<5.00		5.00		mg/L			11/25/16 22:58	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	**0.0613**		0.0500		mg/L		11/25/16 10:00	11/29/16 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		11/23/16 10:00	12/01/16 18:06	1
Arsenic	**0.0473**		0.00200		mg/L		11/23/16 10:00	12/01/16 18:06	1
Barium	**0.544**		0.00200		mg/L		11/23/16 10:00	12/01/16 18:06	1
Beryllium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:06	1
Boron	<0.200		0.200		mg/L		11/23/16 10:00	12/02/16 13:39	1
Cadmium	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:06	1
Calcium	**138**		0.200		mg/L		11/23/16 10:00	12/01/16 18:06	1
Chromium	<0.00500		0.00500		mg/L		11/23/16 10:00	12/01/16 18:06	1
Cobalt	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:06	1
Lead	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:06	1
Molybdenum	<0.00200		0.00200		mg/L		11/23/16 10:00	12/01/16 18:06	1
Selenium	<0.00500		0.00500		mg/L		11/23/16 10:00	12/01/16 18:06	1
Thallium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:06	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 08:56	11/30/16 14:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**510**		30.0		mg/L			11/23/16 08:04	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-94455-1

Client Sample ID: MW2

Date Collected: 11/17/16 11:06
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94455-2

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 00:30	5
Fluoride	<0.500		0.500		mg/L			11/26/16 00:30	5
Sulfate	**298**		20.0		mg/L			11/26/16 14:19	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	11/29/16 16:48	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.00452**		0.00100		mg/L		11/23/16 10:00	12/01/16 18:09	1
Arsenic	<0.00200		0.00200		mg/L		11/23/16 10:00	12/01/16 18:09	1
Barium	**0.122**		0.00200		mg/L		11/23/16 10:00	12/01/16 18:09	1
Beryllium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:09	1
Boron	**0.302**		0.200		mg/L		11/23/16 10:00	12/02/16 13:42	1
Cadmium	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:09	1
Calcium	**236**		0.200		mg/L		11/23/16 10:00	12/01/16 18:09	1
Chromium	<0.00500		0.00500		mg/L		11/23/16 10:00	12/01/16 18:09	1
Cobalt	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:09	1
Lead	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:09	1
Molybdenum	**0.00519**		0.00200		mg/L		11/23/16 10:00	12/01/16 18:09	1
Selenium	<0.00500		0.00500		mg/L		11/23/16 10:00	12/01/16 18:09	1
Thallium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 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		11/29/16 08:56	11/30/16 14:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1030**		60.0		mg/L			11/23/16 08:04	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-94455-1

Client Sample ID: MW3
Date Collected: 11/17/16 10:39
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94455-3
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 02:02	5
Fluoride	**1.28**		0.500		mg/L			11/26/16 02:02	5
Sulfate	**5.59**		5.00		mg/L			11/26/16 02:02	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 16:50	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 18:13	1
Arsenic	**0.0113**		0.00200		mg/L		11/23/16 10:00	12/01/16 18:13	1
Barium	**0.234**		0.00200		mg/L		11/23/16 10:00	12/01/16 18:13	1
Beryllium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:13	1
Boron	<0.200		0.200		mg/L		11/23/16 10:00	12/02/16 13:45	1
Cadmium	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:13	1
Calcium	**91.0**		0.200		mg/L		11/23/16 10:00	12/01/16 18:13	1
Chromium	<0.00500		0.00500		mg/L		11/23/16 10:00	12/01/16 18:13	1
Cobalt	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:13	1
Lead	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:13	1
Molybdenum	<0.00200		0.00200		mg/L		11/23/16 10:00	12/01/16 18:13	1
Selenium	<0.00500		0.00500		mg/L		11/23/16 10:00	12/01/16 18:13	1
Thallium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:13	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 08:56	11/30/16 14:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**354**		30.0		mg/L			11/23/16 08:04	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-94455-1

Client Sample ID: MW4
Date Collected: 11/17/16 08:49
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94455-4
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 02:33	5
Fluoride	**1.28**		0.500		mg/L			11/26/16 02:33	5
Sulfate	**34.0**		5.00		mg/L			11/26/16 02:33	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 16:52	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 18:16	1
Arsenic	<0.00200		0.00200		mg/L		11/23/16 10:00	12/01/16 18:16	1
Barium	**0.284**		0.00200		mg/L		11/23/16 10:00	12/01/16 18:16	1
Beryllium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:16	1
Boron	<0.200		0.200		mg/L		11/23/16 10:00	12/02/16 13:49	1
Cadmium	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:16	1
Calcium	**130**		0.200		mg/L		11/23/16 10:00	12/01/16 18:16	1
Chromium	<0.00500		0.00500		mg/L		11/23/16 10:00	12/01/16 18:16	1
Cobalt	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:16	1
Lead	**0.000536**		0.000500		mg/L		11/23/16 10:00	12/01/16 18:16	1
Molybdenum	**0.00393**		0.00200		mg/L		11/23/16 10:00	12/01/16 18:16	1
Selenium	<0.00500		0.00500		mg/L		11/23/16 10:00	12/01/16 18:16	1
Thallium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:16	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 08:56	11/30/16 14:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**548**		30.0		mg/L			11/23/16 08:04	1

Client Sample ID: MW5

Date Collected: 11/17/16 09:30
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94455-5

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**21.6**		5.00		mg/L			11/26/16 03:04	5
Fluoride	**1.89**		0.500		mg/L			11/26/16 03:04	5
Sulfate	**414**		20.0		mg/L			11/26/16 14:50	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	11/29/16 16:55	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:19	1
Arsenic	**0.00218**		0.00200		mg/L		11/23/16 10:00	12/01/16 18:19	1
Barium	**0.0558**		0.00200		mg/L		11/23/16 10:00	12/01/16 18:19	1
Beryllium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:19	1
Boron	**4.27**		0.200		mg/L		11/23/16 10:00	12/02/16 14:01	1
Cadmium	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:19	1
Calcium	**228**		0.200		mg/L		11/23/16 10:00	12/01/16 18:19	1
Chromium	<0.00500		0.00500		mg/L		11/23/16 10:00	12/01/16 18:19	1
Cobalt	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:19	1
Lead	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:19	1
Molybdenum	**0.0168**		0.00200		mg/L		11/23/16 10:00	12/01/16 18:19	1
Selenium	<0.00500		0.00500		mg/L		11/23/16 10:00	12/01/16 18:19	1
Thallium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:19	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 08:56	11/30/16 14:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1170**		60.0		mg/L			11/23/16 08:04	1

Client Sample ID: MW6

Date Collected: 11/17/16 09:59
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94455-6

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**15.0**		5.00		mg/L			11/26/16 03:34	5
Fluoride	**6.53**		0.500		mg/L			11/26/16 03:34	5
Sulfate	**165**		5.00		mg/L			11/26/16 03:34	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 16:57	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 18:22	1
Arsenic	<0.00200		0.00200		mg/L		11/23/16 10:00	12/01/16 18:22	1
Barium	**0.109**		0.00200		mg/L		11/23/16 10:00	12/01/16 18:22	1
Beryllium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:22	1
Boron	**5.11**		1.00		mg/L		11/23/16 10:00	12/02/16 14:04	5
Cadmium	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:22	1
Calcium	**125**		0.200		mg/L		11/23/16 10:00	12/01/16 18:22	1
Chromium	<0.00500		0.00500		mg/L		11/23/16 10:00	12/01/16 18:22	1
Cobalt	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:22	1
Lead	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:22	1
Molybdenum	**0.0455**		0.00200		mg/L		11/23/16 10:00	12/01/16 18:22	1
Selenium	<0.00500		0.00500		mg/L		11/23/16 10:00	12/01/16 18:22	1
Thallium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:22	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 08:56	11/30/16 14:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**588**		30.0		mg/L			11/23/16 08:04	1

Client Sample ID: MW13

Date Collected: 11/17/16 08:19
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94455-7

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9.33**		5.00		mg/L			11/26/16 04:05	5
Fluoride	**0.803**		0.500		mg/L			11/26/16 04:05	5
Sulfate	**34.7**		5.00		mg/L			11/26/16 04:05	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 16:59	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 18:25	1
Arsenic	**0.00515**		0.00200		mg/L		11/23/16 10:00	12/01/16 18:25	1
Barium	**0.322**		0.00200		mg/L		11/23/16 10:00	12/01/16 18:25	1
Beryllium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:25	1
Boron	<0.200		0.200		mg/L		11/23/16 10:00	12/02/16 14:08	1
Cadmium	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:25	1
Calcium	**84.2**		0.200		mg/L		11/23/16 10:00	12/01/16 18:25	1
Chromium	<0.00500		0.00500		mg/L		11/23/16 10:00	12/01/16 18:25	1
Cobalt	**0.000873**		0.000500		mg/L		11/23/16 10:00	12/01/16 18:25	1
Lead	**0.000890**		0.000500		mg/L		11/23/16 10:00	12/01/16 18:25	1
Molybdenum	**0.00221**		0.00200		mg/L		11/23/16 10:00	12/01/16 18:25	1
Selenium	<0.00500		0.00500		mg/L		11/23/16 10:00	12/01/16 18:25	1
Thallium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:25	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 08:56	11/30/16 14:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**430**		30.0		mg/L			11/23/16 08:04	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-94455-1

Client Sample ID: DUP

Date Collected: 11/17/16 11:08
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94455-8

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 04:36	5
Fluoride	<0.500		0.500		mg/L			11/26/16 04:36	5
Sulfate	**284**		20.0		mg/L			11/26/16 15:20	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	11/29/16 17:03	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.00464**		0.00100		mg/L		11/23/16 10:00	12/01/16 18:28	1
Arsenic	<0.00200		0.00200		mg/L		11/23/16 10:00	12/01/16 18:28	1
Barium	**0.123**		0.00200		mg/L		11/23/16 10:00	12/01/16 18:28	1
Beryllium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:28	1
Boron	**0.306**		0.200		mg/L		11/23/16 10:00	12/02/16 14:11	1
Cadmium	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:28	1
Calcium	**238**		0.200		mg/L		11/23/16 10:00	12/01/16 18:28	1
Chromium	<0.00500		0.00500		mg/L		11/23/16 10:00	12/01/16 18:28	1
Cobalt	<0.000500		0.000500		mg/L		11/23/16 10:00	12/01/16 18:28	1
Lead	**0.000538**		0.000500		mg/L		11/23/16 10:00	12/01/16 18:28	1
Molybdenum	**0.00532**		0.00200		mg/L		11/23/16 10:00	12/01/16 18:28	1
Selenium	<0.00500		0.00500		mg/L		11/23/16 10:00	12/01/16 18:28	1
Thallium	<0.00100		0.00100		mg/L		11/23/16 10:00	12/01/16 18:28	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 08:56	11/30/16 14:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**980**		60.0		mg/L			11/23/16 08:04	1

Definitions/Glossary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-94455-1

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

Lab Sample ID: 310-94455-1 MS
Matrix: Ground Water
Analysis Batch: 149801

Client Sample ID: MW7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.73		25.0	29.22		mg/L		94	80 - 120
Fluoride	0.544		5.00	6.010		mg/L		109	80 - 120
Sulfate	<5.00		25.0	24.76		mg/L		99	80 - 120

Lab Sample ID: 310-94455-1 MSD
Matrix: Ground Water
Analysis Batch: 149801

Client Sample ID: MW7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	5.73		25.0	29.39		mg/L		95	80 - 120	1	15
Fluoride	0.544		5.00	6.036		mg/L		110	80 - 120	0	15
Sulfate	<5.00		25.0	24.93		mg/L		100	80 - 120	1	15

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: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 310-94455-7 DU
Matrix: Ground Water
Analysis Batch: 150005

Client Sample ID: MW13
Prep Type: Total/NA
Prep Batch: 149594

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 310-149432/1-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

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

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

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

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-149877/1-A
Matrix: Water
Analysis Batch: 150125

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 149877

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		11/29/16 08:56	11/30/16 13:34	1

Lab Sample ID: LCS 310-149877/2-A
Matrix: Water
Analysis Batch: 150125

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 149877

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00167	0.001610		mg/L		97	80 - 120

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

Lab Sample ID: 310-94455-1 DU
Matrix: Ground Water
Analysis Batch: 149492

Client Sample ID: MW7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	510		602.0		mg/L		17	20

HPLC/IC

Analysis Batch: 149801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94455-1	MW7	Total/NA	Ground Water	9056A	
310-94455-2	MW2	Total/NA	Ground Water	9056A	
310-94455-2	MW2	Total/NA	Ground Water	9056A	
310-94455-3	MW3	Total/NA	Ground Water	9056A	
310-94455-4	MW4	Total/NA	Ground Water	9056A	
310-94455-5	MW5	Total/NA	Ground Water	9056A	
310-94455-5	MW5	Total/NA	Ground Water	9056A	
310-94455-6	MW6	Total/NA	Ground Water	9056A	
310-94455-7	MW13	Total/NA	Ground Water	9056A	
310-94455-8	DUP	Total/NA	Ground Water	9056A	
310-94455-8	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	
310-94455-1 MS	MW7	Total/NA	Ground Water	9056A	
310-94455-1 MSD	MW7	Total/NA	Ground Water	9056A	

Metals

Prep Batch: 149432

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94455-1	MW7	Total/NA	Ground Water	3010A	
310-94455-2	MW2	Total/NA	Ground Water	3010A	
310-94455-3	MW3	Total/NA	Ground Water	3010A	
310-94455-4	MW4	Total/NA	Ground Water	3010A	
310-94455-5	MW5	Total/NA	Ground Water	3010A	
310-94455-6	MW6	Total/NA	Ground Water	3010A	
310-94455-7	MW13	Total/NA	Ground Water	3010A	
310-94455-8	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	

Prep Batch: 149594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94455-1	MW7	Total/NA	Ground Water	3010A	
310-94455-2	MW2	Total/NA	Ground Water	3010A	
310-94455-3	MW3	Total/NA	Ground Water	3010A	
310-94455-4	MW4	Total/NA	Ground Water	3010A	
310-94455-5	MW5	Total/NA	Ground Water	3010A	
310-94455-6	MW6	Total/NA	Ground Water	3010A	
310-94455-7	MW13	Total/NA	Ground Water	3010A	
310-94455-8	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	
310-94455-7 DU	MW13	Total/NA	Ground Water	3010A	

Analysis Batch: 149756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-149594/1-A	Method Blank	Total/NA	Water	6010C	149594
LCS 310-149594/2-A	Lab Control Sample	Total/NA	Water	6010C	149594

Metals (Continued)

Prep Batch: 149877

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94455-1	MW7	Total/NA	Ground Water	7470A	
310-94455-2	MW2	Total/NA	Ground Water	7470A	
310-94455-3	MW3	Total/NA	Ground Water	7470A	
310-94455-4	MW4	Total/NA	Ground Water	7470A	
310-94455-5	MW5	Total/NA	Ground Water	7470A	
310-94455-6	MW6	Total/NA	Ground Water	7470A	
310-94455-7	MW13	Total/NA	Ground Water	7470A	
310-94455-8	DUP	Total/NA	Ground Water	7470A	
MB 310-149877/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-149877/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 150005

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94455-1	MW7	Total/NA	Ground Water	6010C	149594
310-94455-2	MW2	Total/NA	Ground Water	6010C	149594
310-94455-3	MW3	Total/NA	Ground Water	6010C	149594
310-94455-4	MW4	Total/NA	Ground Water	6010C	149594
310-94455-5	MW5	Total/NA	Ground Water	6010C	149594
310-94455-6	MW6	Total/NA	Ground Water	6010C	149594
310-94455-7	MW13	Total/NA	Ground Water	6010C	149594
310-94455-8	DUP	Total/NA	Ground Water	6010C	149594
310-94455-7 DU	MW13	Total/NA	Ground Water	6010C	149594

Analysis Batch: 150125

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94455-1	MW7	Total/NA	Ground Water	7470A	149877
310-94455-2	MW2	Total/NA	Ground Water	7470A	149877
310-94455-3	MW3	Total/NA	Ground Water	7470A	149877
310-94455-4	MW4	Total/NA	Ground Water	7470A	149877
310-94455-5	MW5	Total/NA	Ground Water	7470A	149877
310-94455-6	MW6	Total/NA	Ground Water	7470A	149877
310-94455-7	MW13	Total/NA	Ground Water	7470A	149877
310-94455-8	DUP	Total/NA	Ground Water	7470A	149877
MB 310-149877/1-A	Method Blank	Total/NA	Water	7470A	149877
LCS 310-149877/2-A	Lab Control Sample	Total/NA	Water	7470A	149877

Analysis Batch: 150329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94455-1	MW7	Total/NA	Ground Water	6020A	149432
310-94455-2	MW2	Total/NA	Ground Water	6020A	149432
310-94455-3	MW3	Total/NA	Ground Water	6020A	149432
310-94455-4	MW4	Total/NA	Ground Water	6020A	149432
310-94455-5	MW5	Total/NA	Ground Water	6020A	149432
310-94455-6	MW6	Total/NA	Ground Water	6020A	149432
310-94455-7	MW13	Total/NA	Ground Water	6020A	149432
310-94455-8	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: 150413

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94455-1	MW7	Total/NA	Ground Water	6020A	149432
310-94455-2	MW2	Total/NA	Ground Water	6020A	149432
310-94455-3	MW3	Total/NA	Ground Water	6020A	149432
310-94455-4	MW4	Total/NA	Ground Water	6020A	149432
310-94455-5	MW5	Total/NA	Ground Water	6020A	149432
310-94455-6	MW6	Total/NA	Ground Water	6020A	149432
310-94455-7	MW13	Total/NA	Ground Water	6020A	149432
310-94455-8	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

General Chemistry

Analysis Batch: 149492

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94455-1	MW7	Total/NA	Ground Water	SM 2540C	
310-94455-2	MW2	Total/NA	Ground Water	SM 2540C	
310-94455-3	MW3	Total/NA	Ground Water	SM 2540C	
310-94455-4	MW4	Total/NA	Ground Water	SM 2540C	
310-94455-5	MW5	Total/NA	Ground Water	SM 2540C	
310-94455-6	MW6	Total/NA	Ground Water	SM 2540C	
310-94455-7	MW13	Total/NA	Ground Water	SM 2540C	
310-94455-8	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	
310-94455-1 DU	MW7	Total/NA	Ground Water	SM 2540C	

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-94455-1

Client Sample ID: MW7

Date Collected: 11/17/16 12:02
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94455-1
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	149801	11/25/16 22:58	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 16:42	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 18:06	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 13:39	OAD	TAL CF
Total/NA	Prep	7470A			149877	11/29/16 08:56	SAD	TAL CF
Total/NA	Analysis	7470A		1	150125	11/30/16 14:04	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	149492	11/23/16 08:04	SAS	TAL CF

Client Sample ID: MW2

Date Collected: 11/17/16 11:06
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94455-2
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	149801	11/26/16 00:30	AJG	TAL CF
Total/NA	Analysis	9056A		20	149801	11/26/16 14:19	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 16:48	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 18:09	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 13:42	OAD	TAL CF
Total/NA	Prep	7470A			149877	11/29/16 08:56	SAD	TAL CF
Total/NA	Analysis	7470A		1	150125	11/30/16 14:05	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	149492	11/23/16 08:04	SAS	TAL CF

Client Sample ID: MW3

Date Collected: 11/17/16 10:39
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94455-3
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	149801	11/26/16 02:02	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 16:50	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 18:13	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 13:45	OAD	TAL CF
Total/NA	Prep	7470A			149877	11/29/16 08:56	SAD	TAL CF
Total/NA	Analysis	7470A		1	150125	11/30/16 14:07	SAD	TAL CF

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-94455-1

Client Sample ID: MW3
Date Collected: 11/17/16 10:39
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94455-3
Matrix: Ground Water

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: MW4
Date Collected: 11/17/16 08:49
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94455-4
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 02:33	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 16:52	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 18:16	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 13:49	OAD	TAL CF
Total/NA	Prep	7470A			149877	11/29/16 08:56	SAD	TAL CF
Total/NA	Analysis	7470A		1	150125	11/30/16 14:08	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	149492	11/23/16 08:04	SAS	TAL CF

Client Sample ID: MW5
Date Collected: 11/17/16 09:30
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94455-5
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 03:04	AJG	TAL CF
Total/NA	Analysis	9056A		20	149801	11/26/16 14:50	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 16:55	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 18:19	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 14:01	OAD	TAL CF
Total/NA	Prep	7470A			149877	11/29/16 08:56	SAD	TAL CF
Total/NA	Analysis	7470A		1	150125	11/30/16 14:10	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	149492	11/23/16 08:04	SAS	TAL CF

Client Sample ID: MW6
Date Collected: 11/17/16 09:59
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94455-6
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 03:34	AJG	TAL CF
Total/NA	Prep	3010A			149594	11/25/16 10:00	JNR	TAL CF

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-94455-1

Client Sample ID: MW6

Date Collected: 11/17/16 09:59
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94455-6

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6010C		1	150005	11/29/16 16:57	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 18:22	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 14:04	OAD	TAL CF
Total/NA	Prep	7470A			149877	11/29/16 08:56	SAD	TAL CF
Total/NA	Analysis	7470A		1	150125	11/30/16 14:12	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	149492	11/23/16 08:04	SAS	TAL CF

Client Sample ID: MW13

Date Collected: 11/17/16 08:19
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94455-7

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 04:05	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 16:59	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 18:25	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 14:08	OAD	TAL CF
Total/NA	Prep	7470A			149877	11/29/16 08:56	SAD	TAL CF
Total/NA	Analysis	7470A		1	150125	11/30/16 14:13	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	149492	11/23/16 08:04	SAS	TAL CF

Client Sample ID: DUP

Date Collected: 11/17/16 11:08
Date Received: 11/22/16 09:45

Lab Sample ID: 310-94455-8

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 04:36	AJG	TAL CF
Total/NA	Analysis	9056A		20	149801	11/26/16 15:20	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 17:03	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 18:28	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 14:11	OAD	TAL CF
Total/NA	Prep	7470A			149877	11/29/16 08:56	SAD	TAL CF
Total/NA	Analysis	7470A		1	150125	11/30/16 14:15	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 2 Landfill CCR

TestAmerica Job ID: 310-94455-1

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 2 Landfill CCR

TestAmerica Job ID: 310-94455-1

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 2 Landfill CCR

TestAmerica Job ID: 310-94455-1

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

310-94455 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: OPSD

City/State: Omaha, NE | Project: Nebraska City Unit 2 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: 19

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: 14 | Correction Factor (°C): 0.0

Uncorrected Temp (°C): 0.4 | Corrected Temp (°C): 0.4

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

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: OPPD

City/State: Omaha, NE | Project: Nebraska City Unit 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: AA44

Multiple Coolers? ☑ Yes ☐ No *If yes:* Cooler # 2 of 4

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): 0.4 | Corrected Temp (°C): 0.4

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 Enter[illegible] 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 2 Landfill CCR	TestAmerica Project #: 31007559
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		
MW7	11/17/16	1202	G	GW			X	X	X		
MW2		1106	G	GW			X	X	X		
MW3		1039	G	GW			X	X	X		
MW4		0844	G	GW			X	X	X		
MW5		0930	G	GW			X	X	X		
MW6		0957	G	GW			X	X	X		
MW13		0819	G	GW			X	X	X		
DUP		1108	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: Gwadhar	Date/Time: 11/22/16 945	Company TACF
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: 310-94455-1

Login Number: 94455
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.	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: 310-99710-1
Client Project/Site: Nebraska City Unit 2 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:
2/28/2017 2:13:53 PM

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

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-99710-1

Job ID: 310-99710-1

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-99710-1

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 0.4° C and 1.5° 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 2 Landfill CCR

TestAmerica Job ID: 310-99710-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-99710-1	MW7	Ground Water	02/15/17 12:09	02/17/17 10:00
310-99710-2	MW2	Ground Water	02/15/17 11:36	02/17/17 10:00
310-99710-3	MW3	Ground Water	02/15/17 10:58	02/17/17 10:00
310-99710-4	MW4	Ground Water	02/15/17 09:38	02/17/17 10:00
310-99710-5	MW5	Ground Water	02/15/17 10:04	02/17/17 10:00
310-99710-6	MW6	Ground Water	02/15/17 10:28	02/17/17 10:00
310-99710-7	MW13	Ground Water	02/15/17 09:06	02/17/17 10:00
310-99710-8	DUP	Ground Water	02/15/17 12:11	02/17/17 10:00

Detection Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-99710-1

Client Sample ID: MW7 — Lab Sample ID: 310-99710-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.96		5.00		mg/L	5		9056A	Total/NA
Lithium	0.0638		0.0500		mg/L	1		6010C	Total/NA
Arsenic	0.0608	F1	0.00200		mg/L	1		6020A	Total/NA
Barium	0.558		0.00200		mg/L	1		6020A	Total/NA
Calcium	143		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000639		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	552		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW2 — Lab Sample ID: 310-99710-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	13.2		5.00		mg/L	5		9056A	Total/NA
Fluoride	2.51		0.500		mg/L	5		9056A	Total/NA
Sulfate	290		10.0		mg/L	10		9056A	Total/NA
Antimony	0.00331		0.00100		mg/L	1		6020A	Total/NA
Barium	0.144		0.00200		mg/L	1		6020A	Total/NA
Boron	0.219		0.200		mg/L	1		6020A	Total/NA
Calcium	269		0.200		mg/L	1		6020A	Total/NA
Lead	0.000671		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00930		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1070		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW3 — Lab Sample ID: 310-99710-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	15.6		5.00		mg/L	5		9056A	Total/NA
Fluoride	5.11		0.500		mg/L	5		9056A	Total/NA
Sulfate	49.6		5.00		mg/L	5		9056A	Total/NA
Antimony	0.00111		0.00100		mg/L	1		6020A	Total/NA
Arsenic	0.00660		0.00200		mg/L	1		6020A	Total/NA
Barium	0.281		0.00200		mg/L	1		6020A	Total/NA
Calcium	74.2		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000510		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.0176		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	378		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW4 — Lab Sample ID: 310-99710-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	10.8		5.00		mg/L	5		9056A	Total/NA
Fluoride	2.43		0.500		mg/L	5		9056A	Total/NA
Sulfate	39.7		5.00		mg/L	5		9056A	Total/NA
Barium	0.272		0.00200		mg/L	1		6020A	Total/NA
Calcium	142		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000584		0.000500		mg/L	1		6020A	Total/NA
Lead	0.00196		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00224		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	526		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW5 — Lab Sample ID: 310-99710-5

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW5 (Continued) — Lab Sample ID: 310-99710-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	13.3		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.591		0.500		mg/L	5		9056A	Total/NA
Sulfate	531		20.0		mg/L	20		9056A	Total/NA
Barium	0.0335		0.00200		mg/L	1		6020A	Total/NA
Boron	2.94		0.200		mg/L	1		6020A	Total/NA
Calcium	217		0.200		mg/L	1		6020A	Total/NA
Lead	0.000880		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00818		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1210		60.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW6 — Lab Sample ID: 310-99710-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	136		5.00		mg/L	5		9056A	Total/NA
Barium	0.0948		0.00200		mg/L	1		6020A	Total/NA
Boron	4.11		1.00		mg/L	5		6020A	Total/NA
Calcium	132		0.200		mg/L	1		6020A	Total/NA
Lead	0.000901		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.0265		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	602		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW13 — Lab Sample ID: 310-99710-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	11.2		5.00		mg/L	5		9056A	Total/NA
Sulfate	40.9		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.00289		0.00200		mg/L	1		6020A	Total/NA
Barium	0.321		0.00200		mg/L	1		6020A	Total/NA
Calcium	94.9		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000883		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00207		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	448		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP — Lab Sample ID: 310-99710-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.75		5.00		mg/L	5		9056A	Total/NA
Lithium	0.0618		0.0500		mg/L	1		6010C	Total/NA
Arsenic	0.0606		0.00200		mg/L	1		6020A	Total/NA
Barium	0.554		0.00200		mg/L	1		6020A	Total/NA
Calcium	141		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000639		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	600		30.0		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 2 Landfill CCR

TestAmerica Job ID: 310-99710-1

Client Sample ID: MW7
Date Collected: 02/15/17 12:09
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99710-1
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9.96**		5.00		mg/L			02/20/17 16:01	5
Fluoride	<0.500		0.500		mg/L			02/28/17 09:26	5
Sulfate	<5.00		5.00		mg/L			02/20/17 16:01	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	**0.0638**		0.0500		mg/L		02/20/17 10:00	02/22/17 16:08	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100	F1	0.00100		mg/L		02/20/17 10:00	02/23/17 17:15	1
Arsenic	**0.0608**	**F1**	0.00200		mg/L		02/20/17 10:00	02/23/17 17:15	1
Barium	**0.558**		0.00200		mg/L		02/20/17 10:00	02/23/17 17:15	1
Beryllium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 17:15	1
Boron	<0.200		0.200		mg/L		02/20/17 10:00	02/24/17 15:16	1
Cadmium	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 17:15	1
Calcium	**143**		0.200		mg/L		02/20/17 10:00	02/23/17 17:15	1
Chromium	<0.00500		0.00500		mg/L		02/20/17 10:00	02/23/17 17:15	1
Cobalt	**0.000639**		0.000500		mg/L		02/20/17 10:00	02/23/17 17:15	1
Lead	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 17:15	1
Molybdenum	<0.00200		0.00200		mg/L		02/20/17 10:00	02/23/17 17:15	1
Selenium	<0.00500		0.00500		mg/L		02/20/17 10:00	02/23/17 17:15	1
Thallium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 17:15	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 09:52	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 08:40	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-99710-1

Client Sample ID: MW2
Date Collected: 02/15/17 11:36
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99710-2
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**13.2**		5.00		mg/L			02/20/17 16:33	5
Fluoride	**2.51**		0.500		mg/L			02/20/17 16:33	5
Sulfate	**290**		10.0		mg/L			02/21/17 05:40	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 16:11	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.00331**		0.00100		mg/L		02/20/17 10:00	02/23/17 17:27	1
Arsenic	<0.00200		0.00200		mg/L		02/20/17 10:00	02/23/17 17:27	1
Barium	**0.144**		0.00200		mg/L		02/20/17 10:00	02/23/17 17:27	1
Beryllium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 17:27	1
Boron	**0.219**		0.200		mg/L		02/20/17 10:00	02/24/17 15:25	1
Cadmium	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 17:27	1
Calcium	**269**		0.200		mg/L		02/20/17 10:00	02/23/17 17:27	1
Chromium	<0.00500		0.00500		mg/L		02/20/17 10:00	02/23/17 17:27	1
Cobalt	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 17:27	1
Lead	**0.000671**		0.000500		mg/L		02/20/17 10:00	02/23/17 17:27	1
Molybdenum	**0.00930**		0.00200		mg/L		02/20/17 10:00	02/23/17 17:27	1
Selenium	<0.00500		0.00500		mg/L		02/20/17 10:00	02/23/17 17:27	1
Thallium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 17:27	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 09:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1070**		30.0		mg/L			02/17/17 08:40	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-99710-1

Client Sample ID: MW3
Date Collected: 02/15/17 10:58
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99710-3
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**15.6**		5.00		mg/L			02/20/17 17:04	5
Fluoride	**5.11**		0.500		mg/L			02/20/17 17:04	5
Sulfate	**49.6**		5.00		mg/L			02/20/17 17:04	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 16:13	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.00111**		0.00100		mg/L		02/20/17 10:00	02/23/17 17:30	1
Arsenic	**0.00660**		0.00200		mg/L		02/20/17 10:00	02/23/17 17:30	1
Barium	**0.281**		0.00200		mg/L		02/20/17 10:00	02/23/17 17:30	1
Beryllium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 17:30	1
Boron	<0.200		0.200		mg/L		02/20/17 10:00	02/24/17 15:28	1
Cadmium	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 17:30	1
Calcium	**74.2**		0.200		mg/L		02/20/17 10:00	02/23/17 17:30	1
Chromium	<0.00500		0.00500		mg/L		02/20/17 10:00	02/23/17 17:30	1
Cobalt	**0.000510**		0.000500		mg/L		02/20/17 10:00	02/23/17 17:30	1
Lead	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 17:30	1
Molybdenum	**0.0176**		0.00200		mg/L		02/20/17 10:00	02/23/17 17:30	1
Selenium	<0.00500		0.00500		mg/L		02/20/17 10:00	02/23/17 17:30	1
Thallium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 17:30	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 10:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**378**		30.0		mg/L			02/17/17 12:37	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-99710-1

Client Sample ID: MW4
Date Collected: 02/15/17 09:38
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99710-4
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10.8**		5.00		mg/L			02/20/17 17:36	5
Fluoride	**2.43**		0.500		mg/L			02/20/17 17:36	5
Sulfate	**39.7**		5.00		mg/L			02/20/17 17:36	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 16:15	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 17:33	1
Arsenic	<0.00200		0.00200		mg/L		02/20/17 10:00	02/23/17 17:33	1
Barium	**0.272**		0.00200		mg/L		02/20/17 10:00	02/23/17 17:33	1
Beryllium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 17:33	1
Boron	<0.200		0.200		mg/L		02/20/17 10:00	02/24/17 15:31	1
Cadmium	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 17:33	1
Calcium	**142**		0.200		mg/L		02/20/17 10:00	02/23/17 17:33	1
Chromium	<0.00500		0.00500		mg/L		02/20/17 10:00	02/23/17 17:33	1
Cobalt	**0.000584**		0.000500		mg/L		02/20/17 10:00	02/23/17 17:33	1
Lead	**0.00196**		0.000500		mg/L		02/20/17 10:00	02/23/17 17:33	1
Molybdenum	**0.00224**		0.00200		mg/L		02/20/17 10:00	02/23/17 17:33	1
Selenium	<0.00500		0.00500		mg/L		02/20/17 10:00	02/23/17 17:33	1
Thallium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 17:33	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 10:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**526**		30.0		mg/L			02/17/17 12:37	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-99710-1

Client Sample ID: MW5
Date Collected: 02/15/17 10:04
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99710-5
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**13.3**		5.00		mg/L			02/20/17 19:10	5
Fluoride	**0.591**		0.500		mg/L			02/20/17 19:10	5
Sulfate	**531**		20.0		mg/L			02/21/17 06:11	20

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 16:17	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 17:37	1
Arsenic	<0.00200		0.00200		mg/L		02/20/17 10:00	02/23/17 17:37	1
Barium	**0.0335**		0.00200		mg/L		02/20/17 10:00	02/23/17 17:37	1
Beryllium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 17:37	1
Boron	**2.94**		0.200		mg/L		02/20/17 10:00	02/24/17 15:35	1
Cadmium	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 17:37	1
Calcium	**217**		0.200		mg/L		02/20/17 10:00	02/23/17 17:37	1
Chromium	<0.00500		0.00500		mg/L		02/20/17 10:00	02/23/17 17:37	1
Cobalt	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 17:37	1
Lead	**0.000880**		0.000500		mg/L		02/20/17 10:00	02/23/17 17:37	1
Molybdenum	**0.00818**		0.00200		mg/L		02/20/17 10:00	02/23/17 17:37	1
Selenium	<0.00500		0.00500		mg/L		02/20/17 10:00	02/23/17 17:37	1
Thallium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 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		02/21/17 08:43	02/22/17 10:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1210**		60.0		mg/L			02/17/17 12:37	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-99710-1

Client Sample ID: MW6
Date Collected: 02/15/17 10:28
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99710-6
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			02/20/17 19:42	5
Fluoride	<0.500		0.500		mg/L			02/20/17 19:42	5
Sulfate	**136**		5.00		mg/L			02/20/17 19:42	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 16:23	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 17:49	1
Arsenic	<0.00200		0.00200		mg/L		02/20/17 10:00	02/23/17 17:49	1
Barium	**0.0948**		0.00200		mg/L		02/20/17 10:00	02/23/17 17:49	1
Beryllium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 17:49	1
Boron	**4.11**		1.00		mg/L		02/20/17 10:00	02/24/17 15:47	5
Cadmium	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 17:49	1
Calcium	**132**		0.200		mg/L		02/20/17 10:00	02/23/17 17:49	1
Chromium	<0.00500		0.00500		mg/L		02/20/17 10:00	02/23/17 17:49	1
Cobalt	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 17:49	1
Lead	**0.000901**		0.000500		mg/L		02/20/17 10:00	02/23/17 17:49	1
Molybdenum	**0.0265**		0.00200		mg/L		02/20/17 10:00	02/23/17 17:49	1
Selenium	<0.00500		0.00500		mg/L		02/20/17 10:00	02/23/17 17:49	1
Thallium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 17:49	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 10:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**602**		30.0		mg/L			02/17/17 12:37	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-99710-1

Client Sample ID: MW13
Date Collected: 02/15/17 09:06
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99710-7
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**11.2**		5.00		mg/L			02/20/17 20:13	5
Fluoride	<0.500		0.500		mg/L			02/20/17 20:13	5
Sulfate	**40.9**		5.00		mg/L			02/20/17 20:13	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 16:25	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 17:52	1
Arsenic	**0.00289**		0.00200		mg/L		02/20/17 10:00	02/23/17 17:52	1
Barium	**0.321**		0.00200		mg/L		02/20/17 10:00	02/23/17 17:52	1
Beryllium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 17:52	1
Boron	<0.200		0.200		mg/L		02/20/17 10:00	02/24/17 15:50	1
Cadmium	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 17:52	1
Calcium	**94.9**		0.200		mg/L		02/20/17 10:00	02/23/17 17:52	1
Chromium	<0.00500		0.00500		mg/L		02/20/17 10:00	02/23/17 17:52	1
Cobalt	**0.000883**		0.000500		mg/L		02/20/17 10:00	02/23/17 17:52	1
Lead	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 17:52	1
Molybdenum	**0.00207**		0.00200		mg/L		02/20/17 10:00	02/23/17 17:52	1
Selenium	<0.00500		0.00500		mg/L		02/20/17 10:00	02/23/17 17:52	1
Thallium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 17:52	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 10:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**448**		30.0		mg/L			02/17/17 12:37	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-99710-1

Client Sample ID: DUP
Date Collected: 02/15/17 12:11
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99710-8
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6.75**		5.00		mg/L			02/20/17 20:45	5
Fluoride	<0.500		0.500		mg/L			02/20/17 20:45	5
Sulfate	<5.00		5.00		mg/L			02/20/17 20:45	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	**0.0618**		0.0500		mg/L		02/20/17 10:00	02/22/17 16:27	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 17:56	1
Arsenic	**0.0606**		0.00200		mg/L		02/20/17 10:00	02/23/17 17:56	1
Barium	**0.554**		0.00200		mg/L		02/20/17 10:00	02/23/17 17:56	1
Beryllium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 17:56	1
Boron	<0.200		0.200		mg/L		02/20/17 10:00	02/24/17 15:54	1
Cadmium	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 17:56	1
Calcium	**141**		0.200		mg/L		02/20/17 10:00	02/23/17 17:56	1
Chromium	<0.00500		0.00500		mg/L		02/20/17 10:00	02/23/17 17:56	1
Cobalt	**0.000639**		0.000500		mg/L		02/20/17 10:00	02/23/17 17:56	1
Lead	<0.000500		0.000500		mg/L		02/20/17 10:00	02/23/17 17:56	1
Molybdenum	<0.00200		0.00200		mg/L		02/20/17 10:00	02/23/17 17:56	1
Selenium	<0.00500		0.00500		mg/L		02/20/17 10:00	02/23/17 17:56	1
Thallium	<0.00100		0.00100		mg/L		02/20/17 10:00	02/23/17 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		02/21/17 08:43	02/22/17 10:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**600**		30.0		mg/L			02/17/17 12:37	1

Qualifiers

Metals

Qualifier	Qualifier Description
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 310-157764/3
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

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

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

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

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
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: 310-99710-1 MS
Matrix: Ground Water
Analysis Batch: 158061

Client Sample ID: MW7
Prep Type: Total/NA
Prep Batch: 157477

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.00100	F1	0.0200	0.02421		mg/L		120	75 - 125
Arsenic	0.0608	F1	0.0400	0.1070		mg/L		116	75 - 125
Barium	0.558		0.0400	0.5862	4	mg/L		70	75 - 125
Beryllium	<0.00100		0.0200	0.02212		mg/L		111	75 - 125
Cadmium	<0.000500		0.0200	0.02318		mg/L		116	75 - 125
Calcium	143		2.00	142.1	4	mg/L		-24	75 - 125
Chromium	<0.00500		0.0400	0.04494		mg/L		112	75 - 125
Cobalt	0.000639		0.0200	0.02249		mg/L		109	75 - 125
Lead	<0.000500		0.0200	0.02224		mg/L		111	75 - 125
Molybdenum	<0.00200		0.0400	0.04619		mg/L		111	75 - 125
Selenium	<0.00500		0.0400	0.04216		mg/L		105	75 - 125
Thallium	<0.00100		0.0160	0.01813		mg/L		113	75 - 125

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

Lab Sample ID: 310-99710-1 MS
Matrix: Ground Water
Analysis Batch: 158198

Client Sample ID: MW7
Prep Type: Total/NA
Prep Batch: 157477

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	<0.200		0.880	1.111		mg/L		104	75 - 125

Lab Sample ID: 310-99710-1 MSD
Matrix: Ground Water
Analysis Batch: 158061

Client Sample ID: MW7
Prep Type: Total/NA
Prep Batch: 157477

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	<0.00100	F1	0.0200	0.02589	F1	mg/L		128	75 - 125	7	20
Arsenic	0.0608	F1	0.0400	0.1135	F1	mg/L		132	75 - 125	6	20
Barium	0.558		0.0400	0.6207	4	mg/L		157	75 - 125	6	20
Beryllium	<0.00100		0.0200	0.02463		mg/L		123	75 - 125	11	20
Cadmium	<0.000500		0.0200	0.02484		mg/L		124	75 - 125	7	20
Calcium	143		2.00	156.2	4	mg/L		684	75 - 125	9	20
Chromium	<0.00500		0.0400	0.04756		mg/L		119	75 - 125	6	20
Cobalt	0.000639		0.0200	0.02402		mg/L		117	75 - 125	7	20
Lead	<0.000500		0.0200	0.02385		mg/L		119	75 - 125	7	20
Molybdenum	<0.00200		0.0400	0.04866		mg/L		117	75 - 125	5	20
Selenium	<0.00500		0.0400	0.04584		mg/L		115	75 - 125	8	20
Thallium	<0.00100		0.0160	0.01928		mg/L		121	75 - 125	6	20

Lab Sample ID: 310-99710-1 MSD
Matrix: Ground Water
Analysis Batch: 158198

Client Sample ID: MW7
Prep Type: Total/NA
Prep Batch: 157477

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	<0.200		0.880	1.177		mg/L		111	75 - 125	6	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

Lab Sample ID: 310-99710-2 MS
Matrix: Ground Water
Analysis Batch: 157886

Client Sample ID: MW2
Prep Type: Total/NA
Prep Batch: 157729

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.000200		0.00167	0.001841		mg/L		110	80 - 120

Lab Sample ID: 310-99710-2 MSD
Matrix: Ground Water
Analysis Batch: 157886

Client Sample ID: MW2
Prep Type: Total/NA
Prep Batch: 157729

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000200		0.00167	0.001865		mg/L		112	80 - 120	1	20

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

Lab Sample ID: MB 310-157432/1
Matrix: Water
Analysis Batch: 157432

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 08:40	1

Lab Sample ID: LCS 310-157432/2
Matrix: Water
Analysis Batch: 157432

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	1104		mg/L		110	90 - 110

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: 310-99710-3 DU
Matrix: Ground Water
Analysis Batch: 157472

Client Sample ID: MW3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	378		316.0		mg/L		18	24

HPLC/IC

Analysis Batch: 157764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99710-1	MW7	Total/NA	Ground Water	9056A	
310-99710-1	MW7	Total/NA	Ground Water	9056A	
310-99710-2	MW2	Total/NA	Ground Water	9056A	
310-99710-2	MW2	Total/NA	Ground Water	9056A	
310-99710-3	MW3	Total/NA	Ground Water	9056A	
310-99710-4	MW4	Total/NA	Ground Water	9056A	
310-99710-5	MW5	Total/NA	Ground Water	9056A	
310-99710-5	MW5	Total/NA	Ground Water	9056A	
310-99710-6	MW6	Total/NA	Ground Water	9056A	
310-99710-7	MW13	Total/NA	Ground Water	9056A	
310-99710-8	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	

Metals

Prep Batch: 157477

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99710-1	MW7	Total/NA	Ground Water	3010A	
310-99710-2	MW2	Total/NA	Ground Water	3010A	
310-99710-3	MW3	Total/NA	Ground Water	3010A	
310-99710-4	MW4	Total/NA	Ground Water	3010A	
310-99710-5	MW5	Total/NA	Ground Water	3010A	
310-99710-6	MW6	Total/NA	Ground Water	3010A	
310-99710-7	MW13	Total/NA	Ground Water	3010A	
310-99710-8	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	
310-99710-1 MS	MW7	Total/NA	Ground Water	3010A	
310-99710-1 MSD	MW7	Total/NA	Ground Water	3010A	

Prep Batch: 157479

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99710-1	MW7	Total/NA	Ground Water	3010A	
310-99710-2	MW2	Total/NA	Ground Water	3010A	
310-99710-3	MW3	Total/NA	Ground Water	3010A	
310-99710-4	MW4	Total/NA	Ground Water	3010A	
310-99710-5	MW5	Total/NA	Ground Water	3010A	
310-99710-6	MW6	Total/NA	Ground Water	3010A	
310-99710-7	MW13	Total/NA	Ground Water	3010A	
310-99710-8	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	

Prep Batch: 157729

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99710-1	MW7	Total/NA	Ground Water	7470A	
310-99710-2	MW2	Total/NA	Ground Water	7470A	
310-99710-3	MW3	Total/NA	Ground Water	7470A	
310-99710-4	MW4	Total/NA	Ground Water	7470A	

Metals (Continued)

Prep Batch: 157729 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99710-5	MW5	Total/NA	Ground Water	7470A	
310-99710-6	MW6	Total/NA	Ground Water	7470A	
310-99710-7	MW13	Total/NA	Ground Water	7470A	
310-99710-8	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	
310-99710-2 MS	MW2	Total/NA	Ground Water	7470A	
310-99710-2 MSD	MW2	Total/NA	Ground Water	7470A	

Analysis Batch: 157886

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99710-1	MW7	Total/NA	Ground Water	7470A	157729
310-99710-2	MW2	Total/NA	Ground Water	7470A	157729
310-99710-3	MW3	Total/NA	Ground Water	7470A	157729
310-99710-4	MW4	Total/NA	Ground Water	7470A	157729
310-99710-5	MW5	Total/NA	Ground Water	7470A	157729
310-99710-6	MW6	Total/NA	Ground Water	7470A	157729
310-99710-7	MW13	Total/NA	Ground Water	7470A	157729
310-99710-8	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
310-99710-2 MS	MW2	Total/NA	Ground Water	7470A	157729
310-99710-2 MSD	MW2	Total/NA	Ground Water	7470A	157729

Analysis Batch: 157957

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99710-1	MW7	Total/NA	Ground Water	6010C	157479
310-99710-2	MW2	Total/NA	Ground Water	6010C	157479
310-99710-3	MW3	Total/NA	Ground Water	6010C	157479
310-99710-4	MW4	Total/NA	Ground Water	6010C	157479
310-99710-5	MW5	Total/NA	Ground Water	6010C	157479
310-99710-6	MW6	Total/NA	Ground Water	6010C	157479
310-99710-7	MW13	Total/NA	Ground Water	6010C	157479
310-99710-8	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

Analysis Batch: 158061

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99710-1	MW7	Total/NA	Ground Water	6020A	157477
310-99710-2	MW2	Total/NA	Ground Water	6020A	157477
310-99710-3	MW3	Total/NA	Ground Water	6020A	157477
310-99710-4	MW4	Total/NA	Ground Water	6020A	157477
310-99710-5	MW5	Total/NA	Ground Water	6020A	157477
310-99710-6	MW6	Total/NA	Ground Water	6020A	157477
310-99710-7	MW13	Total/NA	Ground Water	6020A	157477
310-99710-8	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
310-99710-1 MS	MW7	Total/NA	Ground Water	6020A	157477
310-99710-1 MSD	MW7	Total/NA	Ground Water	6020A	157477

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-99710-1

Analysis Batch: 158198

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99710-1	MW7	Total/NA	Ground Water	6020A	157477
310-99710-2	MW2	Total/NA	Ground Water	6020A	157477
310-99710-3	MW3	Total/NA	Ground Water	6020A	157477
310-99710-4	MW4	Total/NA	Ground Water	6020A	157477
310-99710-5	MW5	Total/NA	Ground Water	6020A	157477
310-99710-6	MW6	Total/NA	Ground Water	6020A	157477
310-99710-7	MW13	Total/NA	Ground Water	6020A	157477
310-99710-8	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
310-99710-1 MS	MW7	Total/NA	Ground Water	6020A	157477
310-99710-1 MSD	MW7	Total/NA	Ground Water	6020A	157477

General Chemistry

Analysis Batch: 157432

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99710-1	MW7	Total/NA	Ground Water	SM 2540C	
310-99710-2	MW2	Total/NA	Ground Water	SM 2540C	
MB 310-157432/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-157432/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 157472

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99710-3	MW3	Total/NA	Ground Water	SM 2540C	
310-99710-4	MW4	Total/NA	Ground Water	SM 2540C	
310-99710-5	MW5	Total/NA	Ground Water	SM 2540C	
310-99710-6	MW6	Total/NA	Ground Water	SM 2540C	
310-99710-7	MW13	Total/NA	Ground Water	SM 2540C	
310-99710-8	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	
310-99710-3 DU	MW3	Total/NA	Ground Water	SM 2540C	

Client Sample ID: MW7

Lab Sample ID: 310-99710-1

Date Collected: 02/15/17 12:09

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	Analysis	9056A		5	157764	02/20/17 16:01	AJG	TAL CF
Total/NA	Analysis	9056A		5	157764	02/28/17 09:26	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 16:08	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 17:15	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 15:16	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 09:52	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	157432	02/17/17 08:40	SAS	TAL CF

Client Sample ID: MW2

Lab Sample ID: 310-99710-2

Date Collected: 02/15/17 11:36

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	Analysis	9056A		5	157764	02/20/17 16:33	AJG	TAL CF
Total/NA	Analysis	9056A		10	157764	02/21/17 05:40	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 16:11	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 17:27	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 15:25	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 09:54	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	157432	02/17/17 08:40	SAS	TAL CF

Client Sample ID: MW3

Lab Sample ID: 310-99710-3

Date Collected: 02/15/17 10:58

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	Analysis	9056A		5	157764	02/20/17 17:04	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 16:13	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 17:30	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 15:28	OAD	TAL CF
Total/NA	Prep	7470A			157729	02/21/17 08:43	SAD	TAL CF

Client Sample ID: MW3

Lab Sample ID: 310-99710-3

Date Collected: 02/15/17 10:58

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	Analysis	7470A		1	157886	02/22/17 10:02	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	157472	02/17/17 12:37	SAS	TAL CF

Client Sample ID: MW4

Lab Sample ID: 310-99710-4

Date Collected: 02/15/17 09:38

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	Analysis	9056A		5	157764	02/20/17 17:36	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 16:15	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 17:33	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 15:31	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 10:03	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	157472	02/17/17 12:37	SAS	TAL CF

Client Sample ID: MW5

Lab Sample ID: 310-99710-5

Date Collected: 02/15/17 10:04

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	Analysis	9056A		5	157764	02/20/17 19:10	AJG	TAL CF
Total/NA	Analysis	9056A		20	157764	02/21/17 06:11	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 16:17	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 17:37	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 15:35	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 10:05	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	157472	02/17/17 12:37	SAS	TAL CF

Client Sample ID: MW6

Lab Sample ID: 310-99710-6

Date Collected: 02/15/17 10:28

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	Analysis	9056A		5	157764	02/20/17 19:42	AJG	TAL CF

Client Sample ID: MW6

Lab Sample ID: 310-99710-6

Date Collected: 02/15/17 10:28

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	3010A			157479	02/20/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	157957	02/22/17 16:23	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 17:49	OAD	TAL CF
Total/NA	Prep	3010A			157477	02/20/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		5	158198	02/24/17 15:47	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 10:06	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	157472	02/17/17 12:37	SAS	TAL CF

Client Sample ID: MW13

Lab Sample ID: 310-99710-7

Date Collected: 02/15/17 09:06

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	Analysis	9056A		5	157764	02/20/17 20:13	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 16:25	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 17:52	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 15:50	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 10:08	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	157472	02/17/17 12:37	SAS	TAL CF

Client Sample ID: DUP

Lab Sample ID: 310-99710-8

Date Collected: 02/15/17 12:11

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	Analysis	9056A		5	157764	02/20/17 20:45	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 16:27	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 17:56	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 15:54	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 10:09	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 2 Landfill CCR

TestAmerica Job ID: 310-99710-1

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 2 Landfill CCR

TestAmerica Job ID: 310-99710-1

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 2 Landfill CCR

TestAmerica Job ID: 310-99710-1

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

310-99710 Chain of Custody
310503

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: OPPD

City/State: Omaha, NE

Project: Nebraska City Unit 2 LF

Receipt Information

Date/Time Received: 2/7/17 1000

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: AA.3

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): 6.4

Corrected Temp (°C): 6.4

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

SCH#-24161

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: 402-636-2575	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 2 Landfill CCR	TestAmerica Project #: 31007559			
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		
MW7	2/15/17	1209	G	GW	N	N	X	X	X		
MW2		1136	G	GW			X	X	X		
MW3		1058	G	GW			X	X	X		
MW4		0938	G	GW			X	X	X		
MW5		1004	G	GW			X	X	X		
MW6		1028	G	GW			X	X	X		
MW13		0906	G	GW			X	X	X		
DUP	↓	1211	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
		12/16/17 1000		Angie Mueller	12/17/17 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:

2/28/2017

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Des Moines
310503

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: OPPD

City/State: Omaha, NE | Project: Nebraska City Unit 2 LF

Receipt Information

Date/Time Received: 2/7/17 1000 | 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: J-9

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): 1.5 | Corrected Temp (°C): 1.5

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

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MW7	310-99710-A-1	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW7	310-99710-B-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW7	310-99710-C-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-99710-A-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW2	310-99710-B-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-99710-C-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW3	310-99710-A-3	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW3	310-99710-B-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW3	310-99710-C-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4	310-99710-A-4	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW4	310-99710-B-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4	310-99710-C-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW5	310-99710-A-5	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW5	310-99710-B-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW5	310-99710-C-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW6	310-99710-A-6	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW6	310-99710-B-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW6	310-99710-C-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-99710-A-7	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW13	310-99710-B-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-99710-C-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP	310-99710-A-8	Plastic 250ml - with Nitric Acid	<2	_____	_____
DUP	310-99710-B-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP	310-99710-C-8	Plastic 1 liter - Nitric Acid	<2	_____	_____

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-99710-1

Login Number: 99710

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	

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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: 310-99710-2
Client Project/Site: Nebraska City Unit 2 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 5:22:26 PM

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

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Case Narrative

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-99710-2

Job ID: 310-99710-2

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-99710-2

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 0.4º C and 1.5º 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: MW4 (310-99710-4)

Method(s) PrecSep-21: Radium 226; Prep Batch 293560 - The following sample was reduced to 500 mL due to high amounts of sediment: MW4 (310-99710-4)

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 2 Landfill CCR

TestAmerica Job ID: 310-99710-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-99710-1	MW7	Ground Water	02/15/17 12:09	02/17/17 10:00
310-99710-2	MW2	Ground Water	02/15/17 11:36	02/17/17 10:00
310-99710-3	MW3	Ground Water	02/15/17 10:58	02/17/17 10:00
310-99710-4	MW4	Ground Water	02/15/17 09:38	02/17/17 10:00
310-99710-5	MW5	Ground Water	02/15/17 10:04	02/17/17 10:00
310-99710-6	MW6	Ground Water	02/15/17 10:28	02/17/17 10:00
310-99710-7	MW13	Ground Water	02/15/17 09:06	02/17/17 10:00
310-99710-8	DUP	Ground Water	02/15/17 12:11	02/17/17 10:00

Client Sample ID: MW7
Date Collected: 02/15/17 12:09
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99710-1
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	**0.443**		0.147	0.153	1.00	0.133	pCi/L	02/21/17 09:02	03/15/17 05:02	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.2*		*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	0.302	U	0.247	0.249	1.00	0.395	pCi/L	02/21/17 09:43	03/10/17 14:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.2*		*40 - 110*	*02/21/17 09:43*	*03/10/17 14:28*	*1*
Y Carrier	*86.0*		*40 - 110*	*02/21/17 09:43*	*03/10/17 14:28*	*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**		0.288	0.292	5.00	0.395	pCi/L		03/15/17 16:45	1

Client Sample ID: MW2
Date Collected: 02/15/17 11:36
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99710-2
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	0.247		0.121	0.123	1.00	0.142	pCi/L	02/21/17 09:02	03/15/17 05:02	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.4*		*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	1.14		0.317	0.334	1.00	0.413	pCi/L	02/21/17 09:43	03/10/17 14:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.4*		*40 - 110*	*02/21/17 09:43*	*03/10/17 14:28*	*1*
Y Carrier	*85.6*		*40 - 110*	*02/21/17 09:43*	*03/10/17 14:28*	*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	1.39		0.339	0.356	5.00	0.413	pCi/L		03/15/17 16:45	1

Client Sample ID: MW3

Date Collected: 02/15/17 10:58
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99710-3

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	**0.252**		0.120	0.122	1.00	0.133	pCi/L	02/21/17 09:02	03/15/17 05:02	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.4*		*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	0.364	U	0.256	0.258	1.00	0.399	pCi/L	02/21/17 09:43	03/10/17 14:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.4*		*40 - 110*	*02/21/17 09:43*	*03/10/17 14:28*	*1*
Y Carrier	*82.2*		*40 - 110*	*02/21/17 09:43*	*03/10/17 14:28*	*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	**0.616**		0.283	0.286	5.00	0.399	pCi/L		03/15/17 16:45	1

Client Sample ID: MW4
Date Collected: 02/15/17 09:38
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99710-4
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	0.214	U	0.207	0.208	1.00	0.324	pCi/L	02/21/17 09:02	03/15/17 05:02	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.4*		*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	0.433	U	0.450	0.451	1.00	0.733	pCi/L	02/21/17 09:43	03/10/17 14:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.4*		*40 - 110*	*02/21/17 09:43*	*03/10/17 14:28*	*1*
Y Carrier	*84.9*		*40 - 110*	*02/21/17 09:43*	*03/10/17 14:28*	*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	0.647	U	0.495	0.497	5.00	0.733	pCi/L		03/15/17 16:45	1

Client Sample ID: MW5
Date Collected: 02/15/17 10:04
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99710-5
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	0.0493	U	0.0842	0.0843	1.00	0.148	pCi/L	02/21/17 09:02	03/15/17 05:02	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.3*		*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	0.0564	U	0.211	0.211	1.00	0.369	pCi/L	02/21/17 09:43	03/10/17 14:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.3*		*40 - 110*	*02/21/17 09:43*	*03/10/17 14:28*	*1*
Y Carrier	*86.7*		*40 - 110*	*02/21/17 09:43*	*03/10/17 14:28*	*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	0.106	U	0.227	0.227	5.00	0.369	pCi/L		03/15/17 16:45	1

Client Sample ID: MW6
Date Collected: 02/15/17 10:28
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99710-6
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	**0.174**		0.100	0.101	1.00	0.125	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	0.256	U	0.210	0.211	1.00	0.333	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	*86.0*		*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	**0.429**		0.233	0.234	5.00	0.333	pCi/L		03/15/17 16:45	1

Client Sample ID: MW13
Date Collected: 02/15/17 09:06
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99710-7
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	**0.320**		0.125	0.128	1.00	0.126	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	0.0870	U	0.208	0.209	1.00	0.359	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	*86.4*		*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	**0.407**		0.243	0.245	5.00	0.359	pCi/L		03/15/17 16:45	1

Client Sample ID: DUP

Date Collected: 02/15/17 12:11
Date Received: 02/17/17 10:00

Lab Sample ID: 310-99710-8

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	**0.410**		0.137	0.142	1.00	0.128	pCi/L	02/21/17 09:02	03/15/17 05:02	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*100*		*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	0.110	U	0.176	0.177	1.00	0.298	pCi/L	02/21/17 09:43	03/10/17 14:29	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*100*		*40 - 110*	*02/21/17 09:43*	*03/10/17 14:29*	*1*
Y Carrier	*87.9*		*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	**0.520**		0.223	0.226	5.00	0.298	pCi/L		03/15/17 16:45	1

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
310-99710-1	MW7	Total/NA	Ground Water	PrecSep-21	
310-99710-2	MW2	Total/NA	Ground Water	PrecSep-21	
310-99710-3	MW3	Total/NA	Ground Water	PrecSep-21	
310-99710-4	MW4	Total/NA	Ground Water	PrecSep-21	
310-99710-5	MW5	Total/NA	Ground Water	PrecSep-21	
310-99710-6	MW6	Total/NA	Ground Water	PrecSep-21	
310-99710-7	MW13	Total/NA	Ground Water	PrecSep-21	
310-99710-8	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
310-99710-1	MW7	Total/NA	Ground Water	PrecSep_0	
310-99710-2	MW2	Total/NA	Ground Water	PrecSep_0	
310-99710-3	MW3	Total/NA	Ground Water	PrecSep_0	
310-99710-4	MW4	Total/NA	Ground Water	PrecSep_0	
310-99710-5	MW5	Total/NA	Ground Water	PrecSep_0	
310-99710-6	MW6	Total/NA	Ground Water	PrecSep_0	
310-99710-7	MW13	Total/NA	Ground Water	PrecSep_0	
310-99710-8	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 2 Landfill CCR

TestAmerica Job ID: 310-99710-2

Client Sample ID: MW7

Lab Sample ID: 310-99710-1

Date Collected: 02/15/17 12:09

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 14:28	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: 310-99710-2

Date Collected: 02/15/17 11:36

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 14:28	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: 310-99710-3

Date Collected: 02/15/17 10:58

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 14:28	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	297932	03/15/17 16:45	RTM	TAL SL

Client Sample ID: MW4

Lab Sample ID: 310-99710-4

Date Collected: 02/15/17 09:38

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 14:28	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 2 Landfill CCR

TestAmerica Job ID: 310-99710-2

Client Sample ID: MW5

Lab Sample ID: 310-99710-5

Date Collected: 02/15/17 10:04
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	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 14:28	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	297932	03/15/17 16:45	RTM	TAL SL

Client Sample ID: MW6

Lab Sample ID: 310-99710-6

Date Collected: 02/15/17 10:28
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: MW13

Lab Sample ID: 310-99710-7

Date Collected: 02/15/17 09:06
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: DUP

Lab Sample ID: 310-99710-8

Date Collected: 02/15/17 12:11
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

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 2 Landfill CCR

TestAmerica Job ID: 310-99710-2

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 2 Landfill CCR

TestAmerica Job ID: 310-99710-2

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

310-99710 Chain of Custody
310503

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: OPPD

City/State: Omaha, NE

Project: Nebraska City Unit 2 LF

Receipt Information

Date/Time Received: 2/7/17 1000

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: AA.3

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): 6.4

Corrected Temp (°C): 0.4

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

Sch# - 24461

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: 402-636-2575	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 2 Landfill CCR	TestAmerica Project #: 31007559			
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		
MW7	2/15/17	1209	G	GW	N	N	X	X	X		
MW2		1136	G	GW			X	X	X		
MW3		1058	G	GW			X	X	X		
MW4		0938	G	GW			X	X	X		
MW5		1004	G	GW			X	X	X		
MW6		1028	G	GW			X	X	X		
MW13		0906	G	GW			X	X	X		
DUP	↓	1211	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		12/16/17 1000		Angie Mucking	12/17/17 10:00	TestAmerica
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:

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3/15/2017

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Des Moines

310503

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: OPPD

City/State: Omaha, NE

Project: Nebraska City Unit 2 LF

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: J-9

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): 1.5

Corrected Temp (°C): 1.5

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

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MW7	310-99710-A-1	Plastic 250ml - with Nitric Acid	<2		
MW7	310-99710-B-1	Plastic 1 liter - Nitric Acid	<2		
MW7	310-99710-C-1	Plastic 1 liter - Nitric Acid	<2		
MW2	310-99710-A-2	Plastic 250ml - with Nitric Acid	<2		
MW2	310-99710-B-2	Plastic 1 liter - Nitric Acid	<2		
MW2	310-99710-C-2	Plastic 1 liter - Nitric Acid	<2		
MW3	310-99710-A-3	Plastic 250ml - with Nitric Acid	<2		
MW3	310-99710-B-3	Plastic 1 liter - Nitric Acid	<2		
MW3	310-99710-C-3	Plastic 1 liter - Nitric Acid	<2		
MW4	310-99710-A-4	Plastic 250ml - with Nitric Acid	<2		
MW4	310-99710-B-4	Plastic 1 liter - Nitric Acid	<2		
MW4	310-99710-C-4	Plastic 1 liter - Nitric Acid	<2		
MW5	310-99710-A-5	Plastic 250ml - with Nitric Acid	<2		
MW5	310-99710-B-5	Plastic 1 liter - Nitric Acid	<2		
MW5	310-99710-C-5	Plastic 1 liter - Nitric Acid	<2		
MW6	310-99710-A-6	Plastic 250ml - with Nitric Acid	<2		
MW6	310-99710-B-6	Plastic 1 liter - Nitric Acid	<2		
MW6	310-99710-C-6	Plastic 1 liter - Nitric Acid	<2		
MW13	310-99710-A-7	Plastic 250ml - with Nitric Acid	<2		
MW13	310-99710-B-7	Plastic 1 liter - Nitric Acid	<2		
MW13	310-99710-C-7	Plastic 1 liter - Nitric Acid	<2		
DUP	310-99710-A-8	Plastic 250ml - with Nitric Acid	<2		
DUP	310-99710-B-8	Plastic 1 liter - Nitric Acid	<2		
DUP	310-99710-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

310-99710 Chain of Custody

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Hayes, Shawn M		No: 3554.1
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 #: 310-99710-2
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 2 Landfill CCR	Project #: 31007559			
Site: 310 OPPD Nebraska City Unit 2	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:								
MW7 (310-99710-1)	2/15/17	12:09 Central		Water			X	X	X	2	
MW2 (310-99710-2)	2/15/17	11:36 Central		Water			X	X	X	2	
MW3 (310-99710-3)	2/15/17	10:58 Central		Water			X	X	X	2	
MW4 (310-99710-4)	2/15/17	09:38 Central		Water			X	X	X	2	
MW5 (310-99710-5)	2/15/17	10:04 Central		Water			X	X	X	2	
MW6 (310-99710-6)	2/15/17	10:28 Central		Water			X	X	X	2	
MW13 (310-99710-7)	2/15/17	09:06 Central		Water			X	X	X	2	
DUP (310-99710-8)	2/15/17	12:11 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. Delk	Date/Time: 2/17/17 1502	Company	Received by: Jill Clark	Date/Time: 2-20-17 1000	Company TASTL
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: 310-99710-2

Login Number: 99710

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: 310-99710-2

Login Number: 99710
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 2 Landfill CCR

TestAmerica Job ID: 310-99710-2

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)
310-99710-1	MW7	98.2
310-99710-2	MW2	94.4
310-99710-3	MW3	91.4
310-99710-4	MW4	89.4
310-99710-5	MW5	90.3
310-99710-6	MW6	97.1
310-99710-7	MW13	97.1
310-99710-8	DUP	100

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)
310-99710-1	MW7	98.2	86.0
310-99710-2	MW2	94.4	85.6
310-99710-3	MW3	91.4	82.2
310-99710-4	MW4	89.4	84.9
310-99710-5	MW5	90.3	86.7
310-99710-6	MW6	97.1	86.0
310-99710-7	MW13	97.1	86.4
310-99710-8	DUP	100	87.9

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Tracer/Carrier Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-99710-2

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: 310-104571-1
Client Project/Site: Nebraska City Unit 2 Landfill
Sampling Event: CCR and Landfill Parameters 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:
5/16/2017 1:38:20 PM

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

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Case Narrative

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-104571-1

Job ID: 310-104571-1

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-104571-1

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 5.6º C and 6.0º 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 2 Landfill

TestAmerica Job ID: 310-104571-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-104571-1	MW7	Ground Water	04/24/17 13:34	04/28/17 09:30
310-104571-2	MW2	Ground Water	04/24/17 12:45	04/28/17 09:30
310-104571-3	MW3	Ground Water	04/24/17 11:58	04/28/17 09:30
310-104571-4	MW4	Ground Water	04/24/17 10:00	04/28/17 09:30
310-104571-5	MW5	Ground Water	04/24/17 10:36	04/28/17 09:30
310-104571-6	MW6	Ground Water	04/24/17 11:10	04/28/17 09:30
310-104571-7	MW13	Ground Water	04/24/17 09:36	04/28/17 09:30
310-104571-8	DUP	Ground Water	04/24/17 12:47	04/28/17 09:30

Detection Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-104571-1

Client Sample ID: MW7 — Lab Sample ID: 310-104571-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	11.3		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.35		0.500		mg/L	5		9056A	Total/NA
Lithium	0.0624		0.0500		mg/L	1		6010C	Total/NA
Arsenic	0.0592		0.00200		mg/L	1		6020A	Total/NA
Barium	0.614		0.00200		mg/L	1		6020A	Total/NA
Calcium	139		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000629		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	576		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW2 — Lab Sample ID: 310-104571-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.40		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.38		0.500		mg/L	5		9056A	Total/NA
Sulfate	135		5.00		mg/L	5		9056A	Total/NA
Antimony	0.00303		0.00100		mg/L	1		6020A	Total/NA
Barium	0.0760		0.00200		mg/L	1		6020A	Total/NA
Boron	0.264		0.200		mg/L	1		6020A	Total/NA
Calcium	158		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.0158		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	652		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW3 — Lab Sample ID: 310-104571-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.00		5.00		mg/L	5		9056A	Total/NA
Fluoride	2.87		0.500		mg/L	5		9056A	Total/NA
Sulfate	10.5		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.00892		0.00200		mg/L	1		6020A	Total/NA
Barium	0.174		0.00200		mg/L	1		6020A	Total/NA
Calcium	63.3		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.00216		0.000500		mg/L	1		6020A	Total/NA
Lead	0.000691		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00677		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	324		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW4 — Lab Sample ID: 310-104571-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	1.08		0.500		mg/L	5		9056A	Total/NA
Sulfate	38.6		5.00		mg/L	5		9056A	Total/NA
Barium	0.287		0.00200		mg/L	1		6020A	Total/NA
Calcium	126		0.200		mg/L	1		6020A	Total/NA
Lead	0.000802		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00422		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	574		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW5 — Lab Sample ID: 310-104571-5

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-104571-1

Client Sample ID: MW5 (Continued) — Lab Sample ID: 310-104571-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	12.5		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.25		0.500		mg/L	5		9056A	Total/NA
Sulfate	331		20.0		mg/L	20		9056A	Total/NA
Arsenic	0.00236		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0366		0.00200		mg/L	1		6020A	Total/NA
Boron	2.85		0.200		mg/L	1		6020A	Total/NA
Calcium	183		0.200		mg/L	1		6020A	Total/NA
Lead	0.000734		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.0125		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1060		60.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW6 — Lab Sample ID: 310-104571-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	10.2		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.71		0.500		mg/L	5		9056A	Total/NA
Sulfate	99.1		5.00		mg/L	5		9056A	Total/NA
Barium	0.0791		0.00200		mg/L	1		6020A	Total/NA
Boron	3.08		0.200		mg/L	1		6020A	Total/NA
Calcium	96.5		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.0410		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	530		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW13 — Lab Sample ID: 310-104571-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	12.0		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.789		0.500		mg/L	5		9056A	Total/NA
Sulfate	39.5		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.00240		0.00200		mg/L	1		6020A	Total/NA
Barium	0.336		0.00200		mg/L	1		6020A	Total/NA
Calcium	94.1		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.00135		0.000500		mg/L	1		6020A	Total/NA
Lead	0.000516		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	520		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP — Lab Sample ID: 310-104571-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.813		0.500		mg/L	5		9056A	Total/NA
Sulfate	132		5.00		mg/L	5		9056A	Total/NA
Antimony	0.00308		0.00100		mg/L	1		6020A	Total/NA
Barium	0.0767		0.00200		mg/L	1		6020A	Total/NA
Boron	0.263		0.200		mg/L	1		6020A	Total/NA
Calcium	158		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.0150		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	648		30.0		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW7

Date Collected: 04/24/17 13:34
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104571-1

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**11.3**		5.00		mg/L			05/03/17 22:45	5
Fluoride	**1.35**		0.500		mg/L			05/03/17 22:45	5
Sulfate	<5.00		5.00		mg/L			05/03/17 22:45	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	**0.0624**		0.0500		mg/L		05/03/17 07:51	05/04/17 17:34	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		05/02/17 10:00	05/10/17 13:42	1
Arsenic	**0.0592**		0.00200		mg/L		05/02/17 10:00	05/10/17 13:42	1
Barium	**0.614**		0.00200		mg/L		05/02/17 10:00	05/10/17 13:42	1
Beryllium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/10/17 13:42	1
Boron	<0.200		0.200		mg/L		05/02/17 10:00	05/10/17 13:42	1
Cadmium	<0.000500		0.000500		mg/L		05/02/17 10:00	05/10/17 13:42	1
Calcium	**139**		0.200		mg/L		05/02/17 10:00	05/10/17 13:42	1
Chromium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/10/17 13:42	1
Cobalt	**0.000629**		0.000500		mg/L		05/02/17 10:00	05/10/17 13:42	1
Lead	<0.000500		0.000500		mg/L		05/02/17 10:00	05/10/17 13:42	1
Molybdenum	<0.00200		0.00200		mg/L		05/02/17 10:00	05/10/17 13:42	1
Selenium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/10/17 13:42	1
Thallium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/10/17 13:42	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 12:25	05/03/17 11:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**576**		30.0		mg/L			04/29/17 08:01	1

Client Sample ID: MW2
Date Collected: 04/24/17 12:45
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104571-2
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5.40**		5.00		mg/L			05/03/17 23:00	5
Fluoride	**1.38**		0.500		mg/L			05/03/17 23:00	5
Sulfate	**135**		5.00		mg/L			05/03/17 23:00	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 07:51	05/04/17 17:40	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.00303**		0.00100		mg/L		05/02/17 10:00	05/10/17 14:11	1
Arsenic	<0.00200		0.00200		mg/L		05/02/17 10:00	05/10/17 14:11	1
Barium	**0.0760**		0.00200		mg/L		05/02/17 10:00	05/10/17 14:11	1
Beryllium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/10/17 14:11	1
Boron	**0.264**		0.200		mg/L		05/02/17 10:00	05/10/17 14:11	1
Cadmium	<0.000500		0.000500		mg/L		05/02/17 10:00	05/10/17 14:11	1
Calcium	**158**		0.200		mg/L		05/02/17 10:00	05/10/17 14:11	1
Chromium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/10/17 14:11	1
Cobalt	<0.000500		0.000500		mg/L		05/02/17 10:00	05/10/17 14:11	1
Lead	<0.000500		0.000500		mg/L		05/02/17 10:00	05/10/17 14:11	1
Molybdenum	**0.0158**		0.00200		mg/L		05/02/17 10:00	05/10/17 14:11	1
Selenium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/10/17 14:11	1
Thallium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/10/17 14:11	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 12:25	05/03/17 11:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**652**		30.0		mg/L			04/29/17 08:01	1

Client Sample ID: MW3

Date Collected: 04/24/17 11:58
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104571-3

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			05/03/17 23:30	5
Fluoride	**2.87**		0.500		mg/L			05/03/17 23:30	5
Sulfate	**10.5**		5.00		mg/L			05/03/17 23:30	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 07:51	05/04/17 17:42	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	05/10/17 14:14	1
Arsenic	**0.00892**		0.00200		mg/L		05/02/17 10:00	05/10/17 14:14	1
Barium	**0.174**		0.00200		mg/L		05/02/17 10:00	05/10/17 14:14	1
Beryllium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/10/17 14:14	1
Boron	<0.200		0.200		mg/L		05/02/17 10:00	05/10/17 14:14	1
Cadmium	<0.000500		0.000500		mg/L		05/02/17 10:00	05/10/17 14:14	1
Calcium	**63.3**		0.200		mg/L		05/02/17 10:00	05/10/17 14:14	1
Chromium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/10/17 14:14	1
Cobalt	**0.00216**		0.000500		mg/L		05/02/17 10:00	05/10/17 14:14	1
Lead	**0.000691**		0.000500		mg/L		05/02/17 10:00	05/10/17 14:14	1
Molybdenum	**0.00677**		0.00200		mg/L		05/02/17 10:00	05/10/17 14:14	1
Selenium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/10/17 14:14	1
Thallium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/10/17 14:14	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 12:25	05/03/17 11:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**324**		30.0		mg/L			04/29/17 08:01	1

Client Sample ID: MW4

Date Collected: 04/24/17 10:00
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104571-4

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			05/03/17 23:45	5
Fluoride	**1.08**		0.500		mg/L			05/03/17 23:45	5
Sulfate	**38.6**		5.00		mg/L			05/03/17 23:45	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 07:51	05/04/17 17:44	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	05/10/17 14:21	1
Arsenic	<0.00200		0.00200		mg/L		05/02/17 10:00	05/10/17 14:21	1
Barium	**0.287**		0.00200		mg/L		05/02/17 10:00	05/10/17 14:21	1
Beryllium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/10/17 14:21	1
Boron	<0.200		0.200		mg/L		05/02/17 10:00	05/10/17 14:21	1
Cadmium	<0.000500		0.000500		mg/L		05/02/17 10:00	05/10/17 14:21	1
Calcium	**126**		0.200		mg/L		05/02/17 10:00	05/10/17 14:21	1
Chromium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/10/17 14:21	1
Cobalt	<0.000500		0.000500		mg/L		05/02/17 10:00	05/10/17 14:21	1
Lead	**0.000802**		0.000500		mg/L		05/02/17 10:00	05/10/17 14:21	1
Molybdenum	**0.00422**		0.00200		mg/L		05/02/17 10:00	05/10/17 14:21	1
Selenium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/10/17 14:21	1
Thallium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/10/17 14:21	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 12:25	05/03/17 11:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**574**		30.0		mg/L			04/29/17 08:01	1

Client Sample ID: MW5

Date Collected: 04/24/17 10:36
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104571-5

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			05/04/17 00:30	5
Fluoride	**1.25**		0.500		mg/L			05/04/17 00:30	5
Sulfate	**331**		20.0		mg/L			05/04/17 00:45	20

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 07:51	05/04/17 17:46	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	05/10/17 14:24	1
Arsenic	**0.00236**		0.00200		mg/L		05/02/17 10:00	05/10/17 14:24	1
Barium	**0.0366**		0.00200		mg/L		05/02/17 10:00	05/10/17 14:24	1
Beryllium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/10/17 14:24	1
Boron	**2.85**		0.200		mg/L		05/02/17 10:00	05/10/17 14:24	1
Cadmium	<0.000500		0.000500		mg/L		05/02/17 10:00	05/10/17 14:24	1
Calcium	**183**		0.200		mg/L		05/02/17 10:00	05/10/17 14:24	1
Chromium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/10/17 14:24	1
Cobalt	<0.000500		0.000500		mg/L		05/02/17 10:00	05/10/17 14:24	1
Lead	**0.000734**		0.000500		mg/L		05/02/17 10:00	05/10/17 14:24	1
Molybdenum	**0.0125**		0.00200		mg/L		05/02/17 10:00	05/10/17 14:24	1
Selenium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/10/17 14:24	1
Thallium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/10/17 14:24	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 12:25	05/03/17 11:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1060**		60.0		mg/L			04/29/17 08:01	1

Client Sample ID: MW6

Date Collected: 04/24/17 11:10
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104571-6

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10.2**		5.00		mg/L			05/04/17 01:00	5
Fluoride	**1.71**		0.500		mg/L			05/04/17 01:00	5
Sulfate	**99.1**		5.00		mg/L			05/04/17 01:00	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 07:51	05/04/17 17:48	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		05/02/17 10:00	05/10/17 14:27	1
Arsenic	<0.00200		0.00200		mg/L		05/02/17 10:00	05/10/17 14:27	1
Barium	**0.0791**		0.00200		mg/L		05/02/17 10:00	05/10/17 14:27	1
Beryllium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/10/17 14:27	1
Boron	**3.08**		0.200		mg/L		05/02/17 10:00	05/10/17 14:27	1
Cadmium	<0.000500		0.000500		mg/L		05/02/17 10:00	05/10/17 14:27	1
Calcium	**96.5**		0.200		mg/L		05/02/17 10:00	05/10/17 14:27	1
Chromium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/10/17 14:27	1
Cobalt	<0.000500		0.000500		mg/L		05/02/17 10:00	05/10/17 14:27	1
Lead	<0.000500		0.000500		mg/L		05/02/17 10:00	05/10/17 14:27	1
Molybdenum	**0.0410**		0.00200		mg/L		05/02/17 10:00	05/10/17 14:27	1
Selenium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/10/17 14:27	1
Thallium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/10/17 14:27	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 12:25	05/03/17 12:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**530**		30.0		mg/L			04/29/17 08:01	1

Client Sample ID: MW13

Date Collected: 04/24/17 09:36
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104571-7

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**12.0**		5.00		mg/L			05/04/17 01:15	5
Fluoride	**0.789**		0.500		mg/L			05/04/17 01:15	5
Sulfate	**39.5**		5.00		mg/L			05/04/17 01:15	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 07:51	05/04/17 17:50	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	05/10/17 14:30	1
Arsenic	**0.00240**		0.00200		mg/L		05/02/17 10:00	05/10/17 14:30	1
Barium	**0.336**		0.00200		mg/L		05/02/17 10:00	05/10/17 14:30	1
Beryllium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/10/17 14:30	1
Boron	<0.200		0.200		mg/L		05/02/17 10:00	05/10/17 14:30	1
Cadmium	<0.000500		0.000500		mg/L		05/02/17 10:00	05/10/17 14:30	1
Calcium	**94.1**		0.200		mg/L		05/02/17 10:00	05/10/17 14:30	1
Chromium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/10/17 14:30	1
Cobalt	**0.00135**		0.000500		mg/L		05/02/17 10:00	05/10/17 14:30	1
Lead	**0.000516**		0.000500		mg/L		05/02/17 10:00	05/10/17 14:30	1
Molybdenum	<0.00200		0.00200		mg/L		05/02/17 10:00	05/10/17 14:30	1
Selenium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/10/17 14:30	1
Thallium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/10/17 14:30	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 12:25	05/03/17 12:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**520**		30.0		mg/L			04/29/17 08:01	1

Client Sample ID: DUP

Date Collected: 04/24/17 12:47
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104571-8

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			05/04/17 01:30	5
Fluoride	**0.813**		0.500		mg/L			05/04/17 01:30	5
Sulfate	**132**		5.00		mg/L			05/04/17 01:30	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 07:51	05/04/17 17:55	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.00308**		0.00100		mg/L		05/02/17 10:00	05/10/17 14:43	1
Arsenic	<0.00200		0.00200		mg/L		05/02/17 10:00	05/10/17 14:43	1
Barium	**0.0767**		0.00200		mg/L		05/02/17 10:00	05/10/17 14:43	1
Beryllium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/10/17 14:43	1
Boron	**0.263**		0.200		mg/L		05/02/17 10:00	05/10/17 14:43	1
Cadmium	<0.000500		0.000500		mg/L		05/02/17 10:00	05/10/17 14:43	1
Calcium	**158**		0.200		mg/L		05/02/17 10:00	05/10/17 14:43	1
Chromium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/10/17 14:43	1
Cobalt	<0.000500		0.000500		mg/L		05/02/17 10:00	05/10/17 14:43	1
Lead	<0.000500		0.000500		mg/L		05/02/17 10:00	05/10/17 14:43	1
Molybdenum	**0.0150**		0.00200		mg/L		05/02/17 10:00	05/10/17 14:43	1
Selenium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/10/17 14:43	1
Thallium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/10/17 14:43	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 12:25	05/03/17 12:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**648**		30.0		mg/L			04/29/17 08:01	1

Definitions/Glossary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-104571-1

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 310-165223/3
Matrix: Water
Analysis Batch: 165223

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			05/03/17 18:30	1
Fluoride	<0.100		0.100		mg/L			05/03/17 18:30	1
Sulfate	<1.00		1.00		mg/L			05/03/17 18:30	1

Lab Sample ID: LCS 310-165223/4
Matrix: Water
Analysis Batch: 165223

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	7.529		mg/L		100	90 - 110
Fluoride	1.50	1.421		mg/L		95	90 - 110
Sulfate	7.50	7.668		mg/L		102	90 - 110

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 310-164977/1-A
Matrix: Water
Analysis Batch: 165335

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 164977

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		05/03/17 07:46	05/04/17 17:16	1

Lab Sample ID: LCS 310-164977/2-A
Matrix: Water
Analysis Batch: 165335

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 164977

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	2.00	1.949		mg/L		97	80 - 120

Lab Sample ID: 310-104571-7 DU
Matrix: Ground Water
Analysis Batch: 165335

Client Sample ID: MW13
Prep Type: Total/NA
Prep Batch: 164977

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 310-164787/1-A
Matrix: Water
Analysis Batch: 165981

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 164787

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	05/10/17 13:36	1
Arsenic	<0.00200		0.00200		mg/L		05/02/17 10:00	05/10/17 13:36	1
Barium	<0.00200		0.00200		mg/L		05/02/17 10:00	05/10/17 13:36	1
Beryllium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/10/17 13:36	1
Boron	<0.200		0.200		mg/L		05/02/17 10:00	05/10/17 13:36	1
Cadmium	<0.000500		0.000500		mg/L		05/02/17 10:00	05/10/17 13:36	1

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

Lab Sample ID: MB 310-164787/1-A
Matrix: Water
Analysis Batch: 165981

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 164787

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	<0.200		0.200		mg/L		05/02/17 10:00	05/10/17 13:36	1
Chromium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/10/17 13:36	1
Cobalt	<0.000500		0.000500		mg/L		05/02/17 10:00	05/10/17 13:36	1
Lead	<0.000500		0.000500		mg/L		05/02/17 10:00	05/10/17 13:36	1
Molybdenum	<0.00200		0.00200		mg/L		05/02/17 10:00	05/10/17 13:36	1
Selenium	<0.00500		0.00500		mg/L		05/02/17 10:00	05/10/17 13:36	1
Thallium	<0.00100		0.00100		mg/L		05/02/17 10:00	05/10/17 13:36	1

Lab Sample ID: LCS 310-164787/2-A
Matrix: Water
Analysis Batch: 165981

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 164787

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0200	0.02094		mg/L		105	80 - 120
Arsenic	0.0400	0.04231		mg/L		106	80 - 120
Barium	0.0400	0.04458		mg/L		111	80 - 120
Beryllium	0.0200	0.02193		mg/L		110	80 - 120
Boron	0.880	0.8700		mg/L		99	80 - 120
Cadmium	0.0200	0.02199		mg/L		110	80 - 120
Calcium	2.00	2.168		mg/L		108	80 - 120
Chromium	0.0400	0.04277		mg/L		107	80 - 120
Cobalt	0.0200	0.02207		mg/L		110	80 - 120
Lead	0.0200	0.02169		mg/L		108	80 - 120
Molybdenum	0.0400	0.04158		mg/L		104	80 - 120
Selenium	0.0400	0.04213		mg/L		105	80 - 120
Thallium	0.0160	0.01848		mg/L		115	80 - 120

Lab Sample ID: 310-104571-1 MS
Matrix: Ground Water
Analysis Batch: 165981

Client Sample ID: MW7
Prep Type: Total/NA
Prep Batch: 164787

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.00100		0.0200	0.02028		mg/L		101	75 - 125
Arsenic	0.0592		0.0400	0.09820		mg/L		98	75 - 125
Barium	0.614		0.0400	0.6413	4	mg/L		67	75 - 125
Beryllium	<0.00100		0.0200	0.02116		mg/L		106	75 - 125
Boron	<0.200		0.880	1.002		mg/L		96	75 - 125
Cadmium	<0.000500		0.0200	0.02142		mg/L		107	75 - 125
Calcium	139		2.00	137.6	4	mg/L		-51	75 - 125
Chromium	<0.00500		0.0400	0.04100		mg/L		103	75 - 125
Cobalt	0.000629		0.0200	0.02139		mg/L		104	75 - 125
Lead	<0.000500		0.0200	0.02172		mg/L		109	75 - 125
Molybdenum	<0.00200		0.0400	0.04424		mg/L		106	75 - 125
Selenium	<0.00500		0.0400	0.04139		mg/L		103	75 - 125
Thallium	<0.00100		0.0160	0.01799		mg/L		112	75 - 125

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

Lab Sample ID: 310-104571-1 MSD
Matrix: Ground Water
Analysis Batch: 165981

Client Sample ID: MW7
Prep Type: Total/NA
Prep Batch: 164787

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	<0.00100		0.0200	0.02012		mg/L		101	75 - 125	1	20
Arsenic	0.0592		0.0400	0.09792		mg/L		97	75 - 125	0	20
Barium	0.614		0.0400	0.6351	4	mg/L		52	75 - 125	1	20
Beryllium	<0.00100		0.0200	0.02074		mg/L		104	75 - 125	2	20
Boron	<0.200		0.880	1.003		mg/L		96	75 - 125	0	20
Cadmium	<0.000500		0.0200	0.02117		mg/L		106	75 - 125	1	20
Calcium	139		2.00	135.3	4	mg/L		-166	75 - 125	2	20
Chromium	<0.00500		0.0400	0.04072		mg/L		102	75 - 125	1	20
Cobalt	0.000629		0.0200	0.02089		mg/L		101	75 - 125	2	20
Lead	<0.000500		0.0200	0.02267		mg/L		113	75 - 125	4	20
Molybdenum	<0.00200		0.0400	0.04382		mg/L		105	75 - 125	1	20
Selenium	<0.00500		0.0400	0.04143		mg/L		104	75 - 125	0	20
Thallium	<0.00100		0.0160	0.01770		mg/L		111	75 - 125	2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-164903/1-A
Matrix: Water
Analysis Batch: 165078

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 164903

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		05/02/17 12:25	05/03/17 11:21	1

Lab Sample ID: LCS 310-164903/2-A
Matrix: Water
Analysis Batch: 165078

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 164903

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00167	0.001425		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

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

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

Lab Sample ID: 310-104571-1 DU
Matrix: Ground Water
Analysis Batch: 164691

Client Sample ID: MW7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	576			584.0		mg/L				1	24

HPLC/IC

Analysis Batch: 165223

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-104571-1	MW7	Total/NA	Ground Water	9056A	
310-104571-2	MW2	Total/NA	Ground Water	9056A	
310-104571-3	MW3	Total/NA	Ground Water	9056A	
310-104571-4	MW4	Total/NA	Ground Water	9056A	
310-104571-5	MW5	Total/NA	Ground Water	9056A	
310-104571-5	MW5	Total/NA	Ground Water	9056A	
310-104571-6	MW6	Total/NA	Ground Water	9056A	
310-104571-7	MW13	Total/NA	Ground Water	9056A	
310-104571-8	DUP	Total/NA	Ground Water	9056A	
MB 310-165223/3	Method Blank	Total/NA	Water	9056A	
LCS 310-165223/4	Lab Control Sample	Total/NA	Water	9056A	

Metals

Prep Batch: 164787

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-104571-1	MW7	Total/NA	Ground Water	3010A	
310-104571-2	MW2	Total/NA	Ground Water	3010A	
310-104571-3	MW3	Total/NA	Ground Water	3010A	
310-104571-4	MW4	Total/NA	Ground Water	3010A	
310-104571-5	MW5	Total/NA	Ground Water	3010A	
310-104571-6	MW6	Total/NA	Ground Water	3010A	
310-104571-7	MW13	Total/NA	Ground Water	3010A	
310-104571-8	DUP	Total/NA	Ground Water	3010A	
MB 310-164787/1-A	Method Blank	Total/NA	Water	3010A	
LCS 310-164787/2-A	Lab Control Sample	Total/NA	Water	3010A	
310-104571-1 MS	MW7	Total/NA	Ground Water	3010A	
310-104571-1 MSD	MW7	Total/NA	Ground Water	3010A	

Prep Batch: 164903

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-104571-1	MW7	Total/NA	Ground Water	7470A	
310-104571-2	MW2	Total/NA	Ground Water	7470A	
310-104571-3	MW3	Total/NA	Ground Water	7470A	
310-104571-4	MW4	Total/NA	Ground Water	7470A	
310-104571-5	MW5	Total/NA	Ground Water	7470A	
310-104571-6	MW6	Total/NA	Ground Water	7470A	
310-104571-7	MW13	Total/NA	Ground Water	7470A	
310-104571-8	DUP	Total/NA	Ground Water	7470A	
MB 310-164903/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-164903/2-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 164977

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-104571-1	MW7	Total/NA	Ground Water	3010A	
310-104571-2	MW2	Total/NA	Ground Water	3010A	
310-104571-3	MW3	Total/NA	Ground Water	3010A	
310-104571-4	MW4	Total/NA	Ground Water	3010A	
310-104571-5	MW5	Total/NA	Ground Water	3010A	
310-104571-6	MW6	Total/NA	Ground Water	3010A	

Metals (Continued)

Prep Batch: 164977 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-104571-7	MW13	Total/NA	Ground Water	3010A	
310-104571-8	DUP	Total/NA	Ground Water	3010A	
MB 310-164977/1-A	Method Blank	Total/NA	Water	3010A	
LCS 310-164977/2-A	Lab Control Sample	Total/NA	Water	3010A	
310-104571-7 DU	MW13	Total/NA	Ground Water	3010A	

Analysis Batch: 165078

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-104571-1	MW7	Total/NA	Ground Water	7470A	164903
310-104571-2	MW2	Total/NA	Ground Water	7470A	164903
310-104571-3	MW3	Total/NA	Ground Water	7470A	164903
310-104571-4	MW4	Total/NA	Ground Water	7470A	164903
310-104571-5	MW5	Total/NA	Ground Water	7470A	164903
310-104571-6	MW6	Total/NA	Ground Water	7470A	164903
310-104571-7	MW13	Total/NA	Ground Water	7470A	164903
310-104571-8	DUP	Total/NA	Ground Water	7470A	164903
MB 310-164903/1-A	Method Blank	Total/NA	Water	7470A	164903
LCS 310-164903/2-A	Lab Control Sample	Total/NA	Water	7470A	164903

Analysis Batch: 165335

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-104571-1	MW7	Total/NA	Ground Water	6010C	164977
310-104571-2	MW2	Total/NA	Ground Water	6010C	164977
310-104571-3	MW3	Total/NA	Ground Water	6010C	164977
310-104571-4	MW4	Total/NA	Ground Water	6010C	164977
310-104571-5	MW5	Total/NA	Ground Water	6010C	164977
310-104571-6	MW6	Total/NA	Ground Water	6010C	164977
310-104571-7	MW13	Total/NA	Ground Water	6010C	164977
310-104571-8	DUP	Total/NA	Ground Water	6010C	164977
MB 310-164977/1-A	Method Blank	Total/NA	Water	6010C	164977
LCS 310-164977/2-A	Lab Control Sample	Total/NA	Water	6010C	164977
310-104571-7 DU	MW13	Total/NA	Ground Water	6010C	164977

Analysis Batch: 165981

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-104571-1	MW7	Total/NA	Ground Water	6020A	164787
310-104571-2	MW2	Total/NA	Ground Water	6020A	164787
310-104571-3	MW3	Total/NA	Ground Water	6020A	164787
310-104571-4	MW4	Total/NA	Ground Water	6020A	164787
310-104571-5	MW5	Total/NA	Ground Water	6020A	164787
310-104571-6	MW6	Total/NA	Ground Water	6020A	164787
310-104571-7	MW13	Total/NA	Ground Water	6020A	164787
310-104571-8	DUP	Total/NA	Ground Water	6020A	164787
MB 310-164787/1-A	Method Blank	Total/NA	Water	6020A	164787
LCS 310-164787/2-A	Lab Control Sample	Total/NA	Water	6020A	164787
310-104571-1 MS	MW7	Total/NA	Ground Water	6020A	164787
310-104571-1 MSD	MW7	Total/NA	Ground Water	6020A	164787

QC Association Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-104571-1

General Chemistry

Analysis Batch: 164691

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-104571-1	MW7	Total/NA	Ground Water	SM 2540C	
310-104571-2	MW2	Total/NA	Ground Water	SM 2540C	
310-104571-3	MW3	Total/NA	Ground Water	SM 2540C	
310-104571-4	MW4	Total/NA	Ground Water	SM 2540C	
310-104571-5	MW5	Total/NA	Ground Water	SM 2540C	
310-104571-6	MW6	Total/NA	Ground Water	SM 2540C	
310-104571-7	MW13	Total/NA	Ground Water	SM 2540C	
310-104571-8	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	
310-104571-1 DU	MW7	Total/NA	Ground Water	SM 2540C	

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill

TestAmerica Job ID: 310-104571-1

Client Sample ID: MW7

Date Collected: 04/24/17 13:34
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104571-1

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	165223	05/03/17 22:45	SAD	TAL CF
Total/NA	Prep	3010A			164977	05/03/17 07:51	JNR	TAL CF
Total/NA	Analysis	6010C		1	165335	05/04/17 17:34	OAD	TAL CF
Total/NA	Prep	3010A			164787	05/02/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	165981	05/10/17 13:42	OAD	TAL CF
Total/NA	Prep	7470A			164903	05/02/17 12:25	SAD	TAL CF
Total/NA	Analysis	7470A		1	165078	05/03/17 11:50	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	164691	04/29/17 08:01	SAS	TAL CF

Client Sample ID: MW2

Date Collected: 04/24/17 12:45
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104571-2

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	165223	05/03/17 23:00	SAD	TAL CF
Total/NA	Prep	3010A			164977	05/03/17 07:51	JNR	TAL CF
Total/NA	Analysis	6010C		1	165335	05/04/17 17:40	OAD	TAL CF
Total/NA	Prep	3010A			164787	05/02/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	165981	05/10/17 14:11	OAD	TAL CF
Total/NA	Prep	7470A			164903	05/02/17 12:25	SAD	TAL CF
Total/NA	Analysis	7470A		1	165078	05/03/17 11:51	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	164691	04/29/17 08:01	SAS	TAL CF

Client Sample ID: MW3

Date Collected: 04/24/17 11:58
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104571-3

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	165223	05/03/17 23:30	SAD	TAL CF
Total/NA	Prep	3010A			164977	05/03/17 07:51	JNR	TAL CF
Total/NA	Analysis	6010C		1	165335	05/04/17 17:42	OAD	TAL CF
Total/NA	Prep	3010A			164787	05/02/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	165981	05/10/17 14:14	OAD	TAL CF
Total/NA	Prep	7470A			164903	05/02/17 12:25	SAD	TAL CF
Total/NA	Analysis	7470A		1	165078	05/03/17 11:56	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 2 Landfill

TestAmerica Job ID: 310-104571-1

Client Sample ID: MW4

Date Collected: 04/24/17 10:00
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104571-4

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	165223	05/03/17 23:45	SAD	TAL CF
Total/NA	Prep	3010A			164977	05/03/17 07:51	JNR	TAL CF
Total/NA	Analysis	6010C		1	165335	05/04/17 17:44	OAD	TAL CF
Total/NA	Prep	3010A			164787	05/02/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	165981	05/10/17 14:21	OAD	TAL CF
Total/NA	Prep	7470A			164903	05/02/17 12:25	SAD	TAL CF
Total/NA	Analysis	7470A		1	165078	05/03/17 11:58	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	164691	04/29/17 08:01	SAS	TAL CF

Client Sample ID: MW5

Date Collected: 04/24/17 10:36
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104571-5

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	165223	05/04/17 00:30	SAD	TAL CF
Total/NA	Analysis	9056A		20	165223	05/04/17 00:45	SAD	TAL CF
Total/NA	Prep	3010A			164977	05/03/17 07:51	JNR	TAL CF
Total/NA	Analysis	6010C		1	165335	05/04/17 17:46	OAD	TAL CF
Total/NA	Prep	3010A			164787	05/02/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	165981	05/10/17 14:24	OAD	TAL CF
Total/NA	Prep	7470A			164903	05/02/17 12:25	SAD	TAL CF
Total/NA	Analysis	7470A		1	165078	05/03/17 11:59	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	164691	04/29/17 08:01	SAS	TAL CF

Client Sample ID: MW6

Date Collected: 04/24/17 11:10
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104571-6

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	165223	05/04/17 01:00	SAD	TAL CF
Total/NA	Prep	3010A			164977	05/03/17 07:51	JNR	TAL CF
Total/NA	Analysis	6010C		1	165335	05/04/17 17:48	OAD	TAL CF
Total/NA	Prep	3010A			164787	05/02/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	165981	05/10/17 14:27	OAD	TAL CF
Total/NA	Prep	7470A			164903	05/02/17 12:25	SAD	TAL CF
Total/NA	Analysis	7470A		1	165078	05/03/17 12:01	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 2 Landfill

TestAmerica Job ID: 310-104571-1

Client Sample ID: MW13

Date Collected: 04/24/17 09:36
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104571-7

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	165223	05/04/17 01:15	SAD	TAL CF
Total/NA	Prep	3010A			164977	05/03/17 07:51	JNR	TAL CF
Total/NA	Analysis	6010C		1	165335	05/04/17 17:50	OAD	TAL CF
Total/NA	Prep	3010A			164787	05/02/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	165981	05/10/17 14:30	OAD	TAL CF
Total/NA	Prep	7470A			164903	05/02/17 12:25	SAD	TAL CF
Total/NA	Analysis	7470A		1	165078	05/03/17 12:02	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	164691	04/29/17 08:01	SAS	TAL CF

Client Sample ID: DUP

Date Collected: 04/24/17 12:47
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104571-8

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	165223	05/04/17 01:30	SAD	TAL CF
Total/NA	Prep	3010A			164977	05/03/17 07:51	JNR	TAL CF
Total/NA	Analysis	6010C		1	165335	05/04/17 17:55	OAD	TAL CF
Total/NA	Prep	3010A			164787	05/02/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	165981	05/10/17 14:43	OAD	TAL CF
Total/NA	Prep	7470A			164903	05/02/17 12:25	SAD	TAL CF
Total/NA	Analysis	7470A		1	165078	05/03/17 12:04	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 2 Landfill

TestAmerica Job ID: 310-104571-1

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 2 Landfill

TestAmerica Job ID: 310-104571-1

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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310-104571 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Omaha Public Power District

City/State: Omaha, NE | Project: City Unit 2 LF CCR

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: H-121

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 BB 4.28.17

Coolant: ☐ Wet ice ☐ Blue ice ☐ Dry ice ☑ Other: Melted ☐ NONE

Temperature Blank? ☐ Yes ☑ No ID & Bottle Type: 250 HNO_3 - MW-7

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

Thermometer ID: 8 | Correction Factor (°C): 0.0

Uncorrected Temp (°C): 6.0 | Corrected Temp (°C): 6.0

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 2 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:	165
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:

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

Thermometer ID: A | Correction Factor (°C): 0.0

Uncorrected Temp (°C): 5.6 | Corrected Temp (°C): 5.6

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 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 #: 31007559	
Project Name: Nebraska City Unit 2 Landfill CCR	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)	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		
MW7	4/24/17	1334	G	GW	N	N	X	X	X		
MW2		1245	G	GW			X	X	X		
MW3		1158	G	GW			X	X	X		
MW4		1007	G	GW			X	X	X		
MW5		1036	G	GW			X	X	X		
MW6		1110	G	GW			X	X	X		
MW13		0936	G	GW			X	X	X		
DUP		1247	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: 4/26/17 1000	Company	Received by: Ashley L Worthy	Date/Time: 4-28-17 930	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:

5/16/2017

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MW7	310-104571-A-1	Plastic 250ml - with Nitric Acid	<2		
MW7	310-104571-C-1	Plastic 1 liter - Nitric Acid	<2		
MW7	310-104571-D-1	Plastic 1 liter - Nitric Acid	<2		
MW2	310-104571-A-2	Plastic 250ml - with Nitric Acid	<2		
MW2	310-104571-C-2	Plastic 1 liter - Nitric Acid	<2		
MW2	310-104571-D-2	Plastic 1 liter - Nitric Acid	<2		
MW3	310-104571-A-3	Plastic 250ml - with Nitric Acid	<2		
MW3	310-104571-C-3	Plastic 1 liter - Nitric Acid	<2		
MW3	310-104571-D-3	Plastic 1 liter - Nitric Acid	<2		
MW4	310-104571-A-4	Plastic 250ml - with Nitric Acid	<2		
MW4	310-104571-C-4	Plastic 1 liter - Nitric Acid	<2		
MW4	310-104571-D-4	Plastic 1 liter - Nitric Acid	<2		
MW5	310-104571-A-5	Plastic 250ml - with Nitric Acid	<2		
MW5	310-104571-C-5	Plastic 1 liter - Nitric Acid	<2		
MW5	310-104571-D-5	Plastic 1 liter - Nitric Acid	<2		
MW6	310-104571-A-6	Plastic 250ml - with Nitric Acid	<2		
MW6	310-104571-C-6	Plastic 1 liter - Nitric Acid	<2		
MW6	310-104571-D-6	Plastic 1 liter - Nitric Acid	<2		
MW13	310-104571-A-7	Plastic 250ml - with Nitric Acid	<2		
MW13	310-104571-C-7	Plastic 1 liter - Nitric Acid	<2		
MW13	310-104571-D-7	Plastic 1 liter - Nitric Acid	<2		
DUP	310-104571-A-8	Plastic 250ml - with Nitric Acid	<2		
DUP	310-104571-C-8	Plastic 1 liter - Nitric Acid	<2		
DUP	310-104571-D-8	Plastic 1 liter - Nitric Acid	<2		

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-104571-1

Login Number: 104571
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	

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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: 310-104571-2
Client Project/Site: Nebraska City Unit 2
Sampling Event: CCR and Landfill Parameters 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 1:13:08 PM

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

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Case Narrative

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2

TestAmerica Job ID: 310-104571-2

Job ID: 310-104571-2

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-104571-2

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 5.6º C and 6.0º C.

RAD
Method(s) PrecSep-21: Radium 226 Prep Batch 160-307221
Insufficient sample volume was available to perform a sample duplicate (DU). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.
MW6 (310-104571-6)

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 2

TestAmerica Job ID: 310-104571-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-104571-1	MW7	Ground Water	04/24/17 13:34	04/28/17 09:30
310-104571-2	MW2	Ground Water	04/24/17 12:45	04/28/17 09:30
310-104571-3	MW3	Ground Water	04/24/17 11:58	04/28/17 09:30
310-104571-4	MW4	Ground Water	04/24/17 10:00	04/28/17 09:30
310-104571-5	MW5	Ground Water	04/24/17 10:36	04/28/17 09:30
310-104571-6	MW6	Ground Water	04/24/17 11:10	04/28/17 09:30
310-104571-7	MW13	Ground Water	04/24/17 09:36	04/28/17 09:30
310-104571-8	DUP	Ground Water	04/24/17 12:47	04/28/17 09:30

Client Sample ID: MW7

Date Collected: 04/24/17 13:34
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104571-1

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	0.626		0.144	0.155	1.00	0.0945	pCi/L	05/04/17 09:39	05/26/17 06:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.9*		*40 - 110*	*05/04/17 09:39*	*05/26/17 06:12*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.418		0.221	0.224	1.00	0.327	pCi/L	05/04/17 09:57	05/17/17 12:56	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.9*		*40 - 110*	*05/04/17 09:57*	*05/17/17 12:56*	*1*
Y Carrier	*90.1*		*40 - 110*	*05/04/17 09:57*	*05/17/17 12:56*	*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	1.04		0.264	0.272	5.00	0.327	pCi/L		05/26/17 12:36	1

Client Sample ID: MW2

Date Collected: 04/24/17 12:45
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104571-2

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	**0.192**		0.0956	0.0972	1.00	0.116	pCi/L	05/04/17 09:39	05/26/17 06:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*05/04/17 09:39*	*05/26/17 06:12*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.112	U	0.202	0.202	1.00	0.344	pCi/L	05/04/17 09:57	05/17/17 12:56	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*05/04/17 09:57*	*05/17/17 12:56*	*1*
Y Carrier	*82.6*		*40 - 110*	*05/04/17 09:57*	*05/17/17 12:56*	*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	0.304	U	0.224	0.225	5.00	0.344	pCi/L		05/26/17 12:36	1

Client Sample ID: MW3

Date Collected: 04/24/17 11:58
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104571-3

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	**0.329**		0.117	0.121	1.00	0.107	pCi/L	05/04/17 09:39	05/26/17 06:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.0*		*40 - 110*	*05/04/17 09:39*	*05/26/17 06:12*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0521	U	0.232	0.232	1.00	0.406	pCi/L	05/04/17 09:57	05/17/17 12:56	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.0*		*40 - 110*	*05/04/17 09:57*	*05/17/17 12:56*	*1*
Y Carrier	*83.4*		*40 - 110*	*05/04/17 09:57*	*05/17/17 12:56*	*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	0.381	U	0.260	0.261	5.00	0.406	pCi/L		05/26/17 12:36	1

Client Sample ID: MW4

Date Collected: 04/24/17 10:00
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104571-4

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	0.387		0.118	0.123	1.00	0.0946	pCi/L	05/04/17 09:39	05/26/17 06:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.4*		*40 - 110*	*05/04/17 09:39*	*05/26/17 06:12*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.692		0.251	0.259	1.00	0.339	pCi/L	05/04/17 09:57	05/17/17 12:56	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.4*		*40 - 110*	*05/04/17 09:57*	*05/17/17 12:56*	*1*
Y Carrier	*82.2*		*40 - 110*	*05/04/17 09:57*	*05/17/17 12:56*	*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	1.08		0.277	0.287	5.00	0.339	pCi/L		05/26/17 12:36	1

Client Sample ID: MW5

Date Collected: 04/24/17 10:36
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104571-5

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	0.108		0.0739	0.0745	1.00	0.0987	pCi/L	05/04/17 09:39	05/26/17 06:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*102*		*40 - 110*	*05/04/17 09:39*	*05/26/17 06:12*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0277	U	0.165	0.165	1.00	0.292	pCi/L	05/04/17 09:57	05/17/17 12:56	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*102*		*40 - 110*	*05/04/17 09:57*	*05/17/17 12:56*	*1*
Y Carrier	*92.7*		*40 - 110*	*05/04/17 09:57*	*05/17/17 12:56*	*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	0.136	U	0.180	0.181	5.00	0.292	pCi/L		05/26/17 12:36	1

Client Sample ID: MW6

Date Collected: 04/24/17 11:10
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104571-6

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**		0.0829	0.0842	1.00	0.0968	pCi/L	05/04/17 09:39	05/26/17 06:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*105*		*40 - 110*	*05/04/17 09:39*	*05/26/17 06:12*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.261	U	0.210	0.212	1.00	0.333	pCi/L	05/04/17 09:57	05/17/17 12:56	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*105*		*40 - 110*	*05/04/17 09:57*	*05/17/17 12:56*	*1*
Y Carrier	*81.1*		*40 - 110*	*05/04/17 09:57*	*05/17/17 12:56*	*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**		0.226	0.228	5.00	0.333	pCi/L		05/26/17 12:36	1

Client Sample ID: MW13
Date Collected: 04/24/17 09:36
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104571-7
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	**0.283**		0.105	0.108	1.00	0.110	pCi/L	05/04/17 09:39	05/26/17 06:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*102*		*40 - 110*	*05/04/17 09:39*	*05/26/17 06:12*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.296	U	0.219	0.221	1.00	0.345	pCi/L	05/04/17 09:57	05/17/17 12:56	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*102*		*40 - 110*	*05/04/17 09:57*	*05/17/17 12:56*	*1*
Y Carrier	*86.0*		*40 - 110*	*05/04/17 09:57*	*05/17/17 12:56*	*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	**0.579**		0.243	0.246	5.00	0.345	pCi/L		05/26/17 12:36	1

Client Sample ID: DUP

Date Collected: 04/24/17 12:47
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104571-8

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	**0.200**		0.0886	0.0904	1.00	0.0945	pCi/L	05/04/17 09:39	05/26/17 06:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*05/04/17 09:39*	*05/26/17 06:12*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.127	U	0.211	0.211	1.00	0.357	pCi/L	05/04/17 09:57	05/17/17 12:57	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*05/04/17 09:57*	*05/17/17 12:57*	*1*
Y Carrier	*83.4*		*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	0.326	U	0.229	0.230	5.00	0.357	pCi/L		05/26/17 12:36	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2

TestAmerica Job ID: 310-104571-2

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 160-307221/1-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*

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Prep Batch: 307221

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-104571-1	MW7	Total/NA	Ground Water	PrecSep-21	
310-104571-2	MW2	Total/NA	Ground Water	PrecSep-21	
310-104571-3	MW3	Total/NA	Ground Water	PrecSep-21	
310-104571-4	MW4	Total/NA	Ground Water	PrecSep-21	
310-104571-5	MW5	Total/NA	Ground Water	PrecSep-21	
310-104571-6	MW6	Total/NA	Ground Water	PrecSep-21	
310-104571-7	MW13	Total/NA	Ground Water	PrecSep-21	
310-104571-8	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
310-104571-1	MW7	Total/NA	Ground Water	PrecSep_0	
310-104571-2	MW2	Total/NA	Ground Water	PrecSep_0	
310-104571-3	MW3	Total/NA	Ground Water	PrecSep_0	
310-104571-4	MW4	Total/NA	Ground Water	PrecSep_0	
310-104571-5	MW5	Total/NA	Ground Water	PrecSep_0	
310-104571-6	MW6	Total/NA	Ground Water	PrecSep_0	
310-104571-7	MW13	Total/NA	Ground Water	PrecSep_0	
310-104571-8	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 2

TestAmerica Job ID: 310-104571-2

Client Sample ID: MW7
Date Collected: 04/24/17 13:34
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104571-1
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307221	05/04/17 09:39	LDE	TAL SL
Total/NA	Analysis	9315		1	310847	05/26/17 06:12	RTM	TAL SL
Total/NA	Prep	PrecSep_0			307228	05/04/17 09:57	LDE	TAL SL
Total/NA	Analysis	9320		1	309105	05/17/17 12:56	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

Client Sample ID: MW2
Date Collected: 04/24/17 12:45
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104571-2
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307221	05/04/17 09:39	LDE	TAL SL
Total/NA	Analysis	9315		1	310847	05/26/17 06:12	RTM	TAL SL
Total/NA	Prep	PrecSep_0			307228	05/04/17 09:57	LDE	TAL SL
Total/NA	Analysis	9320		1	309105	05/17/17 12:56	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

Client Sample ID: MW3
Date Collected: 04/24/17 11:58
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104571-3
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307221	05/04/17 09:39	LDE	TAL SL
Total/NA	Analysis	9315		1	310847	05/26/17 06:12	RTM	TAL SL
Total/NA	Prep	PrecSep_0			307228	05/04/17 09:57	LDE	TAL SL
Total/NA	Analysis	9320		1	309105	05/17/17 12:56	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

Client Sample ID: MW4
Date Collected: 04/24/17 10:00
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104571-4
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307221	05/04/17 09:39	LDE	TAL SL
Total/NA	Analysis	9315		1	310847	05/26/17 06:12	RTM	TAL SL
Total/NA	Prep	PrecSep_0			307228	05/04/17 09:57	LDE	TAL SL
Total/NA	Analysis	9320		1	309105	05/17/17 12:56	ALD	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 2

TestAmerica Job ID: 310-104571-2

Client Sample ID: MW5

Date Collected: 04/24/17 10:36
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104571-5

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307221	05/04/17 09:39	LDE	TAL SL
Total/NA	Analysis	9315		1	310847	05/26/17 06:12	RTM	TAL SL
Total/NA	Prep	PrecSep_0			307228	05/04/17 09:57	LDE	TAL SL
Total/NA	Analysis	9320		1	309105	05/17/17 12:56	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

Client Sample ID: MW6

Date Collected: 04/24/17 11:10
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104571-6

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307221	05/04/17 09:39	LDE	TAL SL
Total/NA	Analysis	9315		1	310847	05/26/17 06:12	RTM	TAL SL
Total/NA	Prep	PrecSep_0			307228	05/04/17 09:57	LDE	TAL SL
Total/NA	Analysis	9320		1	309105	05/17/17 12:56	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

Client Sample ID: MW13

Date Collected: 04/24/17 09:36
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104571-7

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307221	05/04/17 09:39	LDE	TAL SL
Total/NA	Analysis	9315		1	310847	05/26/17 06:12	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 12:56	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

Client Sample ID: DUP

Date Collected: 04/24/17 12:47
Date Received: 04/28/17 09:30

Lab Sample ID: 310-104571-8

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307221	05/04/17 09:39	LDE	TAL SL
Total/NA	Analysis	9315		1	310847	05/26/17 06:12	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

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 2

TestAmerica Job ID: 310-104571-2

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 2

TestAmerica Job ID: 310-104571-2

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

310-104571 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Omaha Public Power District

City/State: Omaha, NE | Project: City Unit 2 LF CCR

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: IR-121

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 4.28.17

Coolant: ☑ Wet ice ☐ Blue ice ☐ Dry ice ☑ Other: Melted ☐ NONE

Temperature Blank? ☐ Yes ☑ No ID & Bottle Type: 250 HNO_3 - MW-7

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

Thermometer ID: IR | Correction Factor (°C): 0.0

Uncorrected Temp (°C): 6.0 | Corrected Temp (°C): 6.0

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 2 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:	165
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:

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

Thermometer ID: A | Correction Factor (°C): 0.0

Uncorrected Temp (°C): 5.6 | Corrected Temp (°C): 5.6

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 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 #: 31007559			
Project Name: Nebraska City Unit 2 Landfill CCR	SSOW#:			
Site:				

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		
MW7	4/24/17	1334	G	GW	N	N	X	X	X		
MW2		1245	G	GW			X	X	X		
MW3		1158	G	GW			X	X	X		
MW4		1003	G	GW			X	X	X		
MW5		1036	G	GW			X	X	X		
MW6		1110	G	GW			X	X	X		
MW13		0936	G	GW			X	X	X		
DUP		1247	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: 4/26/17 1000	Company	Received by: Ashley L Worthy	Date/Time: 4-28-17 930	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:

5/26/2017

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MW7	310-104571-A-1	Plastic 250ml - with Nitric Acid	<2		
MW7	310-104571-C-1	Plastic 1 liter - Nitric Acid	<2		
MW7	310-104571-D-1	Plastic 1 liter - Nitric Acid	<2		
MW2	310-104571-A-2	Plastic 250ml - with Nitric Acid	<2		
MW2	310-104571-C-2	Plastic 1 liter - Nitric Acid	<2		
MW2	310-104571-D-2	Plastic 1 liter - Nitric Acid	<2		
MW3	310-104571-A-3	Plastic 250ml - with Nitric Acid	<2		
MW3	310-104571-C-3	Plastic 1 liter - Nitric Acid	<2		
MW3	310-104571-D-3	Plastic 1 liter - Nitric Acid	<2		
MW4	310-104571-A-4	Plastic 250ml - with Nitric Acid	<2		
MW4	310-104571-C-4	Plastic 1 liter - Nitric Acid	<2		
MW4	310-104571-D-4	Plastic 1 liter - Nitric Acid	<2		
MW5	310-104571-A-5	Plastic 250ml - with Nitric Acid	<2		
MW5	310-104571-C-5	Plastic 1 liter - Nitric Acid	<2		
MW5	310-104571-D-5	Plastic 1 liter - Nitric Acid	<2		
MW6	310-104571-A-6	Plastic 250ml - with Nitric Acid	<2		
MW6	310-104571-C-6	Plastic 1 liter - Nitric Acid	<2		
MW6	310-104571-D-6	Plastic 1 liter - Nitric Acid	<2		
MW13	310-104571-A-7	Plastic 250ml - with Nitric Acid	<2		
MW13	310-104571-C-7	Plastic 1 liter - Nitric Acid	<2		
MW13	310-104571-D-7	Plastic 1 liter - Nitric Acid	<2		
DUP	310-104571-A-8	Plastic 250ml - with Nitric Acid	<2		
DUP	310-104571-C-8	Plastic 1 liter - Nitric Acid	<2		
DUP	310-104571-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

310-104571 Chain of Custody

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Hayes, Shawn M		COC No: 310-9225.1
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 #: 310-104571-2
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 2 Landfill CCR	Project #: 31007559			
Site: 310 OPPD Nebraska City Unit 2	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:								
MW7 (310-104571-1)	4/24/17	13:34 Central		Water			X	X	X	2	
MW2 (310-104571-2)	4/24/17	12:45 Central		Water			X	X	X	2	
MW3 (310-104571-3)	4/24/17	11:58 Central		Water			X	X	X	2	
MW4 (310-104571-4)	4/24/17	10:00 Central		Water			X	X	X	2	
MW5 (310-104571-5)	4/24/17	10:36 Central		Water			X	X	X	2	
MW6 (310-104571-6)	4/24/17	11:10 Central		Water			X	X	X	2	
MW13 (310-104571-7)	4/24/17	09:36 Central		Water			X	X	X	2	
DUP (310-104571-8)	4/24/17	12:47 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: 4/28/17 1610	Company	Received by:	Date/Time: 5/1/17 0915	Company T1
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: 310-104571-2

Login Number: 104571
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	

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-104571-2

Login Number: 104571
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.	True	
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 2

TestAmerica Job ID: 310-104571-2

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)
310-104571-1	MW7	97.9
310-104571-2	MW2	101
310-104571-3	MW3	90.0
310-104571-4	MW4	99.4
310-104571-5	MW5	102
310-104571-6	MW6	105
310-104571-7	MW13	102
310-104571-8	DUP	101

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 160-307221/2-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)	
Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
310-104571-1	MW7	97.9	90.1
310-104571-2	MW2	101	82.6
310-104571-3	MW3	90.0	83.4
310-104571-4	MW4	99.4	82.2
310-104571-5	MW5	102	92.7
310-104571-6	MW6	105	81.1
310-104571-7	MW13	102	86.0
310-104571-8	DUP	101	83.4

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

Tracer/Carrier Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2

TestAmerica Job ID: 310-104571-2

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 160-307228/2-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: 310-108248-2
Client Project/Site: Nebraska City Unit 2 Landfill CCR
Sampling Event: CCR and Landfill Parameters 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 11:54:05 AM

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

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Case Narrative

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-108248-2

Job ID: 310-108248-2

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-108248-2

Comments
No additional comments.

Receipt
The samples were received on 6/21/2017 9:35 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.8º C and 10.7º 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 2 Landfill CCR

TestAmerica Job ID: 310-108248-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-108248-1	MW7	Ground Water	06/15/17 14:14	06/21/17 09:35
310-108248-2	MW2	Ground Water	06/15/17 13:50	06/21/17 09:35
310-108248-3	MW3	Ground Water	06/15/17 13:15	06/21/17 09:35
310-108248-4	MW4	Ground Water	06/15/17 11:36	06/21/17 09:35
310-108248-5	MW5	Ground Water	06/15/17 12:14	06/21/17 09:35
310-108248-6	MW6	Ground Water	06/15/17 12:45	06/21/17 09:35
310-108248-7	MW13	Ground Water	06/15/17 11:00	06/21/17 09:35
310-108248-8	DUP	Ground Water	06/15/17 13:17	06/21/17 09:35

Client Sample ID: MW7

Date Collected: 06/15/17 14:14
Date Received: 06/21/17 09:35

Lab Sample ID: 310-108248-1

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	0.352		0.0998	0.105	1.00	0.0801	pCi/L	06/26/17 09:47	07/18/17 06:20	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*06/26/17 09:47*	*07/18/17 06:20*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.463		0.229	0.233	1.00	0.339	pCi/L	06/26/17 13:28	07/06/17 14:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*06/26/17 13:28*	*07/06/17 14:33*	*1*
Y Carrier	*92.0*		*40 - 110*	*06/26/17 13:28*	*07/06/17 14:33*	*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	0.815		0.250	0.256	5.00	0.339	pCi/L		07/19/17 09:48	1

Client Sample ID: MW2

Date Collected: 06/15/17 13:50
Date Received: 06/21/17 09:35

Lab Sample ID: 310-108248-2

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	0.164		0.0726	0.0741	1.00	0.0737	pCi/L	06/26/17 09:47	07/18/17 06:20	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.2*		*40 - 110*	*06/26/17 09:47*	*07/18/17 06:20*	*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		0.206	0.209	1.00	0.309	pCi/L	06/26/17 13:28	07/06/17 14:34	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.2*		*40 - 110*	*06/26/17 13:28*	*07/06/17 14:34*	*1*
Y Carrier	*90.8*		*40 - 110*	*06/26/17 13:28*	*07/06/17 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	0.518		0.219	0.222	5.00	0.309	pCi/L		07/19/17 09:48	1

Client Sample ID: MW3

Date Collected: 06/15/17 13:15
Date Received: 06/21/17 09:35

Lab Sample ID: 310-108248-3

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	**0.260**		0.0922	0.0951	1.00	0.0839	pCi/L	06/26/17 09:47	07/18/17 06:20	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.0*		*40 - 110*	*06/26/17 09:47*	*07/18/17 06:20*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.262	U	0.224	0.225	1.00	0.357	pCi/L	06/26/17 13:28	07/06/17 14:34	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.0*		*40 - 110*	*06/26/17 13:28*	*07/06/17 14:34*	*1*
Y Carrier	*93.1*		*40 - 110*	*06/26/17 13:28*	*07/06/17 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	**0.521**		0.242	0.244	5.00	0.357	pCi/L		07/19/17 09:48	1

Client Sample ID: MW4

Date Collected: 06/15/17 11:36
Date Received: 06/21/17 09:35

Lab Sample ID: 310-108248-4

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	0.349		0.0987	0.104	1.00	0.0815	pCi/L	06/26/17 09:47	07/18/17 06:20	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.8*		*40 - 110*	*06/26/17 09:47*	*07/18/17 06:20*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.937		0.265	0.278	1.00	0.330	pCi/L	06/26/17 13:28	07/06/17 14:34	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.8*		*40 - 110*	*06/26/17 13:28*	*07/06/17 14:34*	*1*
Y Carrier	*89.3*		*40 - 110*	*06/26/17 13:28*	*07/06/17 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	1.29		0.283	0.297	5.00	0.330	pCi/L		07/19/17 09:48	1

Client Sample ID: MW5

Date Collected: 06/15/17 12:14
Date Received: 06/21/17 09:35

Lab Sample ID: 310-108248-5

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	**0.0958**		0.0589	0.0596	1.00	0.0722	pCi/L	06/26/17 09:47	07/18/17 06:20	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.8*		*40 - 110*	*06/26/17 09:47*	*07/18/17 06:20*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.169	U	0.181	0.182	1.00	0.296	pCi/L	06/26/17 13:28	07/06/17 14:34	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.8*		*40 - 110*	*06/26/17 13:28*	*07/06/17 14:34*	*1*
Y Carrier	*89.0*		*40 - 110*	*06/26/17 13:28*	*07/06/17 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	0.265	U	0.191	0.191	5.00	0.296	pCi/L		07/19/17 09:48	1

Client Sample ID: MW6

Date Collected: 06/15/17 12:45
Date Received: 06/21/17 09:35

Lab Sample ID: 310-108248-6

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	0.267		0.0917	0.0947	1.00	0.0885	pCi/L	06/26/17 11:43	07/18/17 06:20	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.9*		*40 - 110*	*06/26/17 11:43*	*07/18/17 06:20*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.374		0.215	0.218	1.00	0.322	pCi/L	06/26/17 13:28	07/06/17 14:34	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.9*		*40 - 110*	*06/26/17 13:28*	*07/06/17 14:34*	*1*
Y Carrier	*89.0*		*40 - 110*	*06/26/17 13:28*	*07/06/17 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	0.641		0.234	0.238	5.00	0.322	pCi/L		07/19/17 09:48	1

Client Sample ID: MW13

Date Collected: 06/15/17 11:00
Date Received: 06/21/17 09:35

Lab Sample ID: 310-108248-7

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	0.241		0.0827	0.0855	1.00	0.0688	pCi/L	06/26/17 12:48	07/18/17 06:22	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*06/26/17 12:48*	*07/18/17 06:22*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.559		0.245	0.250	1.00	0.353	pCi/L	06/26/17 13:28	07/06/17 14:34	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*06/26/17 13:28*	*07/06/17 14:34*	*1*
Y Carrier	*89.0*		*40 - 110*	*06/26/17 13:28*	*07/06/17 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	0.800		0.258	0.264	5.00	0.353	pCi/L		07/19/17 09:48	1

Client Sample ID: DUP

Date Collected: 06/15/17 13:17
Date Received: 06/21/17 09:35

Lab Sample ID: 310-108248-8

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	**0.202**		0.0807	0.0827	1.00	0.0697	pCi/L	06/26/17 12:48	07/18/17 06:22	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.8*		*40 - 110*	*06/26/17 12:48*	*07/18/17 06:22*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.283	U	0.217	0.219	1.00	0.340	pCi/L	06/26/17 13:28	07/06/17 14:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.8*		*40 - 110*	*06/26/17 13:28*	*07/06/17 14:35*	*1*
Y Carrier	*89.7*		*40 - 110*	*06/26/17 13:28*	*07/06/17 14:35*	*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	**0.484**		0.232	0.234	5.00	0.340	pCi/L		07/19/17 09:48	1

Definitions/Glossary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-108248-2

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)

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-315317/1-A
Matrix: Water
Analysis Batch: 317954

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 315317

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.04397	U	0.0499	0.0501	1.00	0.0802	pCi/L	06/26/17 09:47	07/18/17 06:18	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.2*		*40 - 110*	*06/26/17 09:47*	*07/18/17 06:18*	*1*

Lab Sample ID: LCS 160-315317/2-A
Matrix: Water
Analysis Batch: 317954

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 315317

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.4	8.967		0.929	1.00	0.0832	pCi/L	79	68 - 137		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*109*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-315349/1-A
Matrix: Water
Analysis Batch: 316470

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 315349

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1053	U	0.214	0.214	1.00	0.366	pCi/L	06/26/17 13:28	07/06/17 14:30	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.2*		*40 - 110*	*06/26/17 13:28*	*07/06/17 14:30*	*1*
Y Carrier	*83.4*		*40 - 110*	*06/26/17 13:28*	*07/06/17 14:30*	*1*

Lab Sample ID: LCS 160-315349/2-A
Matrix: Water
Analysis Batch: 316470

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 315349

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			13.2	13.49		1.44	1.00	0.328	pCi/L	102	56 - 140		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*109*		*40 - 110*
Y Carrier	*83.4*		*40 - 110*

Rad

Prep Batch: 315317

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108248-1	MW7	Total/NA	Ground Water	PrecSep-21	
310-108248-2	MW2	Total/NA	Ground Water	PrecSep-21	
310-108248-3	MW3	Total/NA	Ground Water	PrecSep-21	
310-108248-4	MW4	Total/NA	Ground Water	PrecSep-21	
310-108248-5	MW5	Total/NA	Ground Water	PrecSep-21	
310-108248-6	MW6	Total/NA	Ground Water	PrecSep-21	
310-108248-7	MW13	Total/NA	Ground Water	PrecSep-21	
310-108248-8	DUP	Total/NA	Ground Water	PrecSep-21	
MB 160-315317/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-315317/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 315349

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108248-1	MW7	Total/NA	Ground Water	PrecSep_0	
310-108248-2	MW2	Total/NA	Ground Water	PrecSep_0	
310-108248-3	MW3	Total/NA	Ground Water	PrecSep_0	
310-108248-4	MW4	Total/NA	Ground Water	PrecSep_0	
310-108248-5	MW5	Total/NA	Ground Water	PrecSep_0	
310-108248-6	MW6	Total/NA	Ground Water	PrecSep_0	
310-108248-7	MW13	Total/NA	Ground Water	PrecSep_0	
310-108248-8	DUP	Total/NA	Ground Water	PrecSep_0	
MB 160-315349/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-315349/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-108248-2

Client Sample ID: MW7
Date Collected: 06/15/17 14:14
Date Received: 06/21/17 09:35

Lab Sample ID: 310-108248-1
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			315317	06/26/17 09:47	LDE	TAL SL
Total/NA	Analysis	9315		1	317954	07/18/17 06:20	RTM	TAL SL
Total/NA	Prep	PrecSep_0			315349	06/26/17 13:28	LDE	TAL SL
Total/NA	Analysis	9320		1	316470	07/06/17 14:33	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	318131	07/19/17 09:48	RTM	TAL SL

Client Sample ID: MW2
Date Collected: 06/15/17 13:50
Date Received: 06/21/17 09:35

Lab Sample ID: 310-108248-2
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			315317	06/26/17 09:47	LDE	TAL SL
Total/NA	Analysis	9315		1	317954	07/18/17 06:20	RTM	TAL SL
Total/NA	Prep	PrecSep_0			315349	06/26/17 13:28	LDE	TAL SL
Total/NA	Analysis	9320		1	316470	07/06/17 14:34	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	318131	07/19/17 09:48	RTM	TAL SL

Client Sample ID: MW3
Date Collected: 06/15/17 13:15
Date Received: 06/21/17 09:35

Lab Sample ID: 310-108248-3
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			315317	06/26/17 09:47	LDE	TAL SL
Total/NA	Analysis	9315		1	317954	07/18/17 06:20	RTM	TAL SL
Total/NA	Prep	PrecSep_0			315349	06/26/17 13:28	LDE	TAL SL
Total/NA	Analysis	9320		1	316470	07/06/17 14:34	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	318131	07/19/17 09:48	RTM	TAL SL

Client Sample ID: MW4
Date Collected: 06/15/17 11:36
Date Received: 06/21/17 09:35

Lab Sample ID: 310-108248-4
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			315317	06/26/17 09:47	LDE	TAL SL
Total/NA	Analysis	9315		1	317954	07/18/17 06:20	RTM	TAL SL
Total/NA	Prep	PrecSep_0			315349	06/26/17 13:28	LDE	TAL SL
Total/NA	Analysis	9320		1	316470	07/06/17 14:34	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	318131	07/19/17 09:48	RTM	TAL SL

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-108248-2

Client Sample ID: MW5

Date Collected: 06/15/17 12:14
Date Received: 06/21/17 09:35

Lab Sample ID: 310-108248-5
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			315317	06/26/17 09:47	LDE	TAL SL
Total/NA	Analysis	9315		1	317954	07/18/17 06:20	RTM	TAL SL
Total/NA	Prep	PrecSep_0			315349	06/26/17 13:28	LDE	TAL SL
Total/NA	Analysis	9320		1	316470	07/06/17 14:34	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	318131	07/19/17 09:48	RTM	TAL SL

Client Sample ID: MW6

Date Collected: 06/15/17 12:45
Date Received: 06/21/17 09:35

Lab Sample ID: 310-108248-6
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			315317	06/26/17 11:43	LDE	TAL SL
Total/NA	Analysis	9315		1	317954	07/18/17 06:20	RTM	TAL SL
Total/NA	Prep	PrecSep_0			315349	06/26/17 13:28	LDE	TAL SL
Total/NA	Analysis	9320		1	316470	07/06/17 14:34	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	318131	07/19/17 09:48	RTM	TAL SL

Client Sample ID: MW13

Date Collected: 06/15/17 11:00
Date Received: 06/21/17 09:35

Lab Sample ID: 310-108248-7
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			315317	06/26/17 12:48	LDE	TAL SL
Total/NA	Analysis	9315		1	317955	07/18/17 06:22	RTM	TAL SL
Total/NA	Prep	PrecSep_0			315349	06/26/17 13:28	LDE	TAL SL
Total/NA	Analysis	9320		1	316470	07/06/17 14:34	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	318131	07/19/17 09:48	RTM	TAL SL

Client Sample ID: DUP

Date Collected: 06/15/17 13:17
Date Received: 06/21/17 09:35

Lab Sample ID: 310-108248-8
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			315317	06/26/17 12:48	LDE	TAL SL
Total/NA	Analysis	9315		1	317955	07/18/17 06:22	RTM	TAL SL
Total/NA	Prep	PrecSep_0			315349	06/26/17 13:28	LDE	TAL SL
Total/NA	Analysis	9320		1	316469	07/06/17 14:35	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	318131	07/19/17 09:48	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 2 Landfill CCR

TestAmerica Job ID: 310-108248-2

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 2 Landfill CCR

TestAmerica Job ID: 310-108248-2

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

310-108248 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: OPPD

City/State: Omaha NE | Project: NE City LF Unit 2

Receipt Information

Date/Time Received: 06 21 17 935 | Received By: GL

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: G-50

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? ↓

MW-5, MW-6 Dup

Temperature Record

Coolant: ☐ Wet ice ☐ Blue ice ☐ Dry ice ☒ Other: melted ☐ NONE

Thermometer ID: G | Correction Factor (°C): 0

• **Temp Blank Temperature** – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 12.4 | Corrected Temp (°C): 12.4

• **Sample Container Temperature**

Sample ID(s) & bottle type used: CONTAINER 1 Pl 1L HNO3 – MW-5 | CONTAINER 2 Pl 1L HNO3 – Dup

Uncorrected Temp (°C): TEMP 1 10.8 TEMP 2 10.8 | Corrected Temp (°C): TEMP 1 10.7 TEMP 2 10.7

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: NE City Unit 2

Receipt Information

Date/Time Received: 06.21.17 935 | Received By: GL

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:	N-6
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: G | Correction Factor (°C): 0

• **Temp Blank Temperature** – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

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

• **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

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 2 Landfill CCR	TestAmerica Project #: 31007559
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		
MW7	6/15/17	1414	G	GW	Y	N	X	X	X		
MW2		1350	G	GW			X	X	X		
MW3		1315	G	GW			X	X	X		
MW4		1136	G	GW			X	X	X		
MW5		1214	G	GW			X	X	X		
MW6		1245	G	GW			X	X	X		
MW13		1100	G	GW			X	X	X		
DUP		1317	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:	~~6/20/17~~ 6/20/17 1000			6-21-17 935	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:

7/19/2017

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MW7	310-108248-A-1	Plastic 250ml - with Nitric Acid			
MW7	310-108248-C-1	Plastic 1 liter - Nitric Acid	<2		
MW7	310-108248-D-1	Plastic 1 liter - Nitric Acid	<2		
MW2	310-108248-A-2	Plastic 250ml - with Nitric Acid			
MW2	310-108248-C-2	Plastic 1 liter - Nitric Acid	<2		
MW2	310-108248-D-2	Plastic 1 liter - Nitric Acid	<2		
MW3	310-108248-A-3	Plastic 250ml - with Nitric Acid			
MW3	310-108248-C-3	Plastic 1 liter - Nitric Acid	<2		
MW3	310-108248-D-3	Plastic 1 liter - Nitric Acid	<2		
MW4	310-108248-A-4	Plastic 250ml - with Nitric Acid			
MW4	310-108248-C-4	Plastic 1 liter - Nitric Acid	<2		
MW4	310-108248-D-4	Plastic 1 liter - Nitric Acid	<2		
MW5	310-108248-A-5	Plastic 250ml - with Nitric Acid			
MW5	310-108248-C-5	Plastic 1 liter - Nitric Acid	<2		
MW5	310-108248-D-5	Plastic 1 liter - Nitric Acid	<2		
MW6	310-108248-A-6	Plastic 250ml - with Nitric Acid			
MW6	310-108248-C-6	Plastic 1 liter - Nitric Acid	<2		
MW6	310-108248-D-6	Plastic 1 liter - Nitric Acid	<2		
MW13	310-108248-A-7	Plastic 250ml - with Nitric Acid			
MW13	310-108248-C-7	Plastic 1 liter - Nitric Acid	<2		
MW13	310-108248-D-7	Plastic 1 liter - Nitric Acid	<2		
DUP	310-108248-A-8	Plastic 250ml - with Nitric Acid			
DUP	310-108248-C-8	Plastic 1 liter - Nitric Acid	<2		
DUP	310-108248-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

310-108248 Chain of Custody

testAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Hayes, Shawn M		OC No: 0-9754.1
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 #: 310-108248-2
Address: 13715 Rider Trail North, ,	Due Date Requested: 7/20/2017			
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 2 Landfill CCR	Project #: 31007559			
Site: 310 OPFD Nebraska City Unit 2	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:								
MW7 (310-108248-1)	6/15/17	14:14 Central		Water			X	X	X	2	
MW2 (310-108248-2)	6/15/17	13:50 Central		Water			X	X	X	2	
MW3 (310-108248-3)	6/15/17	13:15 Central		Water			X	X	X	2	
MW4 (310-108248-4)	6/15/17	11:36 Central		Water			X	X	X	2	
MW5 (310-108248-5)	6/15/17	12:14 Central		Water			X	X	X	2	
MW6 (310-108248-6)	6/15/17	12:45 Central		Water			X	X	X	2	
MW13 (310-108248-7)	6/15/17	11:00 Central		Water			X	X	X	2	
DUP (310-108248-8)	6/15/17	13:17 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: 6/17 1432	Company	Received by:	Date/Time: 6-22-17 0915	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: 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: 310-108248-2

Login Number: 108248
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.	False	Water present in one cooler; indicates evidence of melted ice.
Cooler Temperature is acceptable.	True	Thermal preservation not required for Ra226/Ra228
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: 310-108248-2

Login Number: 108248
List Number: 2
Creator: Taylor, Kristene N

List Source: TestAmerica St. Louis
List Creation: 06/22/17 10:58 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.	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	20.0,20.0,20.0,20.0
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 2 Landfill CCR

TestAmerica Job ID: 310-108248-2

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)
310-108248-1	MW7	103
310-108248-2	MW2	98.2
310-108248-3	MW3	90.0
310-108248-4	MW4	96.8
310-108248-5	MW5	96.8
310-108248-6	MW6	97.9
310-108248-7	MW13	101
310-108248-8	DUP	88.8

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 160-315317/2-A	Lab Control Sample	109
MB 160-315317/1-A	Method Blank	98.2

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)
310-108248-1	MW7	103	92.0
310-108248-2	MW2	98.2	90.8
310-108248-3	MW3	90.0	93.1
310-108248-4	MW4	96.8	89.3
310-108248-5	MW5	96.8	89.0
310-108248-6	MW6	97.9	89.0
310-108248-7	MW13	101	89.0
310-108248-8	DUP	88.8	89.7

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

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 160-315349/2-A	Lab Control Sample	109	83.4

Tracer/Carrier Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-108248-2

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

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)									
Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)								
MB 160-315349/1-A	Method Blank	98.2	83.4								

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: 310-108248-1
Client Project/Site: Nebraska City Unit 2 Landfill CCR
Sampling Event: CCR and Landfill Parameters 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:
6/28/2017 2:11:14 PM

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

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Case Narrative

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-108248-1

Job ID: 310-108248-1

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-108248-1

Comments
No additional comments.

Receipt
The samples were received on 6/21/2017 9:35 AM; the samples arrived in good condition, properly preserved. One cooler was still on ice and the other the ice was melted. The temperatures of the 2 coolers at receipt time were 1.8º C and 10.7º C.

Receipt Exceptions

The following samples were received at the laboratory in the warm cooler outside the required temperature criteria: MW5 (310-108248-5), MW6 (310-108248-6) and DUP (310-108248-8). The client was contacted regarding this issue, and the laboratory was instructed to proceed with analysis.

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 2 Landfill CCR

TestAmerica Job ID: 310-108248-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-108248-1	MW7	Ground Water	06/15/17 14:14	06/21/17 09:35
310-108248-2	MW2	Ground Water	06/15/17 13:50	06/21/17 09:35
310-108248-3	MW3	Ground Water	06/15/17 13:15	06/21/17 09:35
310-108248-4	MW4	Ground Water	06/15/17 11:36	06/21/17 09:35
310-108248-5	MW5	Ground Water	06/15/17 12:14	06/21/17 09:35
310-108248-6	MW6	Ground Water	06/15/17 12:45	06/21/17 09:35
310-108248-7	MW13	Ground Water	06/15/17 11:00	06/21/17 09:35
310-108248-8	DUP	Ground Water	06/15/17 13:17	06/21/17 09:35

Detection Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-108248-1

Client Sample ID: MW7 — Lab Sample ID: 310-108248-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.81		5.00		mg/L	5		9056A	Total/NA
Lithium	0.0579		0.0500		mg/L	1		6010C	Total/NA
Arsenic	0.0469		0.00200		mg/L	1		6020A	Total/NA
Barium	0.538		0.00200		mg/L	1		6020A	Total/NA
Calcium	128		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	688		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW2 — Lab Sample ID: 310-108248-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	139		5.00		mg/L	5		9056A	Total/NA
Antimony	0.00282		0.00100		mg/L	1		6020A	Total/NA
Barium	0.0828		0.00200		mg/L	1		6020A	Total/NA
Boron	0.304		0.200		mg/L	1		6020A	Total/NA
Calcium	165		0.200		mg/L	1		6020A	Total/NA
Lead	0.000721		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.0106		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	780		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW3 — Lab Sample ID: 310-108248-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0101		0.00200		mg/L	1		6020A	Total/NA
Barium	0.225		0.00200		mg/L	1		6020A	Total/NA
Calcium	89.4		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.00103		0.000500		mg/L	1		6020A	Total/NA
Lead	0.00103		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00298		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	386		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW4 — Lab Sample ID: 310-108248-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	32.2		5.00		mg/L	5		9056A	Total/NA
Barium	0.249		0.00200		mg/L	1		6020A	Total/NA
Calcium	122		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000521		0.000500		mg/L	1		6020A	Total/NA
Lead	0.00165		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00233		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	552		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW5 — Lab Sample ID: 310-108248-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	10.6		5.00		mg/L	5		9056A	Total/NA
Sulfate	243		20.0		mg/L	20		9056A	Total/NA
Arsenic	0.00207		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0416		0.00200		mg/L	1		6020A	Total/NA
Boron	3.82		1.00		mg/L	5		6020A	Total/NA
Calcium	190		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 2 Landfill CCR

TestAmerica Job ID: 310-108248-1

Client Sample ID: MW5 (Continued) — Lab Sample ID: 310-108248-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.000601		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.0120		0.00200		mg/L	1		6020A	Total/NA
Mercury	0.000200		0.000200		mg/L	1		7470A	Total/NA
Total Dissolved Solids	1090		60.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW6 — Lab Sample ID: 310-108248-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.26		5.00		mg/L	5		9056A	Total/NA
Sulfate	196		5.00		mg/L	5		9056A	Total/NA
Barium	0.105		0.00200		mg/L	1		6020A	Total/NA
Boron	3.58		1.00		mg/L	5		6020A	Total/NA
Calcium	119		0.200		mg/L	1		6020A	Total/NA
Chromium	0.00501		0.00500		mg/L	1		6020A	Total/NA
Lead	0.00329		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.0354		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	636		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW13 — Lab Sample ID: 310-108248-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	12.4		5.00		mg/L	5		9056A	Total/NA
Sulfate	34.2		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.00371		0.00200		mg/L	1		6020A	Total/NA
Barium	0.318		0.00200		mg/L	1		6020A	Total/NA
Calcium	91.1		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.00127		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00210		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	454		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP — Lab Sample ID: 310-108248-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0110		0.00200		mg/L	1		6020A	Total/NA
Barium	0.215		0.00200		mg/L	1		6020A	Total/NA
Calcium	91.1		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000737		0.000500		mg/L	1		6020A	Total/NA
Lead	0.000859		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00348		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	440		30.0		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW7

Date Collected: 06/15/17 14:14
Date Received: 06/21/17 09:35

Lab Sample ID: 310-108248-1

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9.81**		5.00		mg/L			06/22/17 21:25	5
Fluoride	<0.500		0.500		mg/L			06/22/17 21:25	5
Sulfate	<5.00		5.00		mg/L			06/22/17 21:25	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	**0.0579**		0.0500		mg/L		06/22/17 10:00	06/22/17 14:42	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 17:24	1
Arsenic	**0.0469**		0.00200		mg/L		06/22/17 10:00	06/22/17 17:24	1
Barium	**0.538**		0.00200		mg/L		06/22/17 10:00	06/22/17 17:24	1
Beryllium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 17:24	1
Boron	<0.200		0.200		mg/L		06/22/17 10:00	06/26/17 12:18	1
Cadmium	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 17:24	1
Calcium	**128**		0.200		mg/L		06/22/17 10:00	06/22/17 17:24	1
Chromium	<0.00500		0.00500		mg/L		06/22/17 10:00	06/22/17 17:24	1
Cobalt	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 17:24	1
Lead	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 17:24	1
Molybdenum	<0.00200		0.00200		mg/L		06/22/17 10:00	06/22/17 17:24	1
Selenium	<0.00500		0.00500		mg/L		06/22/17 10:00	06/22/17 17:24	1
Thallium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 17:24	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/23/17 13:07	06/26/17 13:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**688**		30.0		mg/L			06/22/17 08:17	1

Client Sample ID: MW2

Date Collected: 06/15/17 13:50
Date Received: 06/21/17 09:35

Lab Sample ID: 310-108248-2

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			06/22/17 22:21	5
Fluoride	<0.500		0.500		mg/L			06/22/17 22:21	5
Sulfate	**139**		5.00		mg/L			06/22/17 22:21	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/22/17 10:00	06/22/17 14:45	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.00282**		0.00100		mg/L		06/22/17 10:00	06/22/17 17:46	1
Arsenic	<0.00200		0.00200		mg/L		06/22/17 10:00	06/22/17 17:46	1
Barium	**0.0828**		0.00200		mg/L		06/22/17 10:00	06/22/17 17:46	1
Beryllium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 17:46	1
Boron	**0.304**		0.200		mg/L		06/22/17 10:00	06/26/17 12:27	1
Cadmium	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 17:46	1
Calcium	**165**		0.200		mg/L		06/22/17 10:00	06/22/17 17:46	1
Chromium	<0.00500		0.00500		mg/L		06/22/17 10:00	06/22/17 17:46	1
Cobalt	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 17:46	1
Lead	**0.000721**		0.000500		mg/L		06/22/17 10:00	06/22/17 17:46	1
Molybdenum	**0.0106**		0.00200		mg/L		06/22/17 10:00	06/22/17 17:46	1
Selenium	<0.00500		0.00500		mg/L		06/22/17 10:00	06/22/17 17:46	1
Thallium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 17:46	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/23/17 13:07	06/26/17 13:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**780**		30.0		mg/L			06/22/17 08:17	1

Client Sample ID: MW3

Date Collected: 06/15/17 13:15
Date Received: 06/21/17 09:35

Lab Sample ID: 310-108248-3

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			06/22/17 23:16	5
Fluoride	<0.500		0.500		mg/L			06/22/17 23:16	5
Sulfate	<5.00		5.00		mg/L			06/22/17 23:16	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/22/17 10:00	06/22/17 14:47	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 17:49	1
Arsenic	**0.0101**		0.00200		mg/L		06/22/17 10:00	06/22/17 17:49	1
Barium	**0.225**		0.00200		mg/L		06/22/17 10:00	06/22/17 17:49	1
Beryllium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 17:49	1
Boron	<0.200		0.200		mg/L		06/22/17 10:00	06/26/17 12:30	1
Cadmium	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 17:49	1
Calcium	**89.4**		0.200		mg/L		06/22/17 10:00	06/22/17 17:49	1
Chromium	<0.00500		0.00500		mg/L		06/22/17 10:00	06/22/17 17:49	1
Cobalt	**0.00103**		0.000500		mg/L		06/22/17 10:00	06/22/17 17:49	1
Lead	**0.00103**		0.000500		mg/L		06/22/17 10:00	06/22/17 17:49	1
Molybdenum	**0.00298**		0.00200		mg/L		06/22/17 10:00	06/22/17 17:49	1
Selenium	<0.00500		0.00500		mg/L		06/22/17 10:00	06/22/17 17:49	1
Thallium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 17:49	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/23/17 13:07	06/26/17 13:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**386**		30.0		mg/L			06/22/17 08:17	1

Client Sample ID: MW4

Date Collected: 06/15/17 11:36
Date Received: 06/21/17 09:35

Lab Sample ID: 310-108248-4

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			06/22/17 23:34	5
Fluoride	<0.500		0.500		mg/L			06/22/17 23:34	5
Sulfate	**32.2**		5.00		mg/L			06/22/17 23:34	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/22/17 10:00	06/22/17 14:49	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 17:52	1
Arsenic	<0.00200		0.00200		mg/L		06/22/17 10:00	06/22/17 17:52	1
Barium	**0.249**		0.00200		mg/L		06/22/17 10:00	06/22/17 17:52	1
Beryllium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 17:52	1
Boron	<0.200		0.200		mg/L		06/22/17 10:00	06/26/17 12:33	1
Cadmium	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 17:52	1
Calcium	**122**		0.200		mg/L		06/22/17 10:00	06/22/17 17:52	1
Chromium	<0.00500		0.00500		mg/L		06/22/17 10:00	06/22/17 17:52	1
Cobalt	**0.000521**		0.000500		mg/L		06/22/17 10:00	06/22/17 17:52	1
Lead	**0.00165**		0.000500		mg/L		06/22/17 10:00	06/22/17 17:52	1
Molybdenum	**0.00233**		0.00200		mg/L		06/22/17 10:00	06/22/17 17:52	1
Selenium	<0.00500		0.00500		mg/L		06/22/17 10:00	06/22/17 17:52	1
Thallium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 17:52	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/23/17 13:07	06/26/17 13:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**552**		30.0		mg/L			06/22/17 08:17	1

Client Sample ID: MW5

Date Collected: 06/15/17 12:14
Date Received: 06/21/17 09:35

Lab Sample ID: 310-108248-5

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10.6**		5.00		mg/L			06/22/17 23:53	5
Fluoride	<0.500		0.500		mg/L			06/22/17 23:53	5
Sulfate	**243**		20.0		mg/L			06/23/17 00:11	20

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/22/17 10:00	06/22/17 14:55	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 17:55	1
Arsenic	**0.00207**		0.00200		mg/L		06/22/17 10:00	06/22/17 17:55	1
Barium	**0.0416**		0.00200		mg/L		06/22/17 10:00	06/22/17 17:55	1
Beryllium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 17:55	1
Boron	**3.82**		1.00		mg/L		06/22/17 10:00	06/26/17 12:36	5
Cadmium	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 17:55	1
Calcium	**190**		0.200		mg/L		06/22/17 10:00	06/22/17 17:55	1
Chromium	<0.00500		0.00500		mg/L		06/22/17 10:00	06/22/17 17:55	1
Cobalt	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 17:55	1
Lead	**0.000601**		0.000500		mg/L		06/22/17 10:00	06/22/17 17:55	1
Molybdenum	**0.0120**		0.00200		mg/L		06/22/17 10:00	06/22/17 17:55	1
Selenium	<0.00500		0.00500		mg/L		06/22/17 10:00	06/22/17 17:55	1
Thallium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 17:55	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.000200**		0.000200		mg/L		06/23/17 13:07	06/26/17 13:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1090**		60.0		mg/L			06/22/17 08:17	1

Client Sample ID: MW6

Date Collected: 06/15/17 12:45
Date Received: 06/21/17 09:35

Lab Sample ID: 310-108248-6

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6.26**		5.00		mg/L			06/23/17 00:30	5
Fluoride	<0.500		0.500		mg/L			06/23/17 00:30	5
Sulfate	**196**		5.00		mg/L			06/23/17 00:30	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/22/17 10:00	06/22/17 14:58	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 17:58	1
Arsenic	<0.00200		0.00200		mg/L		06/22/17 10:00	06/22/17 17:58	1
Barium	**0.105**		0.00200		mg/L		06/22/17 10:00	06/22/17 17:58	1
Beryllium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 17:58	1
Boron	**3.58**		1.00		mg/L		06/22/17 10:00	06/26/17 12:39	5
Cadmium	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 17:58	1
Calcium	**119**		0.200		mg/L		06/22/17 10:00	06/22/17 17:58	1
Chromium	**0.00501**		0.00500		mg/L		06/22/17 10:00	06/22/17 17:58	1
Cobalt	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 17:58	1
Lead	**0.00329**		0.000500		mg/L		06/22/17 10:00	06/22/17 17:58	1
Molybdenum	**0.0354**		0.00200		mg/L		06/22/17 10:00	06/22/17 17:58	1
Selenium	<0.00500		0.00500		mg/L		06/22/17 10:00	06/22/17 17:58	1
Thallium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 17:58	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/23/17 13:07	06/26/17 13:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**636**		30.0		mg/L			06/22/17 08:17	1

Client Sample ID: MW13

Date Collected: 06/15/17 11:00
Date Received: 06/21/17 09:35

Lab Sample ID: 310-108248-7

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**12.4**		5.00		mg/L			06/23/17 00:48	5
Fluoride	<0.500		0.500		mg/L			06/23/17 00:48	5
Sulfate	**34.2**		5.00		mg/L			06/23/17 00:48	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/22/17 10:00	06/22/17 15:00	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 18:02	1
Arsenic	**0.00371**		0.00200		mg/L		06/22/17 10:00	06/22/17 18:02	1
Barium	**0.318**		0.00200		mg/L		06/22/17 10:00	06/22/17 18:02	1
Beryllium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 18:02	1
Boron	<0.200		0.200		mg/L		06/22/17 10:00	06/26/17 12:56	1
Cadmium	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 18:02	1
Calcium	**91.1**		0.200		mg/L		06/22/17 10:00	06/22/17 18:02	1
Chromium	<0.00500		0.00500		mg/L		06/22/17 10:00	06/22/17 18:02	1
Cobalt	**0.00127**		0.000500		mg/L		06/22/17 10:00	06/22/17 18:02	1
Lead	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 18:02	1
Molybdenum	**0.00210**		0.00200		mg/L		06/22/17 10:00	06/22/17 18:02	1
Selenium	<0.00500		0.00500		mg/L		06/22/17 10:00	06/22/17 18:02	1
Thallium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 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		06/23/17 13:07	06/26/17 13:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**454**		30.0		mg/L			06/22/17 08:17	1

Client Sample ID: DUP

Date Collected: 06/15/17 13:17
Date Received: 06/21/17 09:35

Lab Sample ID: 310-108248-8

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			06/23/17 01:07	5
Fluoride	<0.500		0.500		mg/L			06/23/17 01:07	5
Sulfate	<5.00		5.00		mg/L			06/23/17 01:07	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/22/17 10:00	06/22/17 15:02	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 18:05	1
Arsenic	**0.0110**		0.00200		mg/L		06/22/17 10:00	06/22/17 18:05	1
Barium	**0.215**		0.00200		mg/L		06/22/17 10:00	06/22/17 18:05	1
Beryllium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 18:05	1
Boron	<0.200		0.200		mg/L		06/22/17 10:00	06/26/17 12:59	1
Cadmium	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 18:05	1
Calcium	**91.1**		0.200		mg/L		06/22/17 10:00	06/22/17 18:05	1
Chromium	<0.00500		0.00500		mg/L		06/22/17 10:00	06/22/17 18:05	1
Cobalt	**0.000737**		0.000500		mg/L		06/22/17 10:00	06/22/17 18:05	1
Lead	**0.000859**		0.000500		mg/L		06/22/17 10:00	06/22/17 18:05	1
Molybdenum	**0.00348**		0.00200		mg/L		06/22/17 10:00	06/22/17 18:05	1
Selenium	<0.00500		0.00500		mg/L		06/22/17 10:00	06/22/17 18:05	1
Thallium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 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		06/23/17 13:07	06/26/17 13:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**440**		30.0		mg/L			06/22/17 08:17	1

Qualifiers

HPLC/IC

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

Metals

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

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 310-170599/3
Matrix: Water
Analysis Batch: 170599

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			06/22/17 20:48	1
Fluoride	<0.100		0.100		mg/L			06/22/17 20:48	1
Sulfate	<1.00		1.00		mg/L			06/22/17 20:48	1

Lab Sample ID: LCS 310-170599/4
Matrix: Water
Analysis Batch: 170599

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	7.564		mg/L		101	90 - 110
Fluoride	1.50	1.542		mg/L		103	90 - 110
Sulfate	7.50	7.256		mg/L		97	90 - 110

Lab Sample ID: 310-108248-2 MS
Matrix: Ground Water
Analysis Batch: 170599

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	26.72		mg/L		96	80 - 120
Fluoride	<0.500		5.00	5.309		mg/L		100	80 - 120
Sulfate	139		25.0	164.8	4	mg/L		102	80 - 120

Lab Sample ID: 310-108248-2 MSD
Matrix: Ground Water
Analysis Batch: 170599

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	26.56		mg/L		96	80 - 120	1	15
Fluoride	<0.500		5.00	5.292		mg/L		100	80 - 120	0	15
Sulfate	139		25.0	165.2	4	mg/L		103	80 - 120	0	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 310-170142/1-A
Matrix: Water
Analysis Batch: 170360

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 170142

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/22/17 10:00	06/22/17 14:30	1

Lab Sample ID: LCS 310-170142/2-A
Matrix: Water
Analysis Batch: 170360

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 170142

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	2.00	1.952		mg/L		98	80 - 120

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 310-170163/1-A
Matrix: Water
Analysis Batch: 170355

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 170163

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 17:18	1
Arsenic	<0.00200		0.00200		mg/L		06/22/17 10:00	06/22/17 17:18	1
Barium	<0.00200		0.00200		mg/L		06/22/17 10:00	06/22/17 17:18	1
Beryllium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 17:18	1
Cadmium	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 17:18	1
Calcium	<0.200		0.200		mg/L		06/22/17 10:00	06/22/17 17:18	1
Chromium	<0.00500		0.00500		mg/L		06/22/17 10:00	06/22/17 17:18	1
Cobalt	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 17:18	1
Lead	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 17:18	1
Molybdenum	<0.00200		0.00200		mg/L		06/22/17 10:00	06/22/17 17:18	1
Selenium	<0.00500		0.00500		mg/L		06/22/17 10:00	06/22/17 17:18	1
Thallium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 17:18	1

Lab Sample ID: MB 310-170163/1-A
Matrix: Water
Analysis Batch: 170653

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 170163

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.200		0.200		mg/L		06/22/17 10:00	06/26/17 12:11	1

Lab Sample ID: LCS 310-170163/2-A
Matrix: Water
Analysis Batch: 170355

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 170163

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0200	0.01960		mg/L		98	80 - 120
Arsenic	0.0400	0.03907		mg/L		98	80 - 120
Barium	0.0400	0.04200		mg/L		105	80 - 120
Beryllium	0.0200	0.02042		mg/L		102	80 - 120
Cadmium	0.0200	0.02078		mg/L		104	80 - 120
Calcium	2.00	2.093		mg/L		105	80 - 120
Chromium	0.0400	0.04139		mg/L		103	80 - 120
Cobalt	0.0200	0.02061		mg/L		103	80 - 120
Lead	0.0200	0.02069		mg/L		103	80 - 120
Molybdenum	0.0400	0.04018		mg/L		100	80 - 120
Selenium	0.0400	0.04077		mg/L		102	80 - 120
Thallium	0.0160	0.01636		mg/L		102	80 - 120

Lab Sample ID: LCS 310-170163/2-A
Matrix: Water
Analysis Batch: 170653

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 170163

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.880	0.9071		mg/L		103	80 - 120

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

Lab Sample ID: 310-108248-1 MS
Matrix: Ground Water
Analysis Batch: 170355

Client Sample ID: MW7
Prep Type: Total/NA
Prep Batch: 170163

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.00100		0.0200	0.01999		mg/L		100	75 - 125
Arsenic	0.0469		0.0400	0.08617		mg/L		98	75 - 125
Barium	0.538		0.0400	0.6255	4	mg/L		220	75 - 125
Beryllium	<0.00100		0.0200	0.02098		mg/L		105	75 - 125
Cadmium	<0.000500		0.0200	0.02082		mg/L		104	75 - 125
Calcium	128		2.00	131.9	4	mg/L		174	75 - 125
Chromium	<0.00500		0.0400	0.04142		mg/L		104	75 - 125
Cobalt	<0.000500		0.0200	0.02024		mg/L		100	75 - 125
Lead	<0.000500		0.0200	0.01997		mg/L		100	75 - 125
Molybdenum	<0.00200		0.0400	0.04345		mg/L		104	75 - 125
Selenium	<0.00500		0.0400	0.03979		mg/L		99	75 - 125
Thallium	<0.00100		0.0160	0.01669		mg/L		104	75 - 125

Lab Sample ID: 310-108248-1 MS
Matrix: Ground Water
Analysis Batch: 170653

Client Sample ID: MW7
Prep Type: Total/NA
Prep Batch: 170163

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	<0.200		0.880	1.178		mg/L		113	75 - 125

Lab Sample ID: 310-108248-1 MSD
Matrix: Ground Water
Analysis Batch: 170355

Client Sample ID: MW7
Prep Type: Total/NA
Prep Batch: 170163

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	<0.00100		0.0200	0.01948		mg/L		97	75 - 125	3	20
Arsenic	0.0469		0.0400	0.08453		mg/L		94	75 - 125	2	20
Barium	0.538		0.0400	0.6131	4	mg/L		189	75 - 125	2	20
Beryllium	<0.00100		0.0200	0.02055		mg/L		103	75 - 125	2	20
Cadmium	<0.000500		0.0200	0.02055		mg/L		103	75 - 125	1	20
Calcium	128		2.00	129.2	4	mg/L		39	75 - 125	2	20
Chromium	<0.00500		0.0400	0.04050		mg/L		101	75 - 125	2	20
Cobalt	<0.000500		0.0200	0.01976		mg/L		97	75 - 125	2	20
Lead	<0.000500		0.0200	0.01972		mg/L		99	75 - 125	1	20
Molybdenum	<0.00200		0.0400	0.04295		mg/L		103	75 - 125	1	20
Selenium	<0.00500		0.0400	0.03928		mg/L		98	75 - 125	1	20
Thallium	<0.00100		0.0160	0.01641		mg/L		103	75 - 125	2	20

Lab Sample ID: 310-108248-1 MSD
Matrix: Ground Water
Analysis Batch: 170653

Client Sample ID: MW7
Prep Type: Total/NA
Prep Batch: 170163

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	<0.200		0.880	1.157		mg/L		111	75 - 125	2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-170420/1-A
Matrix: Water
Analysis Batch: 170613

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 170420

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/23/17 13:07	06/26/17 13:04	1

Lab Sample ID: LCS 310-170420/2-A
Matrix: Water
Analysis Batch: 170613

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 170420

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00167	0.001501		mg/L		90	80 - 120

Lab Sample ID: 310-108248-2 MS
Matrix: Ground Water
Analysis Batch: 170613

Client Sample ID: MW2
Prep Type: Total/NA
Prep Batch: 170420

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.000200		0.00167	0.001688		mg/L		101	80 - 120

Lab Sample ID: 310-108248-2 MSD
Matrix: Ground Water
Analysis Batch: 170613

Client Sample ID: MW2
Prep Type: Total/NA
Prep Batch: 170420

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000200		0.00167	0.001711		mg/L		103	80 - 120	1	20

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

Lab Sample ID: MB 310-170221/1
Matrix: Water
Analysis Batch: 170221

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 08:17	1

Lab Sample ID: LCS 310-170221/2
Matrix: Water
Analysis Batch: 170221

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	1050		mg/L		105	90 - 110

Lab Sample ID: 310-108248-1 DU
Matrix: Ground Water
Analysis Batch: 170221

Client Sample ID: MW7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	688		544.0		mg/L		23	24

HPLC/IC

Analysis Batch: 170599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108248-1	MW7	Total/NA	Ground Water	9056A	
310-108248-2	MW2	Total/NA	Ground Water	9056A	
310-108248-3	MW3	Total/NA	Ground Water	9056A	
310-108248-4	MW4	Total/NA	Ground Water	9056A	
310-108248-5	MW5	Total/NA	Ground Water	9056A	
310-108248-5	MW5	Total/NA	Ground Water	9056A	
310-108248-6	MW6	Total/NA	Ground Water	9056A	
310-108248-7	MW13	Total/NA	Ground Water	9056A	
310-108248-8	DUP	Total/NA	Ground Water	9056A	
MB 310-170599/3	Method Blank	Total/NA	Water	9056A	
LCS 310-170599/4	Lab Control Sample	Total/NA	Water	9056A	
310-108248-2 MS	MW2	Total/NA	Ground Water	9056A	
310-108248-2 MSD	MW2	Total/NA	Ground Water	9056A	

Metals

Prep Batch: 170142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108248-1	MW7	Total/NA	Ground Water	3010A	
310-108248-2	MW2	Total/NA	Ground Water	3010A	
310-108248-3	MW3	Total/NA	Ground Water	3010A	
310-108248-4	MW4	Total/NA	Ground Water	3010A	
310-108248-5	MW5	Total/NA	Ground Water	3010A	
310-108248-6	MW6	Total/NA	Ground Water	3010A	
310-108248-7	MW13	Total/NA	Ground Water	3010A	
310-108248-8	DUP	Total/NA	Ground Water	3010A	
MB 310-170142/1-A	Method Blank	Total/NA	Water	3010A	
LCS 310-170142/2-A	Lab Control Sample	Total/NA	Water	3010A	

Prep Batch: 170163

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108248-1	MW7	Total/NA	Ground Water	3010A	
310-108248-2	MW2	Total/NA	Ground Water	3010A	
310-108248-3	MW3	Total/NA	Ground Water	3010A	
310-108248-4	MW4	Total/NA	Ground Water	3010A	
310-108248-5	MW5	Total/NA	Ground Water	3010A	
310-108248-6	MW6	Total/NA	Ground Water	3010A	
310-108248-7	MW13	Total/NA	Ground Water	3010A	
310-108248-8	DUP	Total/NA	Ground Water	3010A	
MB 310-170163/1-A	Method Blank	Total/NA	Water	3010A	
LCS 310-170163/2-A	Lab Control Sample	Total/NA	Water	3010A	
310-108248-1 MS	MW7	Total/NA	Ground Water	3010A	
310-108248-1 MSD	MW7	Total/NA	Ground Water	3010A	

Analysis Batch: 170355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108248-1	MW7	Total/NA	Ground Water	6020A	170163
310-108248-2	MW2	Total/NA	Ground Water	6020A	170163
310-108248-3	MW3	Total/NA	Ground Water	6020A	170163
310-108248-4	MW4	Total/NA	Ground Water	6020A	170163

Metals (Continued)

Analysis Batch: 170355 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108248-5	MW5	Total/NA	Ground Water	6020A	170163
310-108248-6	MW6	Total/NA	Ground Water	6020A	170163
310-108248-7	MW13	Total/NA	Ground Water	6020A	170163
310-108248-8	DUP	Total/NA	Ground Water	6020A	170163
MB 310-170163/1-A	Method Blank	Total/NA	Water	6020A	170163
LCS 310-170163/2-A	Lab Control Sample	Total/NA	Water	6020A	170163
310-108248-1 MS	MW7	Total/NA	Ground Water	6020A	170163
310-108248-1 MSD	MW7	Total/NA	Ground Water	6020A	170163

Analysis Batch: 170360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108248-1	MW7	Total/NA	Ground Water	6010C	170142
310-108248-2	MW2	Total/NA	Ground Water	6010C	170142
310-108248-3	MW3	Total/NA	Ground Water	6010C	170142
310-108248-4	MW4	Total/NA	Ground Water	6010C	170142
310-108248-5	MW5	Total/NA	Ground Water	6010C	170142
310-108248-6	MW6	Total/NA	Ground Water	6010C	170142
310-108248-7	MW13	Total/NA	Ground Water	6010C	170142
310-108248-8	DUP	Total/NA	Ground Water	6010C	170142
MB 310-170142/1-A	Method Blank	Total/NA	Water	6010C	170142
LCS 310-170142/2-A	Lab Control Sample	Total/NA	Water	6010C	170142

Prep Batch: 170420

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108248-1	MW7	Total/NA	Ground Water	7470A	
310-108248-2	MW2	Total/NA	Ground Water	7470A	
310-108248-3	MW3	Total/NA	Ground Water	7470A	
310-108248-4	MW4	Total/NA	Ground Water	7470A	
310-108248-5	MW5	Total/NA	Ground Water	7470A	
310-108248-6	MW6	Total/NA	Ground Water	7470A	
310-108248-7	MW13	Total/NA	Ground Water	7470A	
310-108248-8	DUP	Total/NA	Ground Water	7470A	
MB 310-170420/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-170420/2-A	Lab Control Sample	Total/NA	Water	7470A	
310-108248-2 MS	MW2	Total/NA	Ground Water	7470A	
310-108248-2 MSD	MW2	Total/NA	Ground Water	7470A	

Analysis Batch: 170613

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108248-1	MW7	Total/NA	Ground Water	7470A	170420
310-108248-2	MW2	Total/NA	Ground Water	7470A	170420
310-108248-3	MW3	Total/NA	Ground Water	7470A	170420
310-108248-4	MW4	Total/NA	Ground Water	7470A	170420
310-108248-5	MW5	Total/NA	Ground Water	7470A	170420
310-108248-6	MW6	Total/NA	Ground Water	7470A	170420
310-108248-7	MW13	Total/NA	Ground Water	7470A	170420
310-108248-8	DUP	Total/NA	Ground Water	7470A	170420
MB 310-170420/1-A	Method Blank	Total/NA	Water	7470A	170420
LCS 310-170420/2-A	Lab Control Sample	Total/NA	Water	7470A	170420
310-108248-2 MS	MW2	Total/NA	Ground Water	7470A	170420
310-108248-2 MSD	MW2	Total/NA	Ground Water	7470A	170420

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-108248-1

Analysis Batch: 170653

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108248-1	MW7	Total/NA	Ground Water	6020A	170163
310-108248-2	MW2	Total/NA	Ground Water	6020A	170163
310-108248-3	MW3	Total/NA	Ground Water	6020A	170163
310-108248-4	MW4	Total/NA	Ground Water	6020A	170163
310-108248-5	MW5	Total/NA	Ground Water	6020A	170163
310-108248-6	MW6	Total/NA	Ground Water	6020A	170163
310-108248-7	MW13	Total/NA	Ground Water	6020A	170163
310-108248-8	DUP	Total/NA	Ground Water	6020A	170163
MB 310-170163/1-A	Method Blank	Total/NA	Water	6020A	170163
LCS 310-170163/2-A	Lab Control Sample	Total/NA	Water	6020A	170163
310-108248-1 MS	MW7	Total/NA	Ground Water	6020A	170163
310-108248-1 MSD	MW7	Total/NA	Ground Water	6020A	170163

General Chemistry

Analysis Batch: 170221

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108248-1	MW7	Total/NA	Ground Water	SM 2540C	
310-108248-2	MW2	Total/NA	Ground Water	SM 2540C	
310-108248-3	MW3	Total/NA	Ground Water	SM 2540C	
310-108248-4	MW4	Total/NA	Ground Water	SM 2540C	
310-108248-5	MW5	Total/NA	Ground Water	SM 2540C	
310-108248-6	MW6	Total/NA	Ground Water	SM 2540C	
310-108248-7	MW13	Total/NA	Ground Water	SM 2540C	
310-108248-8	DUP	Total/NA	Ground Water	SM 2540C	
MB 310-170221/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-170221/2	Lab Control Sample	Total/NA	Water	SM 2540C	
310-108248-1 DU	MW7	Total/NA	Ground Water	SM 2540C	

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-108248-1

Client Sample ID: MW7

Date Collected: 06/15/17 14:14
Date Received: 06/21/17 09:35

Lab Sample ID: 310-108248-1

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	170599	06/22/17 21:25	SAD	TAL CF
Total/NA	Prep	3010A			170142	06/22/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	170360	06/22/17 14:42	OAD	TAL CF
Total/NA	Prep	3010A			170163	06/22/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	170355	06/22/17 17:24	OAD	TAL CF
Total/NA	Prep	3010A			170163	06/22/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	170653	06/26/17 12:18	OAD	TAL CF
Total/NA	Prep	7470A			170420	06/23/17 13:07	MEG	TAL CF
Total/NA	Analysis	7470A		1	170613	06/26/17 13:07	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	170221	06/22/17 08:17	SAS	TAL CF

Client Sample ID: MW2

Date Collected: 06/15/17 13:50
Date Received: 06/21/17 09:35

Lab Sample ID: 310-108248-2

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	170599	06/22/17 22:21	SAD	TAL CF
Total/NA	Prep	3010A			170142	06/22/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	170360	06/22/17 14:45	OAD	TAL CF
Total/NA	Prep	3010A			170163	06/22/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	170355	06/22/17 17:46	OAD	TAL CF
Total/NA	Prep	3010A			170163	06/22/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	170653	06/26/17 12:27	OAD	TAL CF
Total/NA	Prep	7470A			170420	06/23/17 13:07	MEG	TAL CF
Total/NA	Analysis	7470A		1	170613	06/26/17 13:13	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	170221	06/22/17 08:17	SAS	TAL CF

Client Sample ID: MW3

Date Collected: 06/15/17 13:15
Date Received: 06/21/17 09:35

Lab Sample ID: 310-108248-3

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	170599	06/22/17 23:16	SAD	TAL CF
Total/NA	Prep	3010A			170142	06/22/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	170360	06/22/17 14:47	OAD	TAL CF
Total/NA	Prep	3010A			170163	06/22/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	170355	06/22/17 17:49	OAD	TAL CF
Total/NA	Prep	3010A			170163	06/22/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	170653	06/26/17 12:30	OAD	TAL CF
Total/NA	Prep	7470A			170420	06/23/17 13:07	MEG	TAL CF
Total/NA	Analysis	7470A		1	170613	06/26/17 13:18	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	170221	06/22/17 08:17	SAS	TAL CF

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-108248-1

Client Sample ID: MW4

Date Collected: 06/15/17 11:36
Date Received: 06/21/17 09:35

Lab Sample ID: 310-108248-4

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	170599	06/22/17 23:34	SAD	TAL CF
Total/NA	Prep	3010A			170142	06/22/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	170360	06/22/17 14:49	OAD	TAL CF
Total/NA	Prep	3010A			170163	06/22/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	170355	06/22/17 17:52	OAD	TAL CF
Total/NA	Prep	3010A			170163	06/22/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	170653	06/26/17 12:33	OAD	TAL CF
Total/NA	Prep	7470A			170420	06/23/17 13:07	MEG	TAL CF
Total/NA	Analysis	7470A		1	170613	06/26/17 13:19	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	170221	06/22/17 08:17	SAS	TAL CF

Client Sample ID: MW5

Date Collected: 06/15/17 12:14
Date Received: 06/21/17 09:35

Lab Sample ID: 310-108248-5

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	170599	06/22/17 23:53	SAD	TAL CF
Total/NA	Analysis	9056A		20	170599	06/23/17 00:11	SAD	TAL CF
Total/NA	Prep	3010A			170142	06/22/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	170360	06/22/17 14:55	OAD	TAL CF
Total/NA	Prep	3010A			170163	06/22/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	170355	06/22/17 17:55	OAD	TAL CF
Total/NA	Prep	3010A			170163	06/22/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		5	170653	06/26/17 12:36	OAD	TAL CF
Total/NA	Prep	7470A			170420	06/23/17 13:07	MEG	TAL CF
Total/NA	Analysis	7470A		1	170613	06/26/17 13:21	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	170221	06/22/17 08:17	SAS	TAL CF

Client Sample ID: MW6

Date Collected: 06/15/17 12:45
Date Received: 06/21/17 09:35

Lab Sample ID: 310-108248-6

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	170599	06/23/17 00:30	SAD	TAL CF
Total/NA	Prep	3010A			170142	06/22/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	170360	06/22/17 14:58	OAD	TAL CF
Total/NA	Prep	3010A			170163	06/22/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	170355	06/22/17 17:58	OAD	TAL CF
Total/NA	Prep	3010A			170163	06/22/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		5	170653	06/26/17 12:39	OAD	TAL CF
Total/NA	Prep	7470A			170420	06/23/17 13:07	MEG	TAL CF
Total/NA	Analysis	7470A		1	170613	06/26/17 13:23	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	170221	06/22/17 08:17	SAS	TAL CF

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-108248-1

Client Sample ID: MW13

Date Collected: 06/15/17 11:00
Date Received: 06/21/17 09:35

Lab Sample ID: 310-108248-7

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	170599	06/23/17 00:48	SAD	TAL CF
Total/NA	Prep	3010A			170142	06/22/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	170360	06/22/17 15:00	OAD	TAL CF
Total/NA	Prep	3010A			170163	06/22/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	170355	06/22/17 18:02	OAD	TAL CF
Total/NA	Prep	3010A			170163	06/22/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	170653	06/26/17 12:56	OAD	TAL CF
Total/NA	Prep	7470A			170420	06/23/17 13:07	MEG	TAL CF
Total/NA	Analysis	7470A		1	170613	06/26/17 13:24	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	170221	06/22/17 08:17	SAS	TAL CF

Client Sample ID: DUP

Date Collected: 06/15/17 13:17
Date Received: 06/21/17 09:35

Lab Sample ID: 310-108248-8

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	170599	06/23/17 01:07	SAD	TAL CF
Total/NA	Prep	3010A			170142	06/22/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	170360	06/22/17 15:02	OAD	TAL CF
Total/NA	Prep	3010A			170163	06/22/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	170355	06/22/17 18:05	OAD	TAL CF
Total/NA	Prep	3010A			170163	06/22/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	170653	06/26/17 12:59	OAD	TAL CF
Total/NA	Prep	7470A			170420	06/23/17 13:07	MEG	TAL CF
Total/NA	Analysis	7470A		1	170613	06/26/17 13:26	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	170221	06/22/17 08:17	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 2 Landfill CCR

TestAmerica Job ID: 310-108248-1

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 2 Landfill CCR

TestAmerica Job ID: 310-108248-1

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

310-108248 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: OPPD

City/State: Omaha NE | Project: NE City LF Unit 2

Receipt Information

Date/Time Received: 06 21 17 935 | Received By: GL

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: G-50

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? ↓

MW-5, MW-6 Dup

Temperature Record

Coolant: ☐ Wet ice ☐ Blue ice ☐ Dry ice ☒ Other: melted ☐ NONE

Thermometer ID: G | Correction Factor (°C): 0

• **Temp Blank Temperature** – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 12.4 | Corrected Temp (°C): 12.4

• **Sample Container Temperature**

Sample ID(s) & bottle type used: CONTAINER 1 Pl 1L HNO_3 – MW-5 | CONTAINER 2 Pl 1L HNO_3 – Dup

Uncorrected Temp (°C): TEMP 1 10.8 TEMP 2 10.8 | Corrected Temp (°C): TEMP 1 10.7 TEMP 2 10.7

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: NE City Unit 2

Receipt Information

Date/Time Received: 06.21.17 935 | Received By: GL

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:	N-6
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: G | Correction Factor (°C): 0

• **Temp Blank Temperature** – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

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

• **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

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:	Analysis 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 2 Landfill CCR	TestAmerica Project #: 31007559	
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		
MW7	6/15/17	1414	G	GW	Y	N	X	X	X		
MW2		1350	G	GW			X	X	X		
MW3		1315	G	GW			X	X	X		
MW4		1136	G	GW			X	X	X		
MW5		1214	G	GW			X	X	X		
MW6		1245	G	GW			X	X	X		
MW13		1100	G	GW			X	X	X		
DUP		1317	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:	~~BT~~ 6/20/17 1000			6-21-17 935	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:

6/28/2017

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MW7	310-108248-A-1	Plastic 250ml - with Nitric Acid			
MW7	310-108248-C-1	Plastic 1 liter - Nitric Acid	<2		
MW7	310-108248-D-1	Plastic 1 liter - Nitric Acid	<2		
MW2	310-108248-A-2	Plastic 250ml - with Nitric Acid			
MW2	310-108248-C-2	Plastic 1 liter - Nitric Acid	<2		
MW2	310-108248-D-2	Plastic 1 liter - Nitric Acid	<2		
MW3	310-108248-A-3	Plastic 250ml - with Nitric Acid			
MW3	310-108248-C-3	Plastic 1 liter - Nitric Acid	<2		
MW3	310-108248-D-3	Plastic 1 liter - Nitric Acid	<2		
MW4	310-108248-A-4	Plastic 250ml - with Nitric Acid			
MW4	310-108248-C-4	Plastic 1 liter - Nitric Acid	<2		
MW4	310-108248-D-4	Plastic 1 liter - Nitric Acid	<2		
MW5	310-108248-A-5	Plastic 250ml - with Nitric Acid			
MW5	310-108248-C-5	Plastic 1 liter - Nitric Acid	<2		
MW5	310-108248-D-5	Plastic 1 liter - Nitric Acid	<2		
MW6	310-108248-A-6	Plastic 250ml - with Nitric Acid			
MW6	310-108248-C-6	Plastic 1 liter - Nitric Acid	<2		
MW6	310-108248-D-6	Plastic 1 liter - Nitric Acid	<2		
MW13	310-108248-A-7	Plastic 250ml - with Nitric Acid			
MW13	310-108248-C-7	Plastic 1 liter - Nitric Acid	<2		
MW13	310-108248-D-7	Plastic 1 liter - Nitric Acid	<2		
DUP	310-108248-A-8	Plastic 250ml - with Nitric Acid			
DUP	310-108248-C-8	Plastic 1 liter - Nitric Acid	<2		
DUP	310-108248-D-8	Plastic 1 liter - Nitric Acid	<2		

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-108248-1

Login Number: 108248
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.	False	Water present in one cooler; indicates evidence of melted ice.
Cooler Temperature is acceptable.	False	Cooler temperature of one cooler was outside required temperature criteria.
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: 310-110175-2
Client Project/Site: Nebraska City Unit 2 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 11:35:28 AM

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

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Case Narrative

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-110175-2

Job ID: 310-110175-2

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-110175-2

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 1.8º 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 2 Landfill CCR

TestAmerica Job ID: 310-110175-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-110175-1	MW7	Ground Water	07/12/17 14:30	07/19/17 09:25
310-110175-2	MW2	Ground Water	07/12/17 13:30	07/19/17 09:25
310-110175-3	MW3	Ground Water	07/12/17 09:58	07/19/17 09:25
310-110175-4	MW4	Ground Water	07/12/17 10:46	07/19/17 09:25
310-110175-5	MW5	Ground Water	07/12/17 12:15	07/19/17 09:25
310-110175-6	MW6	Ground Water	07/12/17 12:50	07/19/17 09:25
310-110175-7	MW13	Ground Water	07/12/17 11:20	07/19/17 09:25
310-110175-8	DUP	Ground Water	07/12/17 08:00	07/19/17 09:25

Client Sample ID: MW7
Date Collected: 07/12/17 14:30
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110175-1
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	0.408		0.107	0.113	1.00	0.0740	pCi/L	07/24/17 10:50	08/15/17 06:41	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.1*		*40 - 110*	*07/24/17 10:50*	*08/15/17 06:41*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.747		0.231	0.241	1.00	0.288	pCi/L	07/24/17 12:10	08/03/17 09:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.1*		*40 - 110*	*07/24/17 12:10*	*08/03/17 09:25*	*1*
Y Carrier	*92.3*		*40 - 110*	*07/24/17 12:10*	*08/03/17 09:25*	*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	1.15		0.255	0.267	5.00	0.288	pCi/L		08/15/17 14:52	1

Client Sample ID: MW2
Date Collected: 07/12/17 13:30
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110175-2
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	0.0861	U	0.0634	0.0639	1.00	0.0885	pCi/L	07/24/17 10:50	08/15/17 06:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.0*		*40 - 110*	*07/24/17 10:50*	*08/15/17 06:42*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.394**		0.231	0.234	1.00	0.350	pCi/L	07/24/17 12:10	08/03/17 09:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.0*		*40 - 110*	*07/24/17 12:10*	*08/03/17 09:25*	*1*
Y Carrier	*94.5*		*40 - 110*	*07/24/17 12:10*	*08/03/17 09:25*	*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	**0.480**		0.240	0.243	5.00	0.350	pCi/L		08/15/17 14:52	1

Client Sample ID: MW3
Date Collected: 07/12/17 09:58
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110175-3
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	0.294		0.103	0.106	1.00	0.103	pCi/L	07/24/17 10:50	08/15/17 06:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*80.5*		*40 - 110*	*07/24/17 10:50*	*08/15/17 06:42*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.635		0.269	0.275	1.00	0.385	pCi/L	07/24/17 12:10	08/03/17 09:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*80.5*		*40 - 110*	*07/24/17 12:10*	*08/03/17 09:25*	*1*
Y Carrier	*102*		*40 - 110*	*07/24/17 12:10*	*08/03/17 09:25*	*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	0.928		0.288	0.295	5.00	0.385	pCi/L		08/15/17 14:52	1

Client Sample ID: MW4
Date Collected: 07/12/17 10:46
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110175-4
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	0.199		0.0851	0.0869	1.00	0.0937	pCi/L	07/24/17 10:50	08/15/17 06:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.6*		*40 - 110*	*07/24/17 10:50*	*08/15/17 06:42*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.22		0.277	0.299	1.00	0.310	pCi/L	07/24/17 12:10	08/03/17 09:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.6*		*40 - 110*	*07/24/17 12:10*	*08/03/17 09:25*	*1*
Y Carrier	*97.1*		*40 - 110*	*07/24/17 12:10*	*08/03/17 09:25*	*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	1.42		0.290	0.311	5.00	0.310	pCi/L		08/15/17 14:52	1

Client Sample ID: MW5
Date Collected: 07/12/17 12:15
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110175-5
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	**0.0916**		0.0588	0.0593	1.00	0.0711	pCi/L	07/24/17 10:50	08/15/17 06:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.6*		*40 - 110*	*07/24/17 10:50*	*08/15/17 06:43*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.415	U	0.280	0.282	1.00	0.438	pCi/L	07/24/17 12:10	08/03/17 09:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.6*		*40 - 110*	*07/24/17 12:10*	*08/03/17 09:25*	*1*
Y Carrier	*92.9*		*40 - 110*	*07/24/17 12:10*	*08/03/17 09:25*	*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	**0.507**		0.286	0.288	5.00	0.438	pCi/L		08/15/17 14:52	1

Client Sample ID: MW6
Date Collected: 07/12/17 12:50
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110175-6
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	0.104		0.0600	0.0607	1.00	0.0688	pCi/L	07/24/17 10:50	08/15/17 06:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.7*		*40 - 110*	*07/24/17 10:50*	*08/15/17 06:43*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.845		0.261	0.272	1.00	0.343	pCi/L	07/24/17 12:10	08/03/17 09:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.7*		*40 - 110*	*07/24/17 12:10*	*08/03/17 09:25*	*1*
Y Carrier	*96.8*		*40 - 110*	*07/24/17 12:10*	*08/03/17 09:25*	*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	0.949		0.268	0.279	5.00	0.343	pCi/L		08/15/17 14:52	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-110175-2

Client Sample ID: MW13
Date Collected: 07/12/17 11:20
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110175-7
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	0.194		0.0805	0.0824	1.00	0.0797	pCi/L	07/24/17 10:50	08/15/17 06:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.0*		*40 - 110*	*07/24/17 10:50*	*08/15/17 06:43*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.37		0.289	0.315	1.00	0.315	pCi/L	07/24/17 12:10	08/03/17 09:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.0*		*40 - 110*	*07/24/17 12:10*	*08/03/17 09:25*	*1*
Y Carrier	*91.0*		*40 - 110*	*07/24/17 12:10*	*08/03/17 09:25*	*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	1.56		0.300	0.326	5.00	0.315	pCi/L		08/15/17 14:52	1

Client Sample ID: DUP

Date Collected: 07/12/17 08:00
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110175-8

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	0.389		0.106	0.111	1.00	0.0680	pCi/L	07/24/17 10:50	08/15/17 06:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.5*		*40 - 110*	*07/24/17 10:50*	*08/15/17 06:44*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.858		0.241	0.253	1.00	0.290	pCi/L	07/24/17 12:10	08/03/17 09:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.5*		*40 - 110*	*07/24/17 12:10*	*08/03/17 09:25*	*1*
Y Carrier	*94.9*		*40 - 110*	*07/24/17 12:10*	*08/03/17 09:25*	*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	1.25		0.263	0.277	5.00	0.290	pCi/L		08/15/17 14:52	1

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)

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-318910/1-A
Matrix: Water
Analysis Batch: 322165

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 318910

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.003265	U	0.0361	0.0361	1.00	0.0770	pCi/L	07/24/17 10:50	08/15/17 06:38	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.4*		*40 - 110*	*07/24/17 10:50*	*08/15/17 06:38*	*1*

Lab Sample ID: LCS 160-318910/2-A
Matrix: Water
Analysis Batch: 322165

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 318910

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.4	9.000		0.940	1.00	0.0869	pCi/L	79	68 - 137		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*102*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-318919/1-A
Matrix: Water
Analysis Batch: 320545

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 318919

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1909	U	0.187	0.188	1.00	0.303	pCi/L	07/24/17 12:10	08/03/17 09:23	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.4*		*40 - 110*	*07/24/17 12:10*	*08/03/17 09:23*	*1*
Y Carrier	*92.9*		*40 - 110*	*07/24/17 12:10*	*08/03/17 09:23*	*1*

Lab Sample ID: LCS 160-318919/2-A
Matrix: Water
Analysis Batch: 320545

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 318919

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			13.1	13.98		1.47	1.00	0.265	pCi/L	107	56 - 140		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*102*		*40 - 110*
Y Carrier	*93.6*		*40 - 110*

Rad

Prep Batch: 318910

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-110175-1	MW7	Total/NA	Ground Water	PrecSep-21	
310-110175-2	MW2	Total/NA	Ground Water	PrecSep-21	
310-110175-3	MW3	Total/NA	Ground Water	PrecSep-21	
310-110175-4	MW4	Total/NA	Ground Water	PrecSep-21	
310-110175-5	MW5	Total/NA	Ground Water	PrecSep-21	
310-110175-6	MW6	Total/NA	Ground Water	PrecSep-21	
310-110175-7	MW13	Total/NA	Ground Water	PrecSep-21	
310-110175-8	DUP	Total/NA	Ground Water	PrecSep-21	
MB 160-318910/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-318910/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 318919

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-110175-1	MW7	Total/NA	Ground Water	PrecSep_0	
310-110175-2	MW2	Total/NA	Ground Water	PrecSep_0	
310-110175-3	MW3	Total/NA	Ground Water	PrecSep_0	
310-110175-4	MW4	Total/NA	Ground Water	PrecSep_0	
310-110175-5	MW5	Total/NA	Ground Water	PrecSep_0	
310-110175-6	MW6	Total/NA	Ground Water	PrecSep_0	
310-110175-7	MW13	Total/NA	Ground Water	PrecSep_0	
310-110175-8	DUP	Total/NA	Ground Water	PrecSep_0	
MB 160-318919/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-318919/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Client Sample ID: MW7

Lab Sample ID: 310-110175-1

Date Collected: 07/12/17 14:30

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			318910	07/24/17 10:50	LDE	TAL SL
Total/NA	Analysis	9315		1	322166	08/15/17 06:41	CDR	TAL SL
Total/NA	Prep	PrecSep_0			318919	07/24/17 12:10	LDE	TAL SL
Total/NA	Analysis	9320		1	320545	08/03/17 09:25	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: 310-110175-2

Date Collected: 07/12/17 13:30

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			318910	07/24/17 10:50	LDE	TAL SL
Total/NA	Analysis	9315		1	322166	08/15/17 06:42	CDR	TAL SL
Total/NA	Prep	PrecSep_0			318919	07/24/17 12:10	LDE	TAL SL
Total/NA	Analysis	9320		1	320545	08/03/17 09:25	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: 310-110175-3

Date Collected: 07/12/17 09:58

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			318910	07/24/17 10:50	LDE	TAL SL
Total/NA	Analysis	9315		1	322166	08/15/17 06:42	CDR	TAL SL
Total/NA	Prep	PrecSep_0			318919	07/24/17 12:10	LDE	TAL SL
Total/NA	Analysis	9320		1	320545	08/03/17 09:25	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	322313	08/15/17 14:52	RTM	TAL SL

Client Sample ID: MW4

Lab Sample ID: 310-110175-4

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			318910	07/24/17 10:50	LDE	TAL SL
Total/NA	Analysis	9315		1	322166	08/15/17 06:42	CDR	TAL SL
Total/NA	Prep	PrecSep_0			318919	07/24/17 12:10	LDE	TAL SL
Total/NA	Analysis	9320		1	320545	08/03/17 09:25	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 2 Landfill CCR

TestAmerica Job ID: 310-110175-2

Client Sample ID: MW5

Date Collected: 07/12/17 12:15
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110175-5
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			318910	07/24/17 10:50	LDE	TAL SL
Total/NA	Analysis	9315		1	322168	08/15/17 06:43	ALD	TAL SL
Total/NA	Prep	PrecSep_0			318919	07/24/17 12:10	LDE	TAL SL
Total/NA	Analysis	9320		1	320545	08/03/17 09:25	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	322313	08/15/17 14:52	RTM	TAL SL

Client Sample ID: MW6

Date Collected: 07/12/17 12:50
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110175-6
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			318910	07/24/17 10:50	LDE	TAL SL
Total/NA	Analysis	9315		1	322168	08/15/17 06:43	ALD	TAL SL
Total/NA	Prep	PrecSep_0			318919	07/24/17 12:10	LDE	TAL SL
Total/NA	Analysis	9320		1	320545	08/03/17 09:25	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	322313	08/15/17 14:52	RTM	TAL SL

Client Sample ID: MW13

Date Collected: 07/12/17 11:20
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110175-7
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			318910	07/24/17 10:50	LDE	TAL SL
Total/NA	Analysis	9315		1	322168	08/15/17 06:43	ALD	TAL SL
Total/NA	Prep	PrecSep_0			318919	07/24/17 12:10	LDE	TAL SL
Total/NA	Analysis	9320		1	320545	08/03/17 09:25	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	322313	08/15/17 14:52	RTM	TAL SL

Client Sample ID: DUP

Date Collected: 07/12/17 08:00
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110175-8
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			318910	07/24/17 10:50	LDE	TAL SL
Total/NA	Analysis	9315		1	322168	08/15/17 06:44	ALD	TAL SL
Total/NA	Prep	PrecSep_0			318919	07/24/17 12:10	LDE	TAL SL
Total/NA	Analysis	9320		1	320545	08/03/17 09:25	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 2 Landfill CCR

TestAmerica Job ID: 310-110175-2

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 2 Landfill CCR

TestAmerica Job ID: 310-110175-2

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

310-110175 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Omaha Public Power District

City/State: Omaha, NE | Project: Unit 2 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: 600
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

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

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 2LF 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: 3180
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): 1.8 | Corrected Temp (°C): 1.8

• 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

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 2 Landfill CCR	TestAmerica Project #: 31007559
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		
MW7	7/12/17	1430	G	GW	N	N	X	X	X		
MW2		1330	G	GW			X	X	X		
MW3		0958	G	GW			X	X	X		
MW4		1046	G	GW			X	X	X		
MW5		1215	G	GW			X	X	X		
MW6		1250	G	GW			X	X	X		
MW13		1120	G	GW			X	X	X		
DUP		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: 7/18/17 1300	Company	Received by: Nathan Patton	Date/Time: 7-19-17 925	Company TACT
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:

8/16/2017

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MW7	310-110175-A-1	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW7	310-110175-C-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW7	310-110175-D-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-110175-A-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW2	310-110175-C-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-110175-D-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW3	310-110175-A-3	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW3	310-110175-C-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW3	310-110175-D-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4	310-110175-A-4	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW4	310-110175-C-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4	310-110175-D-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW5	310-110175-A-5	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW5	310-110175-C-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW5	310-110175-D-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW6	310-110175-A-6	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW6	310-110175-C-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW6	310-110175-D-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-110175-A-7	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW13	310-110175-C-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-110175-D-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP	310-110175-A-8	Plastic 250ml - with Nitric Acid	<2	_____	_____
DUP	310-110175-C-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP	310-110175-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

310-110175 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	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 310-110175-2
Address: 13715 Rider Trail North,	Due Date Requested: 7/31/2017			
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 2 Landfill CCR	Project #: 31007559			
Site: 310 OPPD Nebraska City Unit 2	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:								
MW7 (310-110175-1)	7/12/17	14:30 Central		Water			X	X	X	2	
MW2 (310-110175-2)	7/12/17	13:30 Central		Water			X	X	X	2	
MW3 (310-110175-3)	7/12/17	09:58 Central		Water			X	X	X	2	
MW4 (310-110175-4)	7/12/17	10:46 Central		Water			X	X	X	2	
MW5 (310-110175-5)	7/12/17	12:15 Central		Water			X	X	X	2	
MW6 (310-110175-6)	7/12/17	12:50 Central		Water			X	X	X	2	
MW13 (310-110175-7)	7/12/17	11:20 Central		Water			X	X	X	2	
DUP (310-110175-8)	7/12/17	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: T Rick	Date/Time: 7/19/17 1533	Company	Received by:	Date/Time: 7/20/17 0830	Company TAS+L
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: 310-110175-2

Login Number: 110175

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	
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: 310-110175-2

Login Number: 110175
List Number: 2
Creator: Taylor, Kristene N

List Source: TestAmerica St. Louis
List Creation: 07/20/17 04:20 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?	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 2 Landfill CCR

TestAmerica Job ID: 310-110175-2

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)	
310-110175-1	MW7	97.1	
310-110175-2	MW2	92.0	
310-110175-3	MW3	80.5	
310-110175-4	MW4	90.6	
310-110175-5	MW5	90.6	
310-110175-6	MW6	94.7	
310-110175-7	MW13	95.0	
310-110175-8	DUP	93.5	

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 160-318910/2-A	Lab Control Sample	102	
MB 160-318910/1-A	Method Blank	99.4	

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)	
310-110175-1	MW7	97.1	92.3	
310-110175-2	MW2	92.0	94.5	
310-110175-3	MW3	80.5	102	
310-110175-4	MW4	90.6	97.1	
310-110175-5	MW5	90.6	92.9	
310-110175-6	MW6	94.7	96.8	
310-110175-7	MW13	95.0	91.0	
310-110175-8	DUP	93.5	94.9	

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

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 160-318919/2-A	Lab Control Sample	102	93.6	

Tracer/Carrier Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-110175-2

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

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)									
Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)								
MB 160-318919/1-A	Method Blank	99.4	92.9								

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: 310-110175-1
Client Project/Site: Nebraska City Unit 2 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 2:36:46 PM

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

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Case Narrative

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-110175-1

Job ID: 310-110175-1

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-110175-1

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 1.8º 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 2 Landfill CCR

TestAmerica Job ID: 310-110175-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-110175-1	MW7	Ground Water	07/12/17 14:30	07/19/17 09:25
310-110175-2	MW2	Ground Water	07/12/17 13:30	07/19/17 09:25
310-110175-3	MW3	Ground Water	07/12/17 09:58	07/19/17 09:25
310-110175-4	MW4	Ground Water	07/12/17 10:46	07/19/17 09:25
310-110175-5	MW5	Ground Water	07/12/17 12:15	07/19/17 09:25
310-110175-6	MW6	Ground Water	07/12/17 12:50	07/19/17 09:25
310-110175-7	MW13	Ground Water	07/12/17 11:20	07/19/17 09:25
310-110175-8	DUP	Ground Water	07/12/17 08:00	07/19/17 09:25

Detection Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-110175-1

Client Sample ID: MW7 — Lab Sample ID: 310-110175-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.07		5.00		mg/L	5		9056A	Total/NA
Lithium	0.0602		0.0500		mg/L	1		6010C	Total/NA
Arsenic	0.0410		0.00200		mg/L	1		6020A	Total/NA
Barium	0.501		0.00200		mg/L	1		6020A	Total/NA
Calcium	125		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	636		60.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW2 — Lab Sample ID: 310-110175-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	73.0		5.00		mg/L	5		9056A	Total/NA
Antimony	0.00266		0.00100		mg/L	1		6020A	Total/NA
Barium	0.0837		0.00200		mg/L	1		6020A	Total/NA
Boron	0.325		0.200		mg/L	1		6020A	Total/NA
Calcium	127		0.200		mg/L	1		6020A	Total/NA
Lead	0.000949		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.0174		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	592		60.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW3 — Lab Sample ID: 310-110175-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	8.94		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.00286		0.00200		mg/L	1		6020A	Total/NA
Barium	0.267		0.00200		mg/L	1		6020A	Total/NA
Calcium	92.8		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000806		0.000500		mg/L	1		6020A	Total/NA
Lead	0.000913		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00206		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	528		60.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW4 — Lab Sample ID: 310-110175-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	32.7		5.00		mg/L	5		9056A	Total/NA
Barium	0.232		0.00200		mg/L	1		6020A	Total/NA
Calcium	104		0.200		mg/L	1		6020A	Total/NA
Lead	0.000549		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00587		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	580		60.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW5 — Lab Sample ID: 310-110175-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.93		5.00		mg/L	5		9056A	Total/NA
Sulfate	369		10.0		mg/L	10		9056A	Total/NA
Arsenic	0.00220		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0484		0.00200		mg/L	1		6020A	Total/NA
Boron	4.63		2.00		mg/L	10		6020A	Total/NA
Calcium	191		0.200		mg/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW5 (Continued) — Lab Sample ID: 310-110175-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.000584		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.0167		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1190		60.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW6 — Lab Sample ID: 310-110175-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	155		5.00		mg/L	5		9056A	Total/NA
Barium	0.0916		0.00200		mg/L	1		6020A	Total/NA
Boron	3.92		2.00		mg/L	10		6020A	Total/NA
Calcium	102		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.0419		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	596		60.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW13 — Lab Sample ID: 310-110175-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	16.8		5.00		mg/L	5		9056A	Total/NA
Sulfate	42.0		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.00263		0.00200		mg/L	1		6020A	Total/NA
Barium	0.328		0.00200		mg/L	1		6020A	Total/NA
Calcium	95.8		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.00112		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00207		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	676		60.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP — Lab Sample ID: 310-110175-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.03		5.00		mg/L	5		9056A	Total/NA
Lithium	0.0611		0.0500		mg/L	1		6010C	Total/NA
Arsenic	0.0409		0.00200		mg/L	1		6020A	Total/NA
Barium	0.495		0.00200		mg/L	1		6020A	Total/NA
Calcium	124		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	532		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 2 Landfill CCR

TestAmerica Job ID: 310-110175-1

Client Sample ID: MW7
Date Collected: 07/12/17 14:30
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110175-1
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8.07**		5.00		mg/L			07/20/17 09:59	5
Fluoride	<0.500		0.500		mg/L			07/20/17 09:59	5
Sulfate	<5.00		5.00		mg/L			07/20/17 09:59	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	**0.0602**		0.0500		mg/L		07/20/17 07:21	07/20/17 20:48	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 16:48	1
Arsenic	**0.0410**		0.00200		mg/L		07/20/17 07:19	07/24/17 16:48	1
Barium	**0.501**		0.00200		mg/L		07/20/17 07:19	07/24/17 16:48	1
Beryllium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 16:48	1
Boron	<0.200		0.200		mg/L		07/20/17 07:19	07/28/17 11:46	1
Cadmium	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 16:48	1
Calcium	**125**		0.200		mg/L		07/20/17 07:19	07/24/17 16:48	1
Chromium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 16:48	1
Cobalt	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 16:48	1
Lead	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 16:48	1
Molybdenum	<0.00200		0.00200		mg/L		07/20/17 07:19	07/24/17 16:48	1
Selenium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 16:48	1
Thallium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 16:48	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 13:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**636**		60.0		mg/L			07/19/17 15:19	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-110175-1

Client Sample ID: MW2
Date Collected: 07/12/17 13:30
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110175-2
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 10:45	5
Fluoride	<0.500		0.500		mg/L			07/20/17 10:45	5
Sulfate	**73.0**		5.00		mg/L			07/20/17 10:45	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 20:56	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.00266**		0.00100		mg/L		07/20/17 07:19	07/24/17 16:51	1
Arsenic	<0.00200		0.00200		mg/L		07/20/17 07:19	07/24/17 16:51	1
Barium	**0.0837**		0.00200		mg/L		07/20/17 07:19	07/24/17 16:51	1
Beryllium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 16:51	1
Boron	**0.325**		0.200		mg/L		07/20/17 07:19	07/28/17 11:49	1
Cadmium	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 16:51	1
Calcium	**127**		0.200		mg/L		07/20/17 07:19	07/24/17 16:51	1
Chromium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 16:51	1
Cobalt	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 16:51	1
Lead	**0.000949**		0.000500		mg/L		07/20/17 07:19	07/24/17 16:51	1
Molybdenum	**0.0174**		0.00200		mg/L		07/20/17 07:19	07/24/17 16:51	1
Selenium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 16:51	1
Thallium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 16:51	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 13:59	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 15:19	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-110175-1

Client Sample ID: MW3
Date Collected: 07/12/17 09:58
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110175-3
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 11:01	5
Fluoride	<0.500		0.500		mg/L			07/20/17 11:01	5
Sulfate	**8.94**		5.00		mg/L			07/20/17 11:01	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 20:58	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 16:55	1
Arsenic	**0.00286**		0.00200		mg/L		07/20/17 07:19	07/24/17 16:55	1
Barium	**0.267**		0.00200		mg/L		07/20/17 07:19	07/24/17 16:55	1
Beryllium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 16:55	1
Boron	<0.200		0.200		mg/L		07/20/17 07:19	07/28/17 11:52	1
Cadmium	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 16:55	1
Calcium	**92.8**		0.200		mg/L		07/20/17 07:19	07/24/17 16:55	1
Chromium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 16:55	1
Cobalt	**0.000806**		0.000500		mg/L		07/20/17 07:19	07/24/17 16:55	1
Lead	**0.000913**		0.000500		mg/L		07/20/17 07:19	07/24/17 16:55	1
Molybdenum	**0.00206**		0.00200		mg/L		07/20/17 07:19	07/24/17 16:55	1
Selenium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 16:55	1
Thallium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 16:55	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 14:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**528**		60.0		mg/L			07/19/17 15:19	1

Client Sample ID: MW4
Date Collected: 07/12/17 10:46
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110175-4
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 11:16	5
Fluoride	<0.500		0.500		mg/L			07/20/17 11:16	5
Sulfate	**32.7**		5.00		mg/L			07/20/17 11:16	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 21:00	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 16:58	1
Arsenic	<0.00200		0.00200		mg/L		07/20/17 07:19	07/24/17 16:58	1
Barium	**0.232**		0.00200		mg/L		07/20/17 07:19	07/24/17 16:58	1
Beryllium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 16:58	1
Boron	<0.200		0.200		mg/L		07/20/17 07:19	07/28/17 11:55	1
Cadmium	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 16:58	1
Calcium	**104**		0.200		mg/L		07/20/17 07:19	07/24/17 16:58	1
Chromium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 16:58	1
Cobalt	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 16:58	1
Lead	**0.000549**		0.000500		mg/L		07/20/17 07:19	07/24/17 16:58	1
Molybdenum	**0.00587**		0.00200		mg/L		07/20/17 07:19	07/24/17 16:58	1
Selenium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 16:58	1
Thallium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 16:58	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 14:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**580**		60.0		mg/L			07/19/17 15:19	1

Client Sample ID: MW5
Date Collected: 07/12/17 12:15
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110175-5
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7.93**		5.00		mg/L			07/20/17 11:32	5
Fluoride	<0.500		0.500		mg/L			07/20/17 11:32	5
Sulfate	**369**		10.0		mg/L			07/21/17 01:12	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 21:06	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:01	1
Arsenic	**0.00220**		0.00200		mg/L		07/20/17 07:19	07/24/17 17:01	1
Barium	**0.0484**		0.00200		mg/L		07/20/17 07:19	07/24/17 17:01	1
Beryllium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:01	1
Boron	**4.63**		2.00		mg/L		07/20/17 07:19	07/28/17 11:58	10
Cadmium	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 17:01	1
Calcium	**191**		0.200		mg/L		07/20/17 07:19	07/24/17 17:01	1
Chromium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 17:01	1
Cobalt	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 17:01	1
Lead	**0.000584**		0.000500		mg/L		07/20/17 07:19	07/24/17 17:01	1
Molybdenum	**0.0167**		0.00200		mg/L		07/20/17 07:19	07/24/17 17:01	1
Selenium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 17:01	1
Thallium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:01	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 14:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1190**		60.0		mg/L			07/19/17 15:19	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-110175-1

Client Sample ID: MW6
Date Collected: 07/12/17 12:50
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110175-6
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 11:47	5
Fluoride	<0.500		0.500		mg/L			07/20/17 11:47	5
Sulfate	**155**		5.00		mg/L			07/20/17 11:47	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 21:08	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:04	1
Arsenic	<0.00200		0.00200		mg/L		07/20/17 07:19	07/24/17 17:04	1
Barium	**0.0916**		0.00200		mg/L		07/20/17 07:19	07/24/17 17:04	1
Beryllium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:04	1
Boron	**3.92**		2.00		mg/L		07/20/17 07:19	07/28/17 12:11	10
Cadmium	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 17:04	1
Calcium	**102**		0.200		mg/L		07/20/17 07:19	07/24/17 17:04	1
Chromium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 17:04	1
Cobalt	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 17:04	1
Lead	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 17:04	1
Molybdenum	**0.0419**		0.00200		mg/L		07/20/17 07:19	07/24/17 17:04	1
Selenium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 17:04	1
Thallium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:04	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 14:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**596**		60.0		mg/L			07/19/17 15:27	1

Client Sample ID: MW13
Date Collected: 07/12/17 11:20
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110175-7
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**16.8**		5.00		mg/L			07/20/17 12:33	5
Fluoride	<0.500		0.500		mg/L			07/20/17 12:33	5
Sulfate	**42.0**		5.00		mg/L			07/20/17 12:33	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 21:10	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:07	1
Arsenic	**0.00263**		0.00200		mg/L		07/20/17 07:19	07/24/17 17:07	1
Barium	**0.328**		0.00200		mg/L		07/20/17 07:19	07/24/17 17:07	1
Beryllium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:07	1
Boron	<0.200		0.200		mg/L		07/20/17 07:19	07/28/17 12:14	1
Cadmium	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 17:07	1
Calcium	**95.8**		0.200		mg/L		07/20/17 07:19	07/24/17 17:07	1
Chromium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 17:07	1
Cobalt	**0.00112**		0.000500		mg/L		07/20/17 07:19	07/24/17 17:07	1
Lead	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 17:07	1
Molybdenum	**0.00207**		0.00200		mg/L		07/20/17 07:19	07/24/17 17:07	1
Selenium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 17:07	1
Thallium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:07	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 14:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**676**		60.0		mg/L			07/19/17 15:27	1

Client Sample ID: DUP
Date Collected: 07/12/17 08:00
Date Received: 07/19/17 09:25

Lab Sample ID: 310-110175-8
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8.03**		5.00		mg/L			07/20/17 12:49	5
Fluoride	<0.500		0.500		mg/L			07/20/17 12:49	5
Sulfate	<5.00		5.00		mg/L			07/20/17 12:49	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	**0.0611**		0.0500		mg/L		07/20/17 07:21	07/20/17 21:13	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:10	1
Arsenic	**0.0409**		0.00200		mg/L		07/20/17 07:19	07/24/17 17:10	1
Barium	**0.495**		0.00200		mg/L		07/20/17 07:19	07/24/17 17:10	1
Beryllium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:10	1
Boron	<0.200		0.200		mg/L		07/20/17 07:19	07/28/17 12:17	1
Cadmium	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 17:10	1
Calcium	**124**		0.200		mg/L		07/20/17 07:19	07/24/17 17:10	1
Chromium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 17:10	1
Cobalt	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 17:10	1
Lead	<0.000500		0.000500		mg/L		07/20/17 07:19	07/24/17 17:10	1
Molybdenum	<0.00200		0.00200		mg/L		07/20/17 07:19	07/24/17 17:10	1
Selenium	<0.00500		0.00500		mg/L		07/20/17 07:19	07/24/17 17:10	1
Thallium	<0.00100		0.00100		mg/L		07/20/17 07:19	07/24/17 17:10	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 14:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**532**		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

Lab Sample ID: 310-110175-1 MS
Matrix: Ground Water
Analysis Batch: 173315

Client Sample ID: MW7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	8.07		25.0	32.23		mg/L		97	80 - 120
Fluoride	<0.500		5.00	5.251		mg/L		97	80 - 120
Sulfate	<5.00		25.0	25.56		mg/L		93	80 - 120

Lab Sample ID: 310-110175-1 MSD
Matrix: Ground Water
Analysis Batch: 173315

Client Sample ID: MW7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	8.07		25.0	31.93		mg/L		95	80 - 120	1	15
Fluoride	<0.500		5.00	5.412		mg/L		100	80 - 120	3	15
Sulfate	<5.00		25.0	25.44		mg/L		92	80 - 120	0	15

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

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 310-110175-1 MS
Matrix: Ground Water
Analysis Batch: 173119

Client Sample ID: MW7
Prep Type: Total/NA
Prep Batch: 172980

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	0.0602		2.00	2.032		mg/L		99	75 - 125

Lab Sample ID: 310-110175-1 MSD
Matrix: Ground Water
Analysis Batch: 173119

Client Sample ID: MW7
Prep Type: Total/NA
Prep Batch: 172980

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lithium	0.0602		2.00	1.939		mg/L		94	75 - 125	5	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
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

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

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
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

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-173031/1-A
Matrix: Water
Analysis Batch: 173205

Client Sample ID: Method Blank
Prep Type: Total/NA
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
Matrix: Water
Analysis Batch: 173205

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

Lab Sample ID: 310-110175-2 MS
Matrix: Ground Water
Analysis Batch: 173205

Client Sample ID: MW2
Prep Type: Total/NA
Prep Batch: 173031

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.000200		0.00167	0.001545		mg/L		93	80 - 120

Lab Sample ID: 310-110175-2 MSD
Matrix: Ground Water
Analysis Batch: 173205

Client Sample ID: MW2
Prep Type: Total/NA
Prep Batch: 173031

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000200		0.00167	0.001517		mg/L		91	80 - 120	2	20

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

Lab Sample ID: MB 310-172904/1
Matrix: Water
Analysis Batch: 172904

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			07/19/17 15:19	1

Lab Sample ID: LCS 310-172904/2
Matrix: Water
Analysis Batch: 172904

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	1010		mg/L		101	90 - 110

Lab Sample ID: MB 310-172922/1
Matrix: Water
Analysis Batch: 172922

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			07/19/17 15:27	1

Lab Sample ID: LCS 310-172922/2
Matrix: Water
Analysis Batch: 172922

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	1030		mg/L		103	90 - 110

Lab Sample ID: 310-110175-6 DU
Matrix: Ground Water
Analysis Batch: 172922

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	596		576.0		mg/L		3	24

HPLC/IC

Analysis Batch: 173315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-110175-1	MW7	Total/NA	Ground Water	9056A	
310-110175-2	MW2	Total/NA	Ground Water	9056A	
310-110175-3	MW3	Total/NA	Ground Water	9056A	
310-110175-4	MW4	Total/NA	Ground Water	9056A	
310-110175-5	MW5	Total/NA	Ground Water	9056A	
310-110175-5	MW5	Total/NA	Ground Water	9056A	
310-110175-6	MW6	Total/NA	Ground Water	9056A	
310-110175-7	MW13	Total/NA	Ground Water	9056A	
310-110175-8	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	
310-110175-1 MS	MW7	Total/NA	Ground Water	9056A	
310-110175-1 MSD	MW7	Total/NA	Ground Water	9056A	

Metals

Prep Batch: 172979

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-110175-1	MW7	Total/NA	Ground Water	3010A	
310-110175-2	MW2	Total/NA	Ground Water	3010A	
310-110175-3	MW3	Total/NA	Ground Water	3010A	
310-110175-4	MW4	Total/NA	Ground Water	3010A	
310-110175-5	MW5	Total/NA	Ground Water	3010A	
310-110175-6	MW6	Total/NA	Ground Water	3010A	
310-110175-7	MW13	Total/NA	Ground Water	3010A	
310-110175-8	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	

Prep Batch: 172980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-110175-1	MW7	Total/NA	Ground Water	3010A	
310-110175-2	MW2	Total/NA	Ground Water	3010A	
310-110175-3	MW3	Total/NA	Ground Water	3010A	
310-110175-4	MW4	Total/NA	Ground Water	3010A	
310-110175-5	MW5	Total/NA	Ground Water	3010A	
310-110175-6	MW6	Total/NA	Ground Water	3010A	
310-110175-7	MW13	Total/NA	Ground Water	3010A	
310-110175-8	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	
310-110175-1 MS	MW7	Total/NA	Ground Water	3010A	
310-110175-1 MSD	MW7	Total/NA	Ground Water	3010A	

Prep Batch: 173031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-110175-1	MW7	Total/NA	Ground Water	7470A	
310-110175-2	MW2	Total/NA	Ground Water	7470A	
310-110175-3	MW3	Total/NA	Ground Water	7470A	
310-110175-4	MW4	Total/NA	Ground Water	7470A	

Metals (Continued)

Prep Batch: 173031 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-110175-5	MW5	Total/NA	Ground Water	7470A	
310-110175-6	MW6	Total/NA	Ground Water	7470A	
310-110175-7	MW13	Total/NA	Ground Water	7470A	
310-110175-8	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	
310-110175-2 MS	MW2	Total/NA	Ground Water	7470A	
310-110175-2 MSD	MW2	Total/NA	Ground Water	7470A	

Analysis Batch: 173119

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-110175-1	MW7	Total/NA	Ground Water	6010C	172980
310-110175-2	MW2	Total/NA	Ground Water	6010C	172980
310-110175-3	MW3	Total/NA	Ground Water	6010C	172980
310-110175-4	MW4	Total/NA	Ground Water	6010C	172980
310-110175-5	MW5	Total/NA	Ground Water	6010C	172980
310-110175-6	MW6	Total/NA	Ground Water	6010C	172980
310-110175-7	MW13	Total/NA	Ground Water	6010C	172980
310-110175-8	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
310-110175-1 MS	MW7	Total/NA	Ground Water	6010C	172980
310-110175-1 MSD	MW7	Total/NA	Ground Water	6010C	172980

Analysis Batch: 173205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-110175-1	MW7	Total/NA	Ground Water	7470A	173031
310-110175-2	MW2	Total/NA	Ground Water	7470A	173031
310-110175-3	MW3	Total/NA	Ground Water	7470A	173031
310-110175-4	MW4	Total/NA	Ground Water	7470A	173031
310-110175-5	MW5	Total/NA	Ground Water	7470A	173031
310-110175-6	MW6	Total/NA	Ground Water	7470A	173031
310-110175-7	MW13	Total/NA	Ground Water	7470A	173031
310-110175-8	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
310-110175-2 MS	MW2	Total/NA	Ground Water	7470A	173031
310-110175-2 MSD	MW2	Total/NA	Ground Water	7470A	173031

Analysis Batch: 173409

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-110175-1	MW7	Total/NA	Ground Water	6020A	172979
310-110175-2	MW2	Total/NA	Ground Water	6020A	172979
310-110175-3	MW3	Total/NA	Ground Water	6020A	172979
310-110175-4	MW4	Total/NA	Ground Water	6020A	172979
310-110175-5	MW5	Total/NA	Ground Water	6020A	172979
310-110175-6	MW6	Total/NA	Ground Water	6020A	172979
310-110175-7	MW13	Total/NA	Ground Water	6020A	172979
310-110175-8	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

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-110175-1

Analysis Batch: 173902

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-110175-1	MW7	Total/NA	Ground Water	6020A	172979
310-110175-2	MW2	Total/NA	Ground Water	6020A	172979
310-110175-3	MW3	Total/NA	Ground Water	6020A	172979
310-110175-4	MW4	Total/NA	Ground Water	6020A	172979
310-110175-5	MW5	Total/NA	Ground Water	6020A	172979
310-110175-6	MW6	Total/NA	Ground Water	6020A	172979
310-110175-7	MW13	Total/NA	Ground Water	6020A	172979
310-110175-8	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

General Chemistry

Analysis Batch: 172904

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-110175-1	MW7	Total/NA	Ground Water	SM 2540C	
310-110175-2	MW2	Total/NA	Ground Water	SM 2540C	
310-110175-3	MW3	Total/NA	Ground Water	SM 2540C	
310-110175-4	MW4	Total/NA	Ground Water	SM 2540C	
310-110175-5	MW5	Total/NA	Ground Water	SM 2540C	
MB 310-172904/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-172904/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 172922

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-110175-6	MW6	Total/NA	Ground Water	SM 2540C	
310-110175-7	MW13	Total/NA	Ground Water	SM 2540C	
310-110175-8	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	
310-110175-6 DU	MW6	Total/NA	Ground Water	SM 2540C	

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2 Landfill CCR

TestAmerica Job ID: 310-110175-1

Client Sample ID: MW7

Lab Sample ID: 310-110175-1

Date Collected: 07/12/17 14:30

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 09:59	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 20:48	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 16:48	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 11:46	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 13:57	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	172904	07/19/17 15:19	MDK	TAL CF

Client Sample ID: MW2

Lab Sample ID: 310-110175-2

Date Collected: 07/12/17 13:30

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 10:45	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 20:56	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 16:51	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 11:49	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 13:59	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	172904	07/19/17 15:19	MDK	TAL CF

Client Sample ID: MW3

Lab Sample ID: 310-110175-3

Date Collected: 07/12/17 09:58

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 11:01	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 20:58	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 16:55	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 11:52	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 14:04	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	172904	07/19/17 15:19	MDK	TAL CF

Client Sample ID: MW4

Lab Sample ID: 310-110175-4

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 11:16	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 21:00	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 16:58	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 11:55	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 14:05	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	172904	07/19/17 15:19	MDK	TAL CF

Client Sample ID: MW5

Lab Sample ID: 310-110175-5

Date Collected: 07/12/17 12:15
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 11:32	SAD	TAL CF
Total/NA	Analysis	9056A		10	173315	07/21/17 01:12	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 21:06	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 17:01	OAD	TAL CF
Total/NA	Prep	3010A			172979	07/20/17 07:19	JNR	TAL CF
Total/NA	Analysis	6020A		10	173902	07/28/17 11:58	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 14:07	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	172904	07/19/17 15:19	MDK	TAL CF

Client Sample ID: MW6

Lab Sample ID: 310-110175-6

Date Collected: 07/12/17 12:50
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 11:47	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 21:08	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 17:04	OAD	TAL CF
Total/NA	Prep	3010A			172979	07/20/17 07:19	JNR	TAL CF
Total/NA	Analysis	6020A		10	173902	07/28/17 12:11	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 14:11	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 2 Landfill CCR

TestAmerica Job ID: 310-110175-1

Client Sample ID: MW13

Lab Sample ID: 310-110175-7

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 12:33	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 21:10	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 17:07	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 12:14	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 14:13	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: 310-110175-8

Date Collected: 07/12/17 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 12:49	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 21:13	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 17:10	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 12:17	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 14:15	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 2 Landfill CCR

TestAmerica Job ID: 310-110175-1

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 2 Landfill CCR

TestAmerica Job ID: 310-110175-1

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

310-110175 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Omaha Public Power District

City/State: Omaha, NE | Project: Unit 2 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: 600
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

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

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
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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 2LF 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: 3180
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): 1.8 | Corrected Temp (°C): 1.8

• 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

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 2 Landfill CCR	TestAmerica Project #: 31007559
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		
MW7	7/12/17	1430	G	GW	N	N	X	X	X		
MW2		1330	G	GW			X	X	X		
MW3		0958	G	GW			X	X	X		
MW4		1046	G	GW			X	X	X		
MW5		1215	G	GW			X	X	X		
MW6		1250	G	GW			X	X	X		
MW13		1120	G	GW			X	X	X		
DUP		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: 7/18/17 1300	Company	Received by: Nathan Patton	Date/Time: 7-19-17 925	Company TACT
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:

7/31/2017

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MW7	310-110175-A-1	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW7	310-110175-C-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW7	310-110175-D-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-110175-A-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW2	310-110175-C-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-110175-D-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW3	310-110175-A-3	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW3	310-110175-C-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW3	310-110175-D-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4	310-110175-A-4	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW4	310-110175-C-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW4	310-110175-D-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW5	310-110175-A-5	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW5	310-110175-C-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW5	310-110175-D-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW6	310-110175-A-6	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW6	310-110175-C-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW6	310-110175-D-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-110175-A-7	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW13	310-110175-C-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-110175-D-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP	310-110175-A-8	Plastic 250ml - with Nitric Acid	<2	_____	_____
DUP	310-110175-C-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP	310-110175-D-8	Plastic 1 liter - Nitric Acid	<2	_____	_____

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-110175-1

Login Number: 110175

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	
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	

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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: 310-118605-1
Client Project/Site: Nebraska City Unit 2

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 6:09:47 PM

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

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Case Narrative

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2

TestAmerica Job ID: 310-118605-1

Job ID: 310-118605-1

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-118605-1

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 2.0º 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 2

TestAmerica Job ID: 310-118605-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-118605-1	MW2	Ground Water	11/09/17 10:50	11/10/17 09:43
310-118605-2	MW3	Ground Water	11/09/17 10:22	11/10/17 09:43
310-118605-3	MW4	Ground Water	11/09/17 08:56	11/10/17 09:43
310-118605-4	MW5	Ground Water	11/09/17 09:26	11/10/17 09:43
310-118605-5	MW6	Ground Water	11/09/17 09:50	11/10/17 09:43
310-118605-6	MW7	Ground Water	11/09/17 11:28	11/10/17 09:43
310-118605-7	MW13	Ground Water	11/09/17 08:38	11/10/17 09:43
310-118605-8	DUP	Ground Water	11/09/17 08:00	11/10/17 09:43

Detection Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2

TestAmerica Job ID: 310-118605-1

Client Sample ID: MW2 — Lab Sample ID: 310-118605-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	130		5.00		mg/L	5		9056A	Total/NA
Boron	0.250		0.200		mg/L	1		6020A	Total/NA
Calcium	131		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	662		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW3 — Lab Sample ID: 310-118605-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	185		5.00		mg/L	5		9056A	Total/NA
Calcium	148		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	604		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW4 — Lab Sample ID: 310-118605-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	42.8		5.00		mg/L	5		9056A	Total/NA
Calcium	134		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	568		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW5 — Lab Sample ID: 310-118605-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	13.2		5.00		mg/L	5		9056A	Total/NA
Sulfate	404		20.0		mg/L	20		9056A	Total/NA
Boron	2.91		0.200		mg/L	1		6020A	Total/NA
Calcium	168		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1260		60.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW6 — Lab Sample ID: 310-118605-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.75		5.00		mg/L	5		9056A	Total/NA
Sulfate	195		5.00		mg/L	5		9056A	Total/NA
Boron	4.39		0.200		mg/L	1		6020A	Total/NA
Calcium	128		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	872		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW7 — Lab Sample ID: 310-118605-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.79		5.00		mg/L	5		9056A	Total/NA
Sulfate	17.8		5.00		mg/L	5		9056A	Total/NA
Boron	0.201		0.200		mg/L	1		6020A	Total/NA
Calcium	131		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	580		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW13 — Lab Sample ID: 310-118605-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	12.4		5.00		mg/L	5		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2

TestAmerica Job ID: 310-118605-1

Client Sample ID: MW13 (Continued) — Lab Sample ID: 310-118605-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.550		0.500		mg/L	5		9056A	Total/NA
Sulfate	36.4		5.00		mg/L	5		9056A	Total/NA
Calcium	95.2		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	488		30.0		mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP — Lab Sample ID: 310-118605-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.09		5.00		mg/L	5		9056A	Total/NA
Sulfate	19.3		5.00		mg/L	5		9056A	Total/NA
Boron	0.210		0.200		mg/L	1		6020A	Total/NA
Calcium	130		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	646		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 2

TestAmerica Job ID: 310-118605-1

Client Sample ID: MW2
Date Collected: 11/09/17 10:50
Date Received: 11/10/17 09:43

Lab Sample ID: 310-118605-1
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			11/15/17 05:37	5
Fluoride	<0.500		0.500		mg/L			11/15/17 05:37	5
Sulfate	**130**		5.00		mg/L			11/15/17 05:37	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**0.250**		0.200		mg/L		11/13/17 08:11	11/22/17 23:43	1
Calcium	**131**		0.200		mg/L		11/13/17 08:11	11/22/17 23:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**662**		30.0		mg/L			11/14/17 08:24	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2

TestAmerica Job ID: 310-118605-1

Client Sample ID: MW3
Date Collected: 11/09/17 10:22
Date Received: 11/10/17 09:43

Lab Sample ID: 310-118605-2
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			11/15/17 05:55	5
Fluoride	<0.500		0.500		mg/L			11/15/17 05:55	5
Sulfate	**185**		5.00		mg/L			11/15/17 05:55	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	11/27/17 15:28	1
Calcium	**148**		0.200		mg/L		11/13/17 08:11	11/27/17 15:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**604**		30.0		mg/L			11/14/17 08:24	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2

TestAmerica Job ID: 310-118605-1

Client Sample ID: MW4
Date Collected: 11/09/17 08:56
Date Received: 11/10/17 09:43

Lab Sample ID: 310-118605-3
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			11/15/17 06:46	5
Fluoride	<0.500		0.500		mg/L			11/15/17 06:46	5
Sulfate	**42.8**		5.00		mg/L			11/15/17 06:46	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	11/27/17 15:31	1
Calcium	**134**		0.200		mg/L		11/13/17 08:11	11/27/17 15:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**568**		30.0		mg/L			11/14/17 08:24	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2

TestAmerica Job ID: 310-118605-1

Client Sample ID: MW5
Date Collected: 11/09/17 09:26
Date Received: 11/10/17 09:43

Lab Sample ID: 310-118605-4
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**13.2**		5.00		mg/L			11/15/17 07:03	5
Fluoride	<0.500		0.500		mg/L			11/15/17 07:03	5
Sulfate	**404**		20.0		mg/L			11/15/17 07:20	20

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2.91**		0.200		mg/L		11/13/17 08:11	11/27/17 15:34	1
Calcium	**168**		0.200		mg/L		11/13/17 08:11	11/27/17 15:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1260**		60.0		mg/L			11/14/17 08:24	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2

TestAmerica Job ID: 310-118605-1

Client Sample ID: MW6

Date Collected: 11/09/17 09:50
Date Received: 11/10/17 09:43

Lab Sample ID: 310-118605-5

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6.75**		5.00		mg/L			11/15/17 07:38	5
Fluoride	<0.500		0.500		mg/L			11/15/17 07:38	5
Sulfate	**195**		5.00		mg/L			11/15/17 07:38	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**4.39**		0.200		mg/L		11/13/17 08:11	11/27/17 15:37	1
Calcium	**128**		0.200		mg/L		11/13/17 08:11	11/27/17 15:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**872**		30.0		mg/L			11/14/17 08:24	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2

TestAmerica Job ID: 310-118605-1

Client Sample ID: MW7
Date Collected: 11/09/17 11:28
Date Received: 11/10/17 09:43

Lab Sample ID: 310-118605-6
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7.79**		5.00		mg/L			11/15/17 07:55	5
Fluoride	<0.500		0.500		mg/L			11/15/17 07:55	5
Sulfate	**17.8**		5.00		mg/L			11/15/17 07:55	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**0.201**		0.200		mg/L		11/13/17 08:11	11/24/17 17:59	1
Calcium	**131**		0.200		mg/L		11/13/17 08:11	11/24/17 17:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**580**		30.0		mg/L			11/14/17 08:24	1

Client Sample Results

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2

TestAmerica Job ID: 310-118605-1

Client Sample ID: MW13
Date Collected: 11/09/17 08:38
Date Received: 11/10/17 09:43

Lab Sample ID: 310-118605-7
Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**12.4**		5.00		mg/L			11/15/17 08:12	5
Fluoride	**0.550**		0.500		mg/L			11/15/17 08:12	5
Sulfate	**36.4**		5.00		mg/L			11/15/17 08:12	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 18:02	1
Calcium	**95.2**		0.200		mg/L		11/13/17 08:11	11/24/17 18:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**488**		30.0		mg/L			11/14/17 08:24	1

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2

TestAmerica Job ID: 310-118605-1

Client Sample ID: DUP

Date Collected: 11/09/17 08:00
Date Received: 11/10/17 09:43

Lab Sample ID: 310-118605-8

Matrix: Ground Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8.09**		5.00		mg/L			11/15/17 08:29	5
Fluoride	<0.500		0.500		mg/L			11/15/17 08:29	5
Sulfate	**19.3**		5.00		mg/L			11/15/17 08:29	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**0.210**		0.200		mg/L		11/13/17 08:11	11/27/17 15:41	1
Calcium	**130**		0.200		mg/L		11/13/17 08:11	11/27/17 15:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**646**		30.0		mg/L			11/14/17 08:24	1

Definitions/Glossary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2

TestAmerica Job ID: 310-118605-1

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 310-186167/3
Matrix: Water
Analysis Batch: 186167

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			11/14/17 21:20	1
Fluoride	<0.100		0.100		mg/L			11/14/17 21:20	1
Sulfate	<1.00		1.00		mg/L			11/14/17 21:20	1

Lab Sample ID: LCS 310-186167/4
Matrix: Water
Analysis Batch: 186167

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	7.692		mg/L		103	90 - 110
Fluoride	1.50	1.533		mg/L		102	90 - 110
Sulfate	7.50	7.788		mg/L		104	90 - 110

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

Lab Sample ID: 310-118605-1 MS
Matrix: Ground Water
Analysis Batch: 187022

Client Sample ID: MW2
Prep Type: Total/NA
Prep Batch: 185824

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.250		0.880	1.153		mg/L		103	75 - 125
Calcium	131		2.00	152.2	4	mg/L		1065	75 - 125

Lab Sample ID: 310-118605-1 MSD
Matrix: Ground Water
Analysis Batch: 187022

Client Sample ID: MW2
Prep Type: Total/NA
Prep Batch: 185824

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	0.250		0.880	1.162		mg/L		104	75 - 125	1	20
Calcium	131		2.00	150.2	4	mg/L		965	75 - 125	1	20

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

Lab Sample ID: MB 310-185968/1
Matrix: Water
Analysis Batch: 185968

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 08:24	1

Lab Sample ID: LCS 310-185968/2
Matrix: Water
Analysis Batch: 185968

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	1070		mg/L		107	90 - 110

Lab Sample ID: 310-118605-5 DU
Matrix: Ground Water
Analysis Batch: 185968

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	872		736.0		mg/L		17	24

QC Association Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2

TestAmerica Job ID: 310-118605-1

HPLC/IC

Analysis Batch: 186167

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-118605-1	MW2	Total/NA	Ground Water	9056A	
310-118605-2	MW3	Total/NA	Ground Water	9056A	
310-118605-3	MW4	Total/NA	Ground Water	9056A	
310-118605-4	MW5	Total/NA	Ground Water	9056A	
310-118605-4	MW5	Total/NA	Ground Water	9056A	
310-118605-5	MW6	Total/NA	Ground Water	9056A	
310-118605-6	MW7	Total/NA	Ground Water	9056A	
310-118605-7	MW13	Total/NA	Ground Water	9056A	
310-118605-8	DUP	Total/NA	Ground Water	9056A	
MB 310-186167/3	Method Blank	Total/NA	Water	9056A	
LCS 310-186167/4	Lab Control Sample	Total/NA	Water	9056A	

Metals

Prep Batch: 185824

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-118605-1	MW2	Total/NA	Ground Water	3010A	
310-118605-2	MW3	Total/NA	Ground Water	3010A	
310-118605-3	MW4	Total/NA	Ground Water	3010A	
310-118605-4	MW5	Total/NA	Ground Water	3010A	
310-118605-5	MW6	Total/NA	Ground Water	3010A	
310-118605-6	MW7	Total/NA	Ground Water	3010A	
310-118605-7	MW13	Total/NA	Ground Water	3010A	
310-118605-8	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	
310-118605-1 MS	MW2	Total/NA	Ground Water	3010A	
310-118605-1 MSD	MW2	Total/NA	Ground Water	3010A	

Analysis Batch: 187022

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-118605-1	MW2	Total/NA	Ground Water	6020A	185824
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
310-118605-1 MS	MW2	Total/NA	Ground Water	6020A	185824
310-118605-1 MSD	MW2	Total/NA	Ground Water	6020A	185824

Analysis Batch: 187098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-118605-6	MW7	Total/NA	Ground Water	6020A	185824
310-118605-7	MW13	Total/NA	Ground Water	6020A	185824

Analysis Batch: 187178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-118605-2	MW3	Total/NA	Ground Water	6020A	185824
310-118605-3	MW4	Total/NA	Ground Water	6020A	185824
310-118605-4	MW5	Total/NA	Ground Water	6020A	185824
310-118605-5	MW6	Total/NA	Ground Water	6020A	185824
310-118605-8	DUP	Total/NA	Ground Water	6020A	185824

QC Association Summary

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2

TestAmerica Job ID: 310-118605-1

General Chemistry

Analysis Batch: 185968

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-118605-1	MW2	Total/NA	Ground Water	SM 2540C	
310-118605-2	MW3	Total/NA	Ground Water	SM 2540C	
310-118605-3	MW4	Total/NA	Ground Water	SM 2540C	
310-118605-4	MW5	Total/NA	Ground Water	SM 2540C	
310-118605-5	MW6	Total/NA	Ground Water	SM 2540C	
310-118605-6	MW7	Total/NA	Ground Water	SM 2540C	
310-118605-7	MW13	Total/NA	Ground Water	SM 2540C	
310-118605-8	DUP	Total/NA	Ground Water	SM 2540C	
MB 310-185968/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-185968/2	Lab Control Sample	Total/NA	Water	SM 2540C	
310-118605-5 DU	MW6	Total/NA	Ground Water	SM 2540C	

Client Sample ID: MW2

Lab Sample ID: 310-118605-1

Date Collected: 11/09/17 10:50

Matrix: Ground Water

Date Received: 11/10/17 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	186167	11/15/17 05:37	SAD	TAL CF
Total/NA	Prep	3010A			185824	11/13/17 08:11	JNR	TAL CF
Total/NA	Analysis	6020A		1	187022	11/22/17 23:43	OAD	TAL CF
Total/NA	Analysis	SM 2540C		1	185968	11/14/17 08:24	SAS	TAL CF

Client Sample ID: MW3

Lab Sample ID: 310-118605-2

Date Collected: 11/09/17 10:22

Matrix: Ground Water

Date Received: 11/10/17 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	186167	11/15/17 05:55	SAD	TAL CF
Total/NA	Prep	3010A			185824	11/13/17 08:11	JNR	TAL CF
Total/NA	Analysis	6020A		1	187178	11/27/17 15:28	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	185968	11/14/17 08:24	SAS	TAL CF

Client Sample ID: MW4

Lab Sample ID: 310-118605-3

Date Collected: 11/09/17 08:56

Matrix: Ground Water

Date Received: 11/10/17 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	186167	11/15/17 06:46	SAD	TAL CF
Total/NA	Prep	3010A			185824	11/13/17 08:11	JNR	TAL CF
Total/NA	Analysis	6020A		1	187178	11/27/17 15:31	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	185968	11/14/17 08:24	SAS	TAL CF

Client Sample ID: MW5

Lab Sample ID: 310-118605-4

Date Collected: 11/09/17 09:26

Matrix: Ground Water

Date Received: 11/10/17 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	186167	11/15/17 07:03	SAD	TAL CF
Total/NA	Analysis	9056A		20	186167	11/15/17 07:20	SAD	TAL CF
Total/NA	Prep	3010A			185824	11/13/17 08:11	JNR	TAL CF
Total/NA	Analysis	6020A		1	187178	11/27/17 15:34	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	185968	11/14/17 08:24	SAS	TAL CF

Client Sample ID: MW6

Lab Sample ID: 310-118605-5

Date Collected: 11/09/17 09:50

Matrix: Ground Water

Date Received: 11/10/17 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	186167	11/15/17 07:38	SAD	TAL CF

Lab Chronicle

Client: Omaha Public Power District
Project/Site: Nebraska City Unit 2

TestAmerica Job ID: 310-118605-1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			185824	11/13/17 08:11	JNR	TAL CF
Total/NA	Analysis	6020A		1	187178	11/27/17 15:37	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	185968	11/14/17 08:24	SAS	TAL CF

Client Sample ID: MW7

Lab Sample ID: 310-118605-6

Date Collected: 11/09/17 11:28

Matrix: Ground Water

Date Received: 11/10/17 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	186167	11/15/17 07:55	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 17:59	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	185968	11/14/17 08:24	SAS	TAL CF

Client Sample ID: MW13

Lab Sample ID: 310-118605-7

Date Collected: 11/09/17 08:38

Matrix: Ground Water

Date Received: 11/10/17 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	186167	11/15/17 08:12	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 18:02	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	185968	11/14/17 08:24	SAS	TAL CF

Client Sample ID: DUP

Lab Sample ID: 310-118605-8

Date Collected: 11/09/17 08:00

Matrix: Ground Water

Date Received: 11/10/17 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	186167	11/15/17 08:29	SAD	TAL CF
Total/NA	Prep	3010A			185824	11/13/17 08:11	JNR	TAL CF
Total/NA	Analysis	6020A		1	187178	11/27/17 15:41	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	185968	11/14/17 08:24	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 2

TestAmerica Job ID: 310-118605-1

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 2

TestAmerica Job ID: 310-118605-1

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

310-118605 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 2 Landfill

Receipt Information

Date/Time Received: 11-10-17 0943 | Received By: D

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 # ____ 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): 2.0 | Corrected Temp (°C): 2.0

• 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

Client Contact: Brad Sojka
Company: Omaha Public Power District
Address: 444 South 16th Street Mall 9E/EP1
City: Omaha
State, Zip: NE, 68102-2247
Phone: 402-636-2515(Tel)
Email: bsojka@oppd.com
Project Name: Nebraska City Unit 2 Landfill CCR Appendix III
Site:

Sampler: Brad Sojka
Phone: 402-636-2515
Lab PM: Hayes, Shawn M
E-Mail: shawn.hayes@testamericainc.com
Carrier Tracking No(s):
COC No:
Page:
Job #:
Due Date Requested:
TAT Requested (days):
PO #:
WO #:
TestAmerica Project #: 31007559
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)	6020A Boron and Calcium	2540C TDS, 9056A Chloride, Fluoride, Sulfate	Total Number of containers	Special Instructions/Note:
		Preservation Code:					D	N		
MW2	11/9/17	1050	G	GW			X	X		
MW3		1022	G	GW			X	X		
MW4		0856	G	GW			X	X		
MW5		0926	G	GW			X	X		
MW6		0950	G	GW			X	X		
MW7		1128	G	GW			X	X		
MW13		0838	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:

	Date/Time	Company	Received by	Date/Time	Company
Relinquished by:	11/9/17 1500		Kathryn Parker	11-10-17 9:43	TAC
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	310-118605-A-1	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW3	310-118605-A-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW4	310-118605-A-3	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW5	310-118605-A-4	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW6	310-118605-A-5	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW7	310-118605-A-6	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW13	310-118605-A-7	Plastic 250ml - with Nitric Acid	<2	_____	_____
DUP	310-118605-A-8	Plastic 250ml - with Nitric Acid	<2	_____	_____

Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-118605-1

Login Number: 118605
List Number: 1
Creator: Patrick, Kathryn E

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	

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 2
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 2 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 December 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-4, MW-5, MW-6 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-4, MW-5, MW-6 and MW-13 were designated as the upgradient (background) wells and monitoring wells MW-2, MW-3, and MW-7 were designated as downgradient (compliance) wells.

Output from the statistical analysis program is attached. ANOVA results indicate SSIs for the following constituents and wells.

- Calcium and pH in monitoring well MW-2

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.
Saff 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: NE2 SanitasMatrix CCR (Q4 2017) Printed 1/3/2018, 3:27 PM

Constituent	Well	Calc.	Crit.	Sig.	Alpha	Transform	ANOVA Sig.	Alpha	Method
Boron (mg/L)	MW3	-18	14.61	No	0.01667	n/a	Yes	0.05	NP (normality)
Boron (mg/L)	MW7	-15.94	14.61	No	0.01667	n/a	Yes	0.05	NP (normality)
Boron (mg/L)	MW2	2.444	14.61	No	0.01667	n/a	Yes	0.05	NP (normality)
Calcium (mg/L)	MW3	-17.85	14.61	No	0.01667	n/a	Yes	0.05	NP (eq. var.)
Calcium (mg/L)	MW7	5.708	14.61	No	0.01667	n/a	Yes	0.05	NP (eq. var.)
Calcium (mg/L)	**MW2**	**18.65**	**14.61**	**Yes**	**0.01667**	**n/a**	**Yes**	**0.05**	**NP (eq. var.)**
Chloride (mg/L)	MW3	-18.13	14.61	No	0.01667	n/a	Yes	0.05	NP (eq. var.)
Chloride (mg/L)	MW2	-19.96	14.61	No	0.01667	n/a	Yes	0.05	NP (eq. var.)
Chloride (mg/L)	MW7	-3.236	14.61	No	0.01667	n/a	Yes	0.05	NP (eq. var.)
Fluoride (mg/L)	MW3	0.1944	14.61	No	0.01667	n/a	No	0.05	NP (eq. var.)
Fluoride (mg/L)	MW7	-1.139	14.61	No	0.01667	n/a	No	0.05	NP (eq. var.)
Fluoride (mg/L)	MW2	0.75	14.61	No	0.01667	n/a	No	0.05	NP (eq. var.)
pH (SU)	MW7	0.1103	0.2565	No	0.008333	No	No	0.05	Param.
pH (SU)	**MW2**	**-0.2608**	**0.2565**	**Yes**	**0.008333**	**No**	**No**	**0.05**	**Param.**
pH (SU)	MW3	0.01583	0.2565	No	0.008333	No	No	0.05	Param.
Sulfate (mg/L)	MW7	-32.33	14.61	No	0.01667	n/a	Yes	0.05	NP (normality)
Sulfate (mg/L)	MW3	-20.44	14.61	No	0.01667	n/a	Yes	0.05	NP (normality)
Sulfate (mg/L)	MW2	7.278	14.61	No	0.01667	n/a	Yes	0.05	NP (normality)
Total Dissolved Solids (mg/L)	MW3	-23.75	14.61	No	0.01667	n/a	Yes	0.05	NP (eq. var.)
Total Dissolved Solids (mg/L)	MW7	-4.694	14.61	No	0.01667	n/a	Yes	0.05	NP (eq. var.)
Total Dissolved Solids (mg/L)	MW2	13.08	14.61	No	0.01667	n/a	Yes	0.05	NP (eq. var.)

Non-Parametric ANOVA

Constituent: Boron Analysis Run 1/3/2018 3:27 PM
OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

For observations made between 3/14/2016 and 11/9/2017, 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 = 57.44

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) = 46.72
Adjusted Kruskal-Wallis statistic (H') = 57.44

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 none of the compliance wells.

Contrast table:

Well	Difference	Contrast	Significant?
MW3	-18	14.61	No
MW7	-15.94	14.61	No
MW2	2.444	14.61	No

The critical (contrast) value was computed with 3 degrees of freedom and a 1.667% error level for each well comparison. (Note: In this case, with Anova indicating differences that are not reflected in the contrast test, it should be concluded that it is the median of the Background data which is significantly higher.)

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 3:27 PM
OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

For observations made between 3/14/2016 and 11/9/2017, 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 = 44.88

Tabulated Chi-Squared value = 12.592 with 6 degrees of freedom at the 5% significance level.

There were 8 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) = 44.86
Adjusted Kruskal-Wallis statistic (H') = 44.88

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?
MW3	-17.85	14.61	No
MW7	5.708	14.61	No
MW2	18.65	14.61	Yes

The critical (contrast) value was computed with 3 degrees of freedom and a 1.667% 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.

Non-Parametric ANOVA

Constituent: Chloride Analysis Run 1/3/2018 3:27 PM
OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

For observations made between 3/14/2016 and 11/9/2017, 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 = 34.86

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) = 33.16
Adjusted Kruskal-Wallis statistic (H') = 34.86

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	-18.13	14.61	No
MW2	-19.96	14.61	No
MW7	-3.236	14.61	No

The critical (contrast) value was computed with 3 degrees of freedom and a 1.667% error level for each well comparison. (Note: In this case, with Anova indicating differences that are not reflected in the contrast test, it should be concluded that it is the median of the Background data which is significantly higher.)

Non-parametric test used in lieu of parametric anova because Levene's Equality of Variance test failed at the 0.05 alpha level.

Non-Parametric ANOVA

Constituent: Fluoride Analysis Run 1/3/2018 3:27 PM
OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

For observations made between 3/14/2016 and 11/9/2017, 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 = 0.2593

Tabulated Chi-Squared value = 12.592 with 6 degrees of freedom at the 5% significance level.

There were 2 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) = 0.193
Adjusted Kruskal-Wallis statistic (H') = 0.2593

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	0.1944	14.61	No
MW7	-1.139	14.61	No
MW2	0.75	14.61	No

The critical (contrast) value was computed with 3 degrees of freedom and a 1.667% 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.

Parametric ANOVA

Constituent: pH Analysis Run 1/3/2018 3:27 PM
OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

For observations made between 3/14/2016 and 11/9/2017 the parametric analysis of variance test indicates NO VARIATION at the 5% significance level. Because the calculated F statistic is less than or equal to the tabulated F statistic, the hypothesis of a single homogeneous population is accepted.

Calculated F statistic = 2.054

Tabulated F statistic = 2.268 with 6 and 56 degrees of freedom at the 5% significance level.

ONE-WAY PARAMETRIC ANOVA TABLE

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F
Between Groups	0.23	6	0.03834	4.949
Error Within Groups	0.4337	56	0.007745	
Total	0.6638	62		

The 2-tailed Bonferroni t-Test indicates that at least one compliance well mean is significantly higher or lower than the background (see Contrasts Table below). The critical t (contrast) value is 2.468 with 56 degrees of freedom, 3 compliance wells and a 0.8333% error level for each well comparison.

Contrast table:

Well	Difference	Di	Significant
MW7	0.1103	0.2565	No
MW2	-0.2608	0.2565	Yes
MW3	0.01583	0.2565	No

Where the absolute value of the difference of a Well is greater than the critical (Di) value the hypothesis of a single population should be rejected.

The Shapiro Francia normality test on the residuals passed on the raw data. Alpha = 0.01, calculated = 0.9516, critical = 0.947. Levene's Equality of Variance test passed. Calculated = 1.132, tabulated = 2.268.

Non-Parametric ANOVA

Constituent: Sulfate Analysis Run 1/3/2018 3:27 PM
OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

For observations made between 3/14/2016 and 11/9/2017, 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 = 53.25

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) = 53.15
Adjusted Kruskal-Wallis statistic (H') = 53.25

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?
MW7	-32.33	14.61	No
MW3	-20.44	14.61	No
MW2	7.278	14.61	No

The critical (contrast) value was computed with 3 degrees of freedom and a 1.667% error level for each well comparison. (Note: In this case, with Anova indicating differences that are not reflected in the contrast test, it should be concluded that it is the median of the Background data which is significantly higher.)

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 3:27 PM
OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

For observations made between 3/14/2016 and 11/9/2017, 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 5 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) = 47.61
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 none of the compliance wells.

Contrast table:

Well	Difference	Contrast	Significant?
MW3	-23.75	14.61	No
MW7	-4.694	14.61	No
MW2	13.08	14.61	No

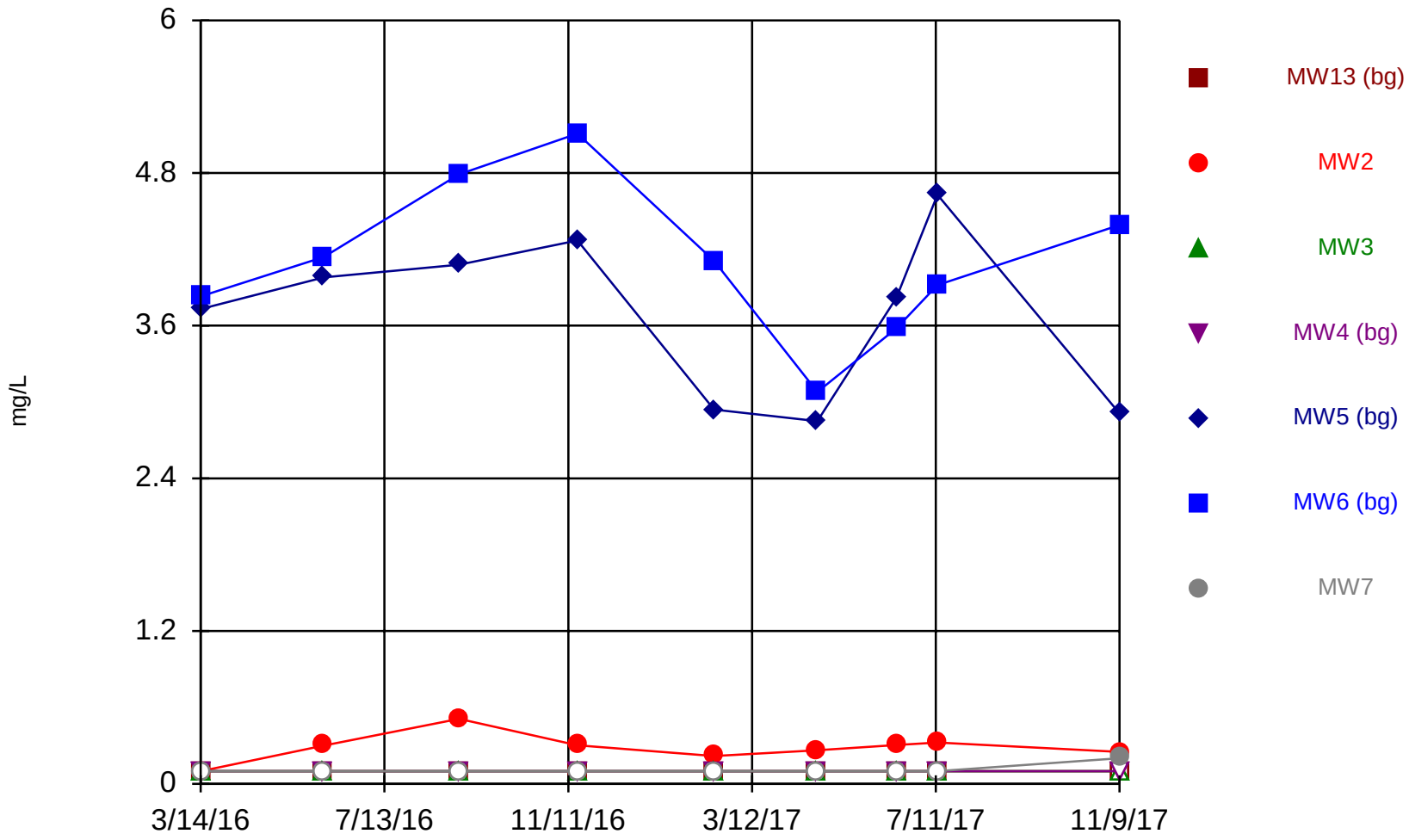
The critical (contrast) value was computed with 3 degrees of freedom and a 1.667% error level for each well comparison. (Note: In this case, with Anova indicating differences that are not reflected in the contrast test, it should be concluded that it is the median of the Background data which is significantly higher.)

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.

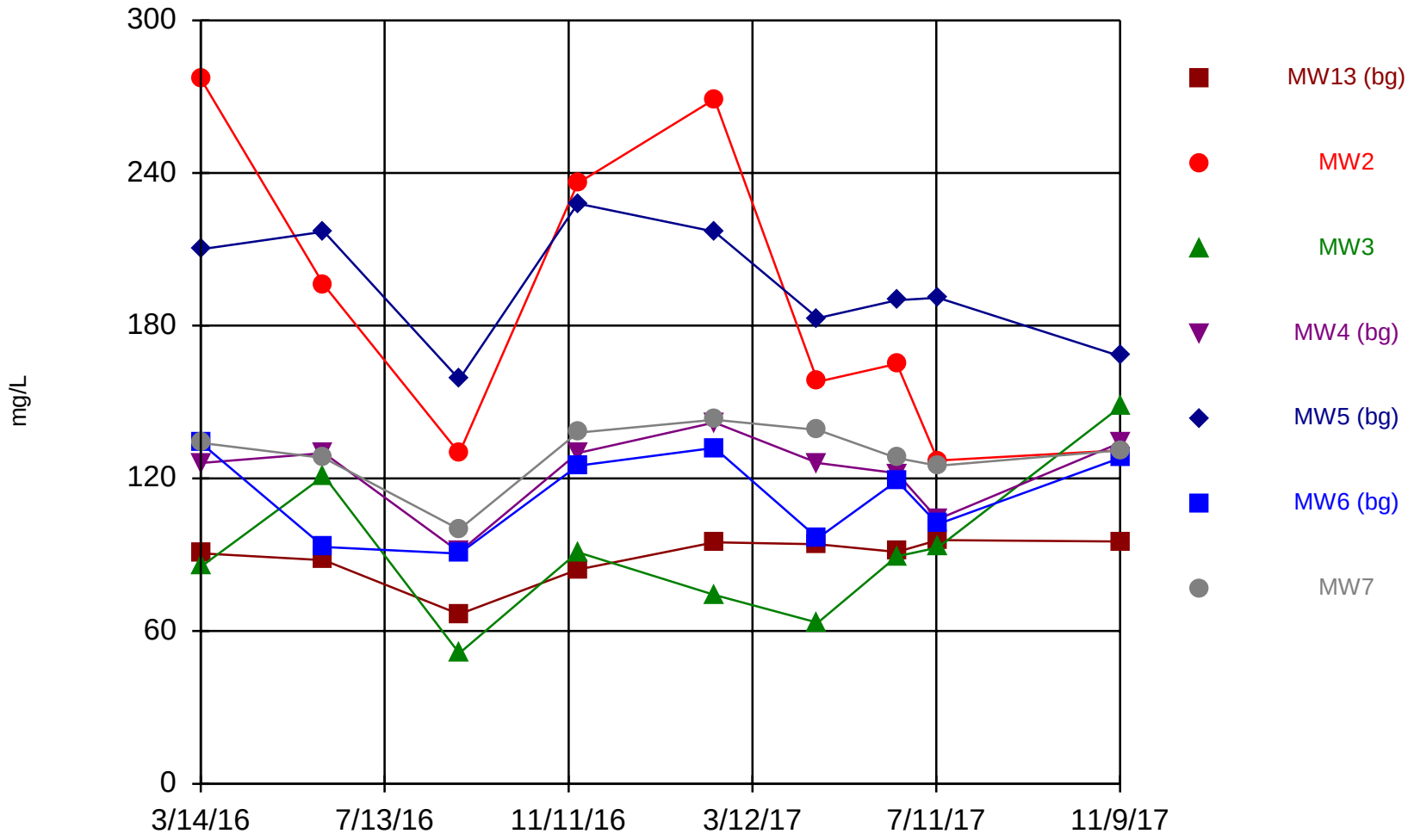
Time Series



Constituent: Boron Analysis Run 1/4/2018 8:45 AM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Time Series

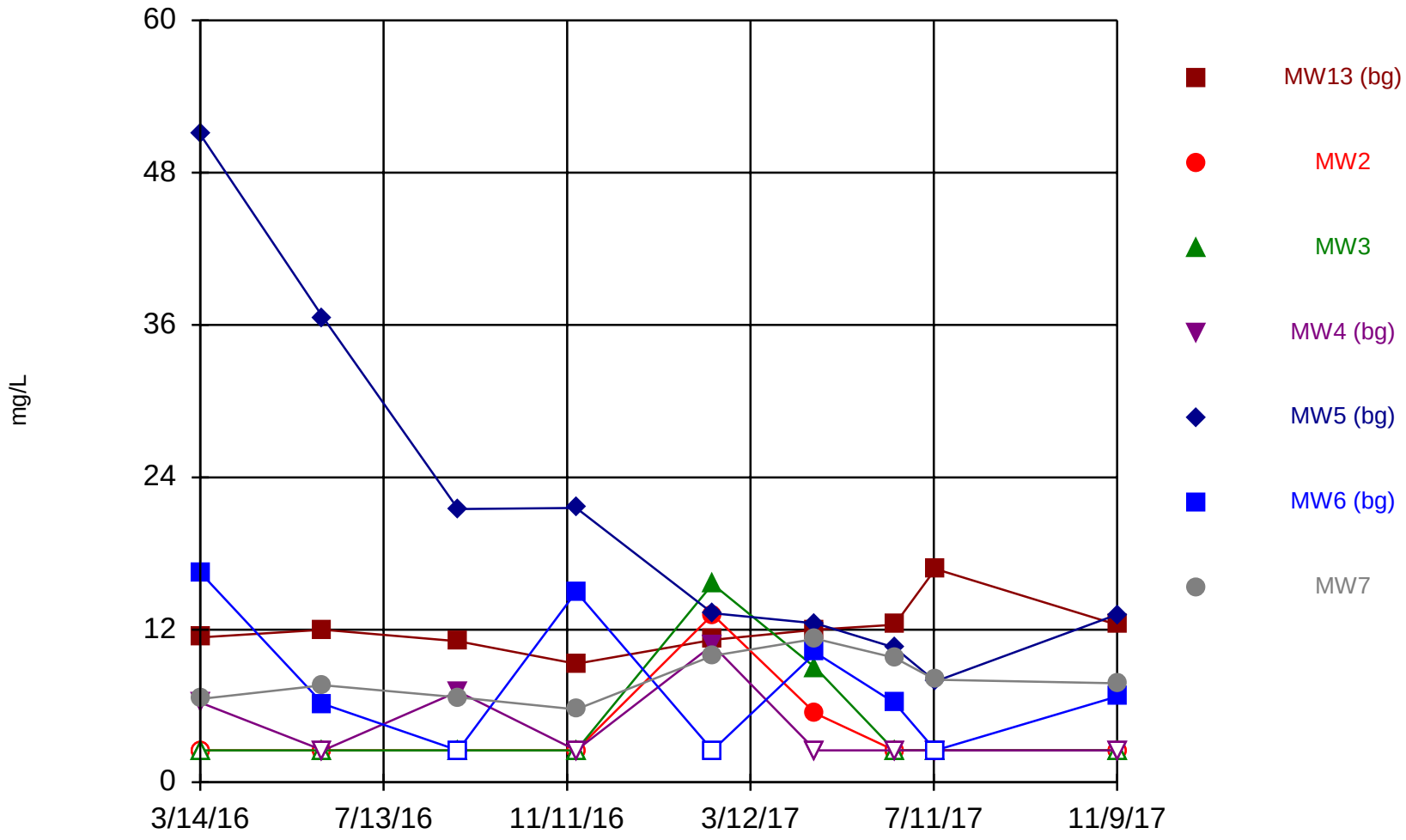


Constituent: Calcium Analysis Run 1/4/2018 8:45 AM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

Time Series

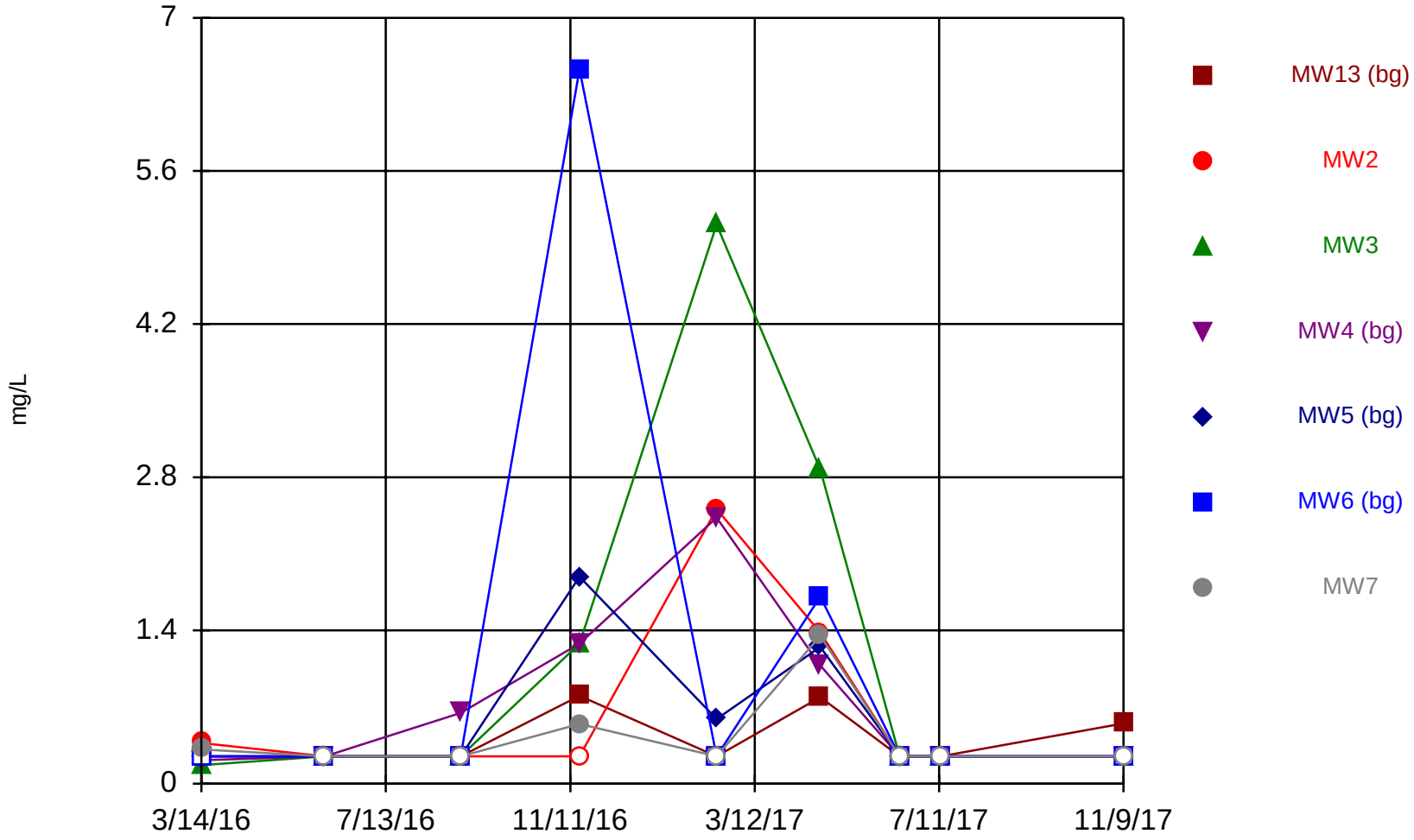


Constituent: Chloride Analysis Run 1/4/2018 8:45 AM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

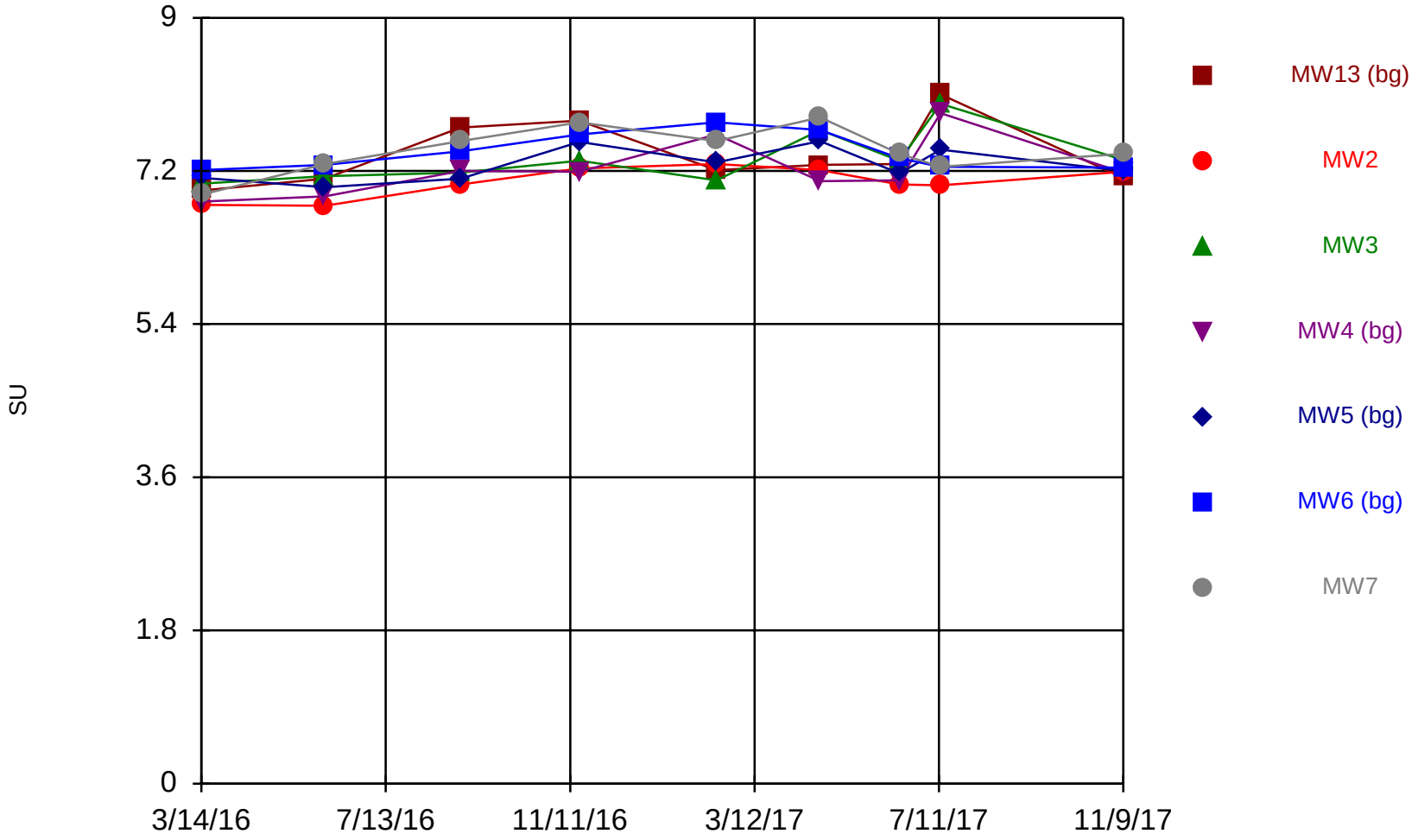
Time Series



Constituent: Fluoride Analysis Run 1/4/2018 8:45 AM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Time Series

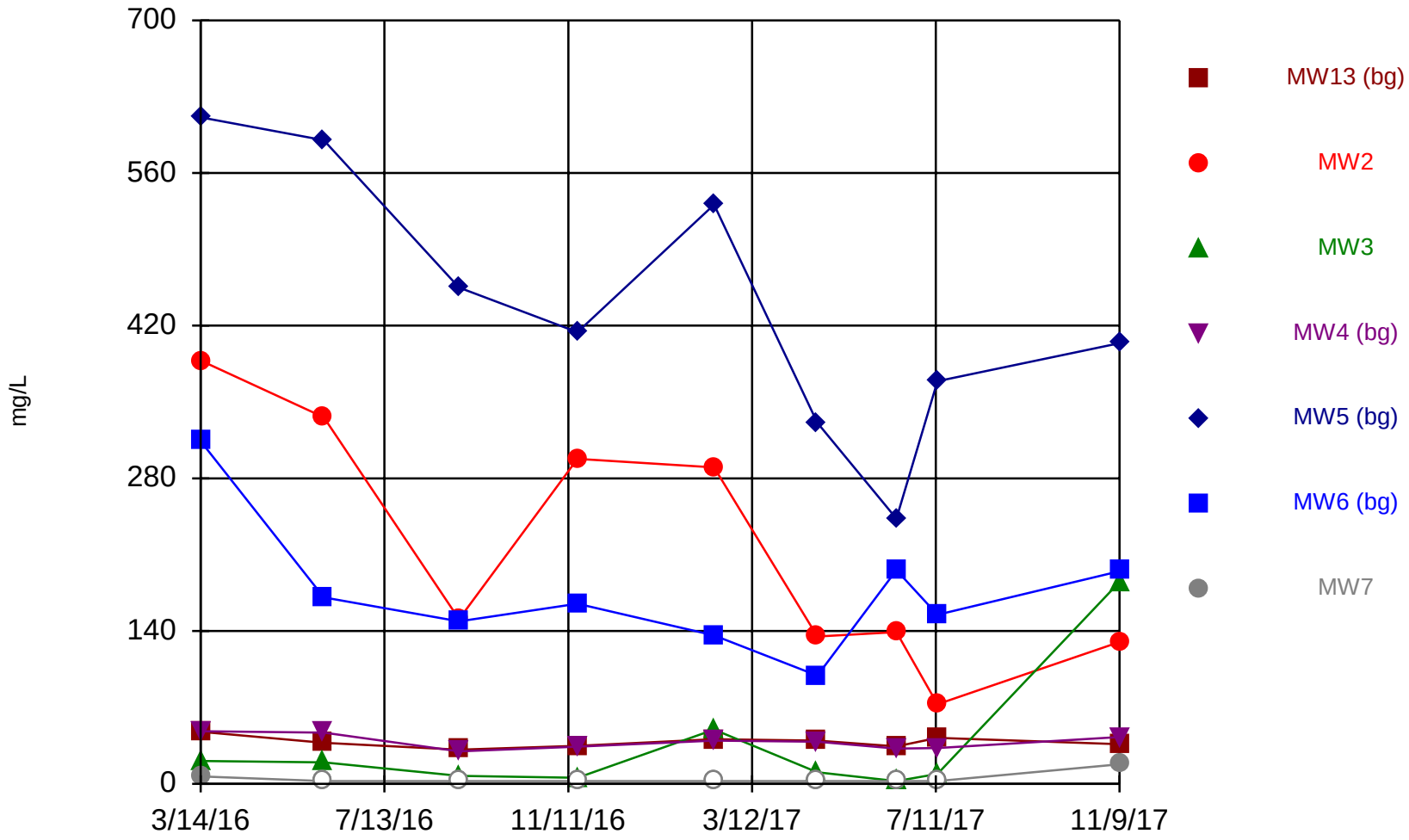


Constituent: pH Analysis Run 1/4/2018 8:45 AM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

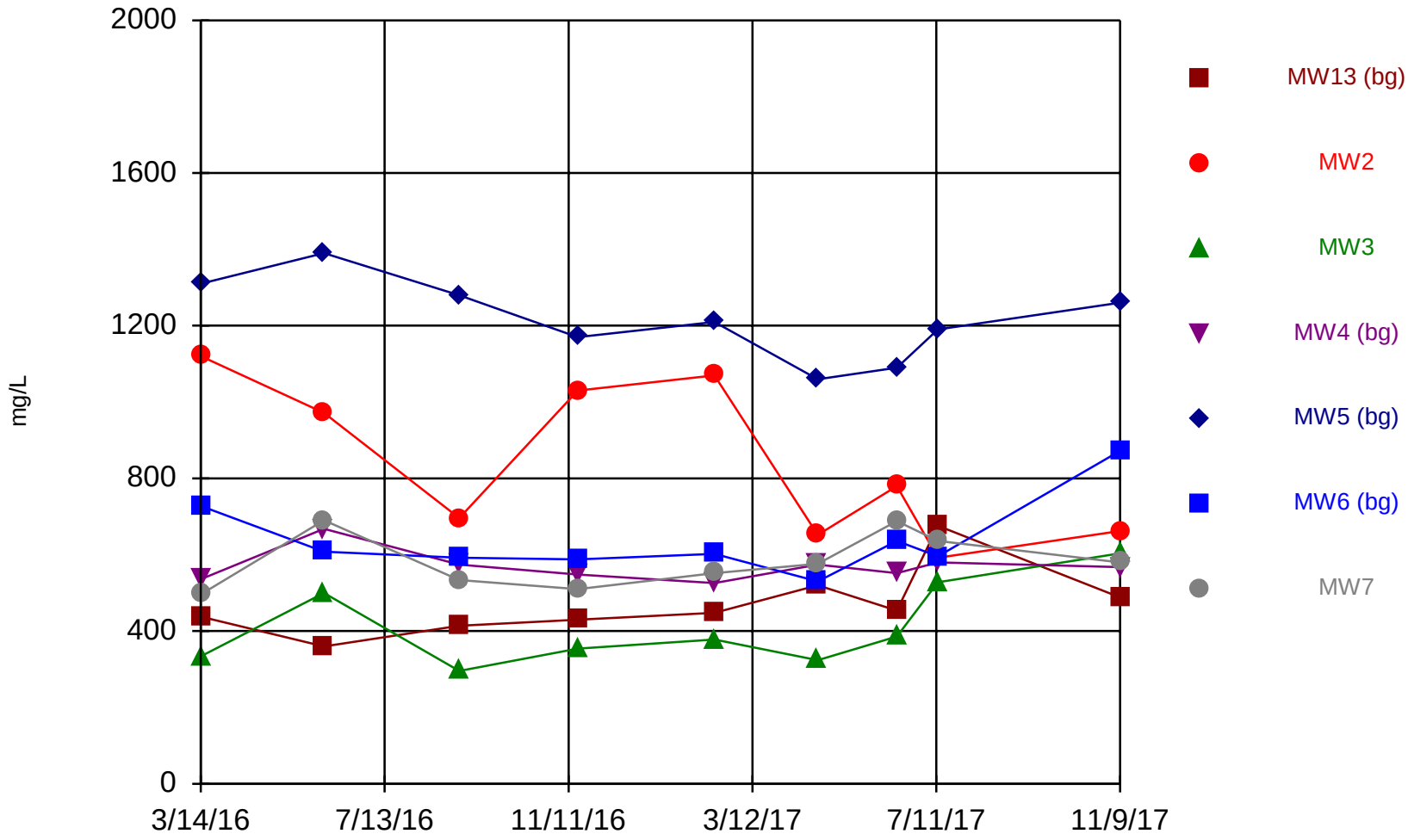
Time Series



Constituent: Sulfate Analysis Run 1/4/2018 8:45 AM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Time Series



Constituent: Total Dissolved Solids Analysis Run 1/4/2018 8:45 AM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

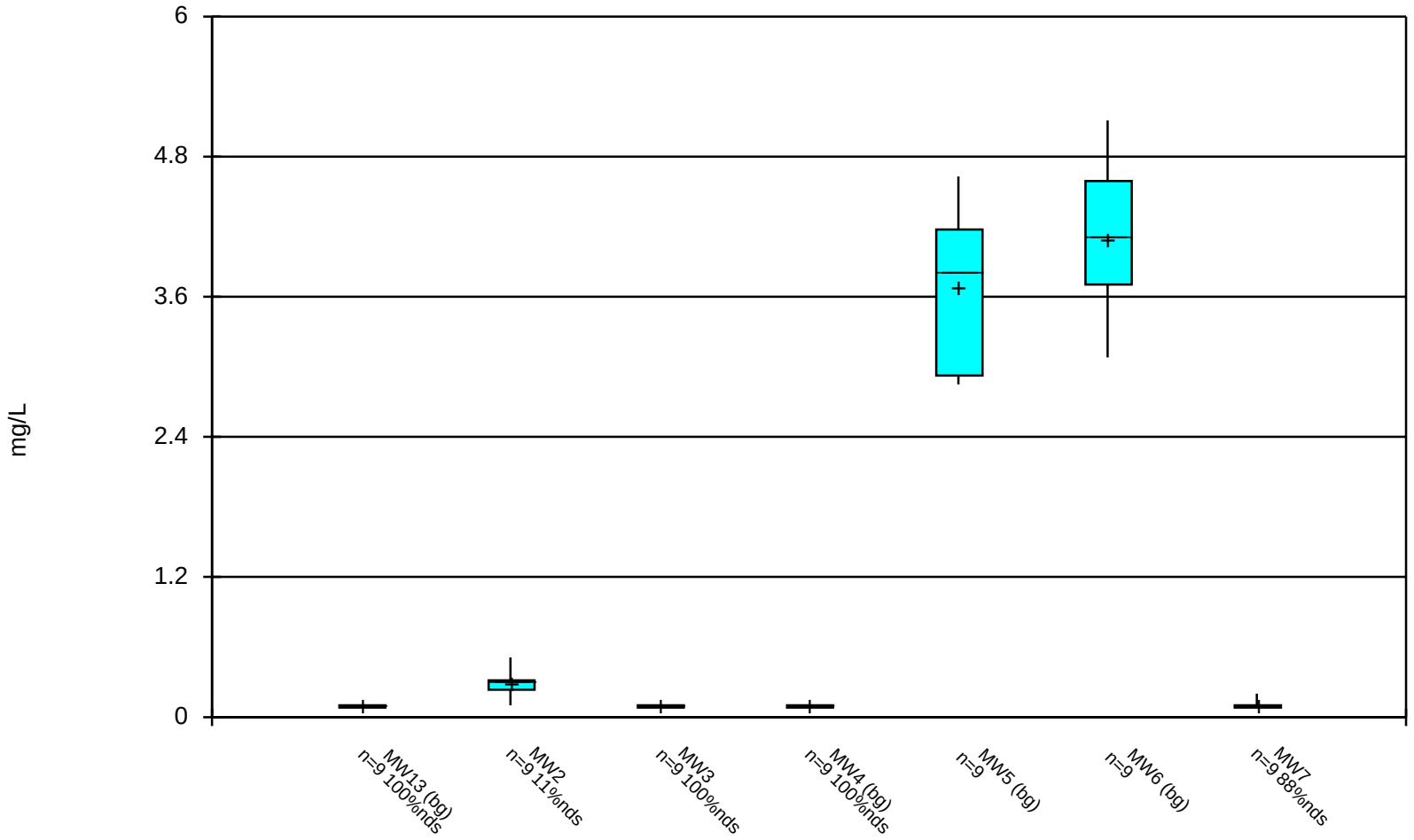
BOX PLOTS

Box & Whiskers Plot

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017) Printed 1/4/2018, 8:47 AM

Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Boron (mg/L)	MW13 (bg)	9	0.1	0	0	0.1	0.1	0.1	100
Boron (mg/L)	MW2	9	0.2862	0.1083	0.0361	0.301	0.1	0.511	11.11
Boron (mg/L)	MW3	9	0.1	0	0	0.1	0.1	0.1	100
Boron (mg/L)	MW4 (bg)	9	0.1	0	0	0.1	0.1	0.1	100
Boron (mg/L)	MW5 (bg)	9	3.69	0.6472	0.2157	3.82	2.85	4.63	0
Boron (mg/L)	MW6 (bg)	9	4.106	0.6122	0.2041	4.11	3.08	5.11	0
Boron (mg/L)	MW7	9	0.1112	0.03367	0.01122	0.1	0.1	0.201	88.89
Calcium (mg/L)	MW13 (bg)	9	88.93	9.209	3.07	91.1	66.6	95.8	0
Calcium (mg/L)	MW2	9	187.7	59.8	19.93	165	127	277	0
Calcium (mg/L)	MW3	9	90.7	29.18	9.727	89.4	51.3	148	0
Calcium (mg/L)	MW4 (bg)	9	122.8	15.72	5.24	126	91.1	142	0
Calcium (mg/L)	MW5 (bg)	9	195.9	23.68	7.892	191	159	228	0
Calcium (mg/L)	MW6 (bg)	9	113.3	17.71	5.904	119	90.4	134	0
Calcium (mg/L)	MW7	9	129.6	12.56	4.187	131	100	143	0
Chloride (mg/L)	MW13 (bg)	9	12.07	2.008	0.6693	12	9.33	16.8	0
Chloride (mg/L)	MW2	9	4.011	3.577	1.192	2.5	2.5	13.2	77.78
Chloride (mg/L)	MW3	9	4.678	4.626	1.542	2.5	2.5	15.6	77.78
Chloride (mg/L)	MW4 (bg)	9	4.356	3.032	1.011	2.5	2.5	10.8	66.67
Chloride (mg/L)	MW5 (bg)	9	20.91	14.21	4.736	13.3	7.93	51	0
Chloride (mg/L)	MW6 (bg)	9	7.597	5.284	1.761	6.26	2.5	16.5	33.33
Chloride (mg/L)	MW7	9	8.169	1.835	0.6116	7.79	5.73	11.3	0
Fluoride (mg/L)	MW13 (bg)	9	0.4047	0.2427	0.08088	0.25	0.25	0.803	66.67
Fluoride (mg/L)	MW2	9	0.6401	0.7929	0.2643	0.25	0.25	2.51	66.67
Fluoride (mg/L)	MW3	9	1.186	1.72	0.5732	0.25	0.168	5.11	55.56
Fluoride (mg/L)	MW4 (bg)	9	0.7388	0.7509	0.2503	0.25	0.213	2.43	44.44
Fluoride (mg/L)	MW5 (bg)	9	0.5812	0.5936	0.1979	0.25	0.25	1.89	66.67
Fluoride (mg/L)	MW6 (bg)	9	1.11	2.089	0.6964	0.25	0.25	6.53	77.78
Fluoride (mg/L)	MW7	9	0.4118	0.3648	0.1216	0.25	0.25	1.35	66.67
pH (SU)	MW13 (bg)	9	7.396	0.3796	0.1265	7.27	6.97	8.1	0
pH (SU)	MW2	9	7.068	0.1797	0.0599	7.04	6.79	7.28	0
pH (SU)	MW3	9	7.344	0.3064	0.1021	7.32	7.05	7.99	0
pH (SU)	MW4 (bg)	9	7.221	0.3335	0.1112	7.18	6.84	7.88	0
pH (SU)	MW5 (bg)	9	7.272	0.1985	0.06616	7.2	7.01	7.55	0
pH (SU)	MW6 (bg)	9	7.426	0.2141	0.07138	7.35	7.21	7.77	0
pH (SU)	MW7	9	7.439	0.2785	0.09283	7.4	6.92	7.83	0
Sulfate (mg/L)	MW13 (bg)	9	38.26	4.913	1.638	37.6	31.3	47.7	0
Sulfate (mg/L)	MW2	9	215.6	112.2	37.41	151	73	388	0
Sulfate (mg/L)	MW3	9	34.45	58.21	19.4	10.5	2.5	185	11.11
Sulfate (mg/L)	MW4 (bg)	9	38.31	6.667	2.222	38.6	29.7	48.3	0
Sulfate (mg/L)	MW5 (bg)	9	438.7	121.4	40.47	414	243	611	0
Sulfate (mg/L)	MW6 (bg)	9	175.6	59.83	19.94	165	99.1	314	0
Sulfate (mg/L)	MW7	9	4.687	5.126	1.709	2.5	2.5	17.8	77.78
Total Dissolved Solids (mg/L)	MW13 (bg)	9	469.8	89.34	29.78	448	360	676	0
Total Dissolved Solids (mg/L)	MW2	9	841.6	205.4	68.48	780	592	1120	0
Total Dissolved Solids (mg/L)	MW3	9	411.6	106.4	35.46	378	296	604	0
Total Dissolved Solids (mg/L)	MW4 (bg)	9	569.6	41.29	13.76	568	526	668	0
Total Dissolved Solids (mg/L)	MW5 (bg)	9	1218	105	34.99	1210	1060	1390	0
Total Dissolved Solids (mg/L)	MW6 (bg)	9	639.1	101.9	33.97	602	530	872	0
Total Dissolved Solids (mg/L)	MW7	9	584.7	72.09	24.03	576	496	690	0

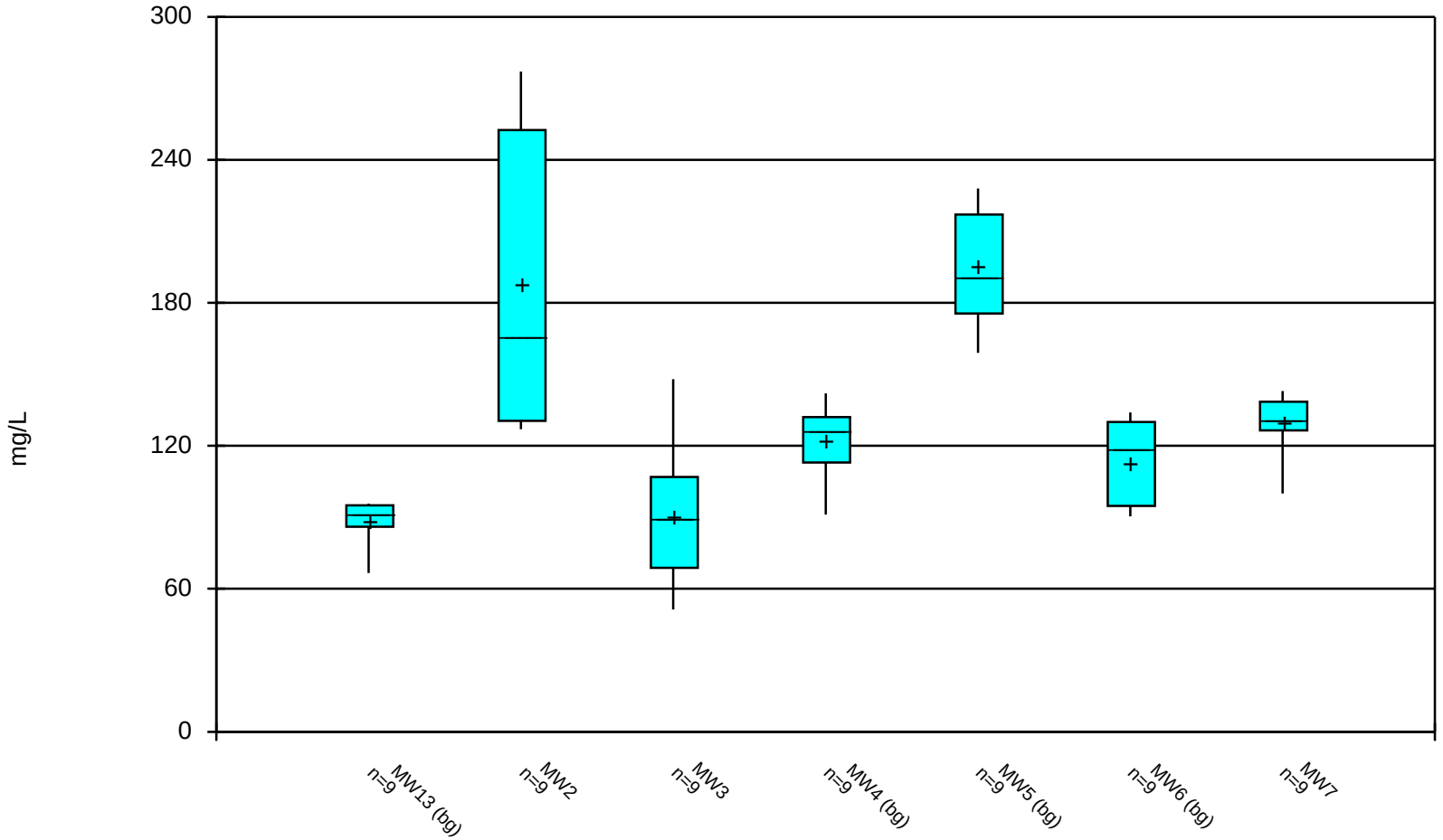
Box & Whiskers Plot



Constituent: Boron Analysis Run 1/4/2018 8:46 AM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

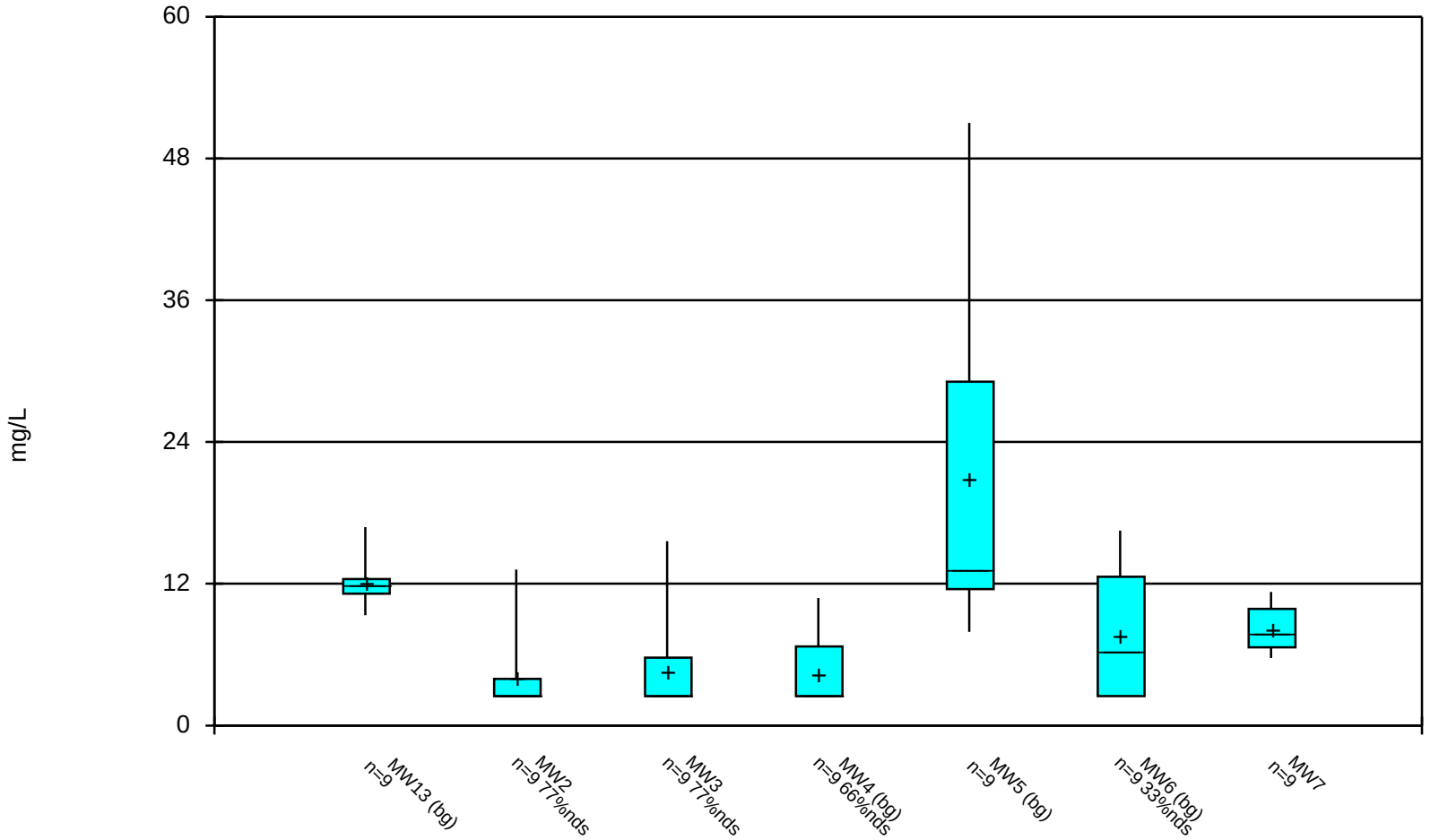
Box & Whiskers Plot



Constituent: Calcium Analysis Run 1/4/2018 8:46 AM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

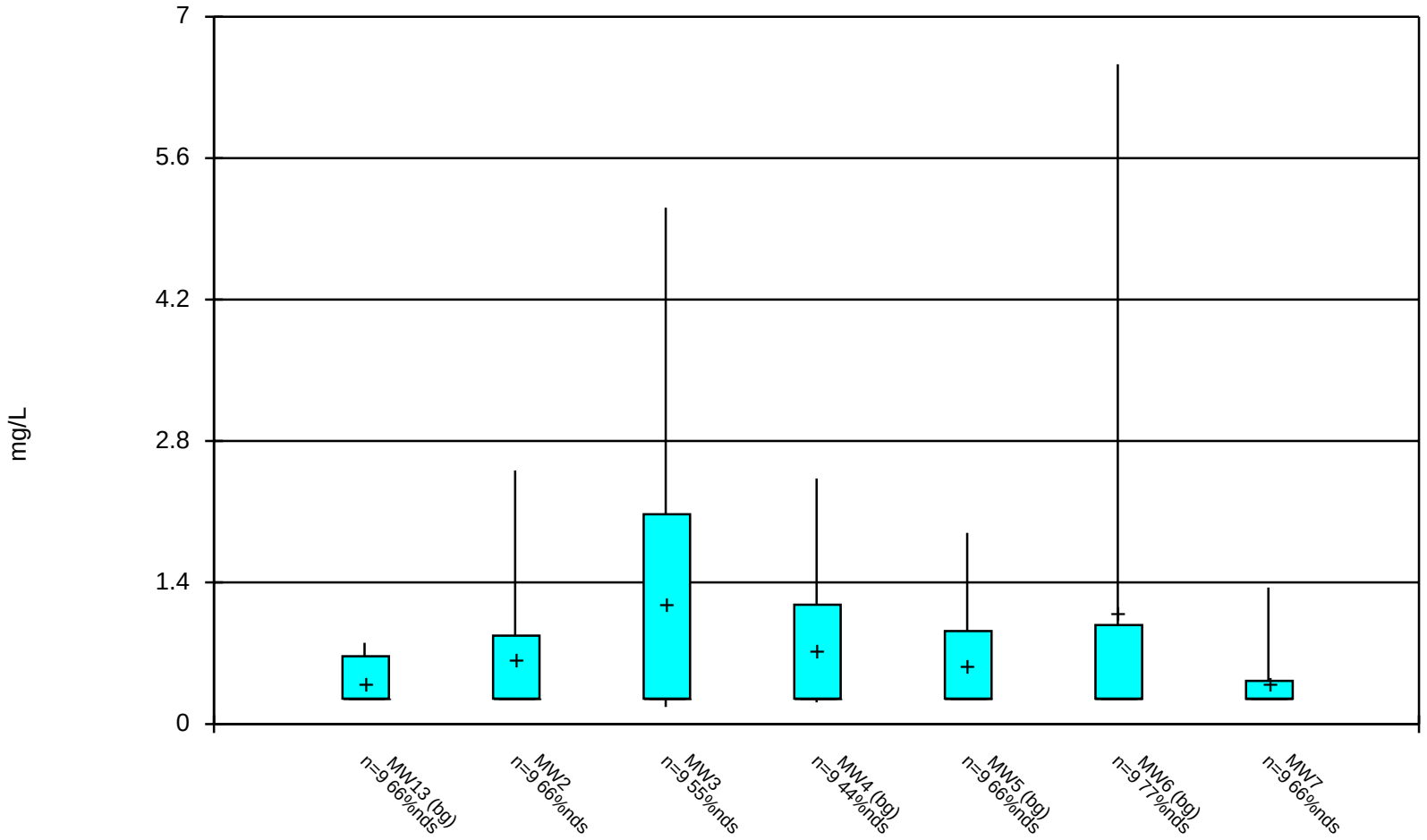
Box & Whiskers Plot



Constituent: Chloride Analysis Run 1/4/2018 8:46 AM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

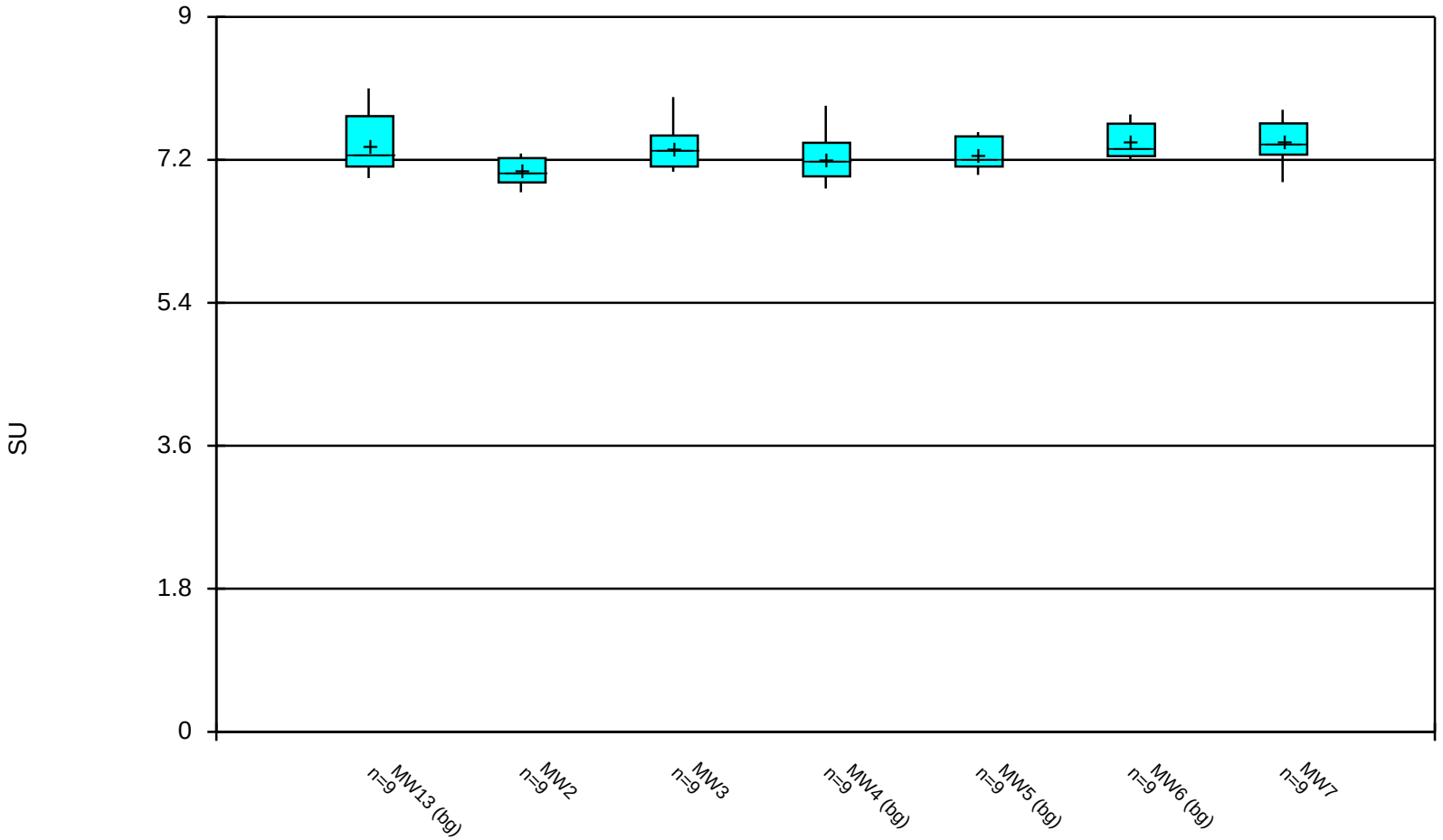
Box & Whiskers Plot



Constituent: Fluoride Analysis Run 1/4/2018 8:46 AM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

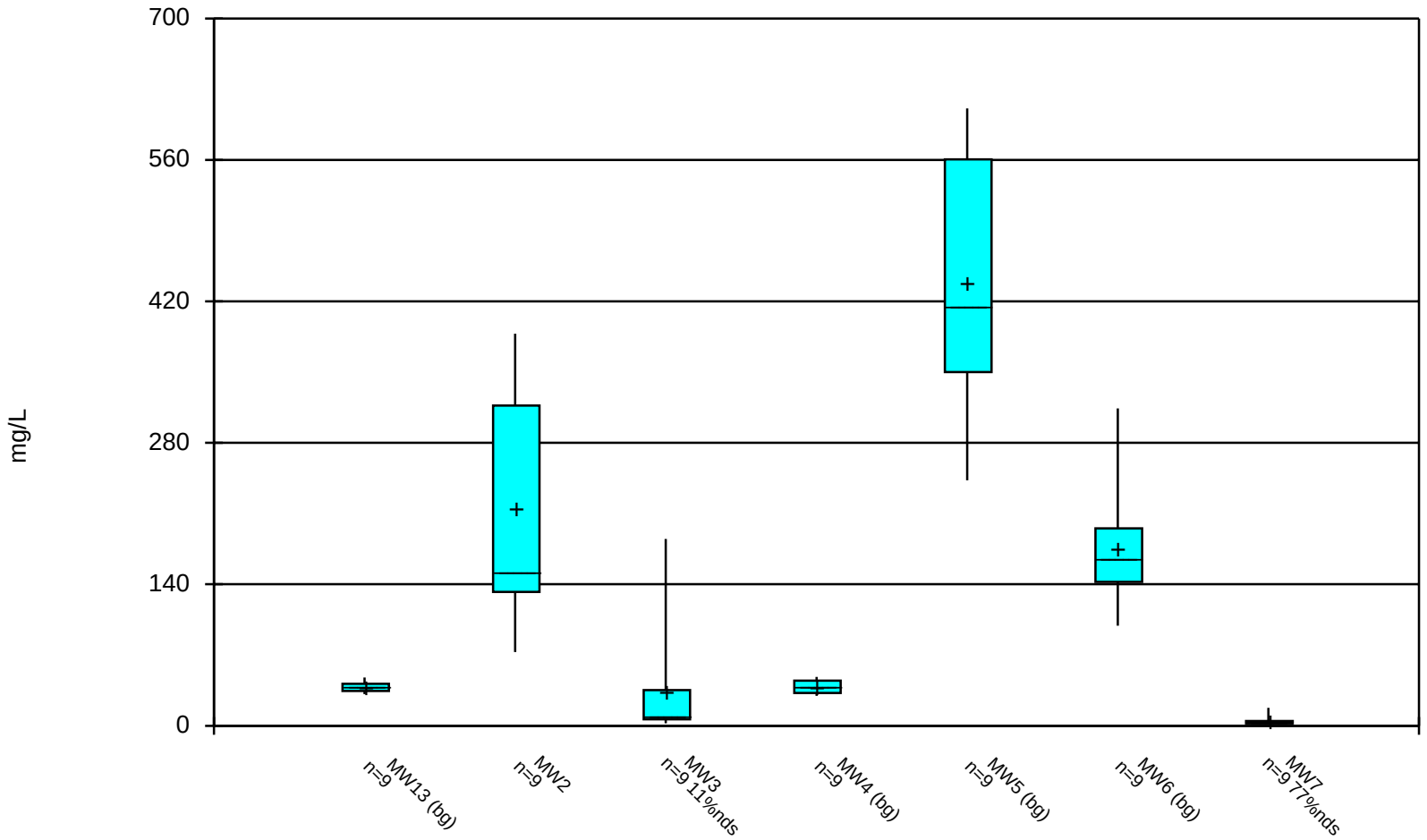
Box & Whiskers Plot



Constituent: pH Analysis Run 1/4/2018 8:46 AM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

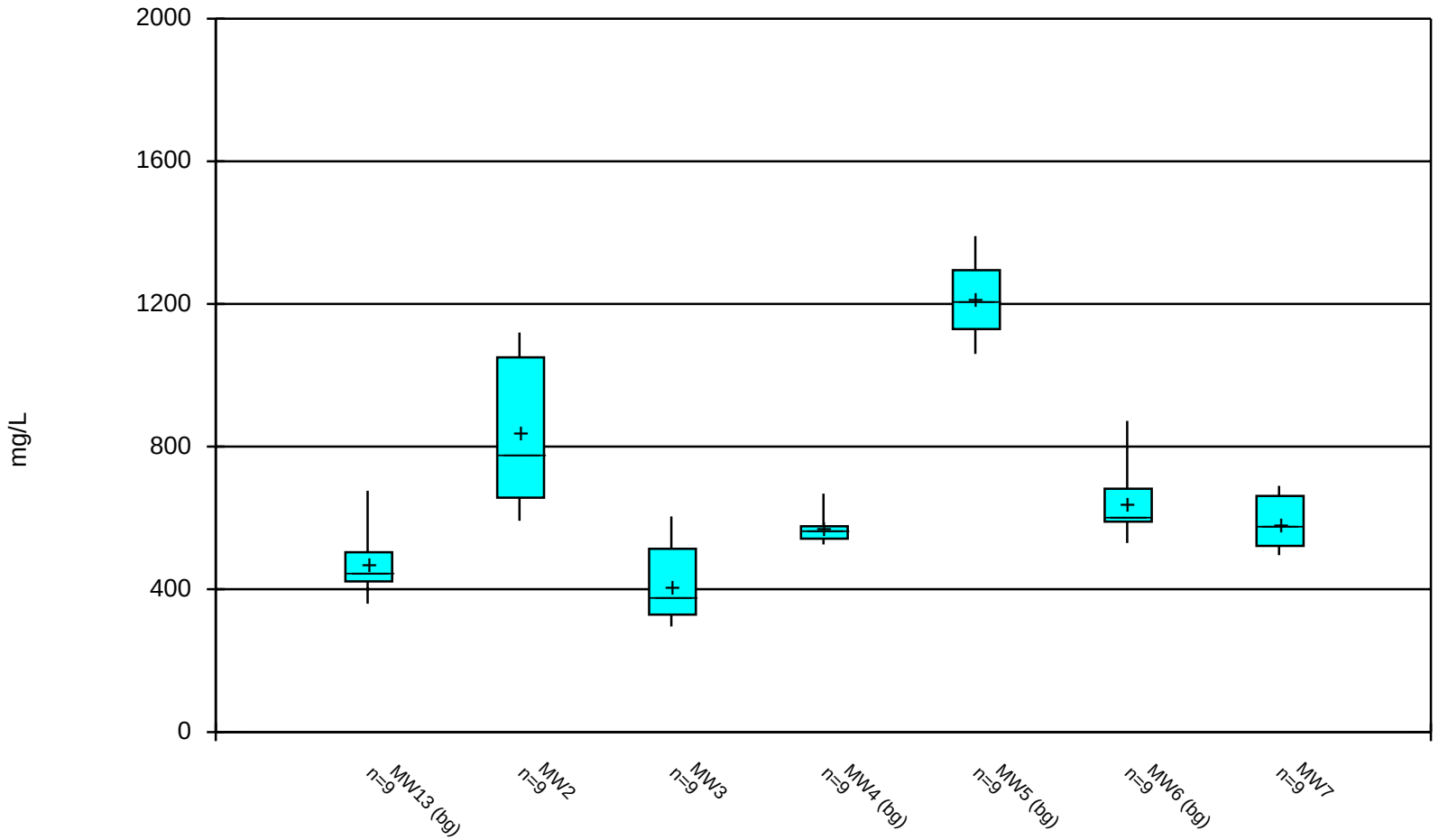
Box & Whiskers Plot



Constituent: Sulfate Analysis Run 1/4/2018 8:46 AM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 1/4/2018 8:46 AM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

TREND ANALYSES

Trend Test

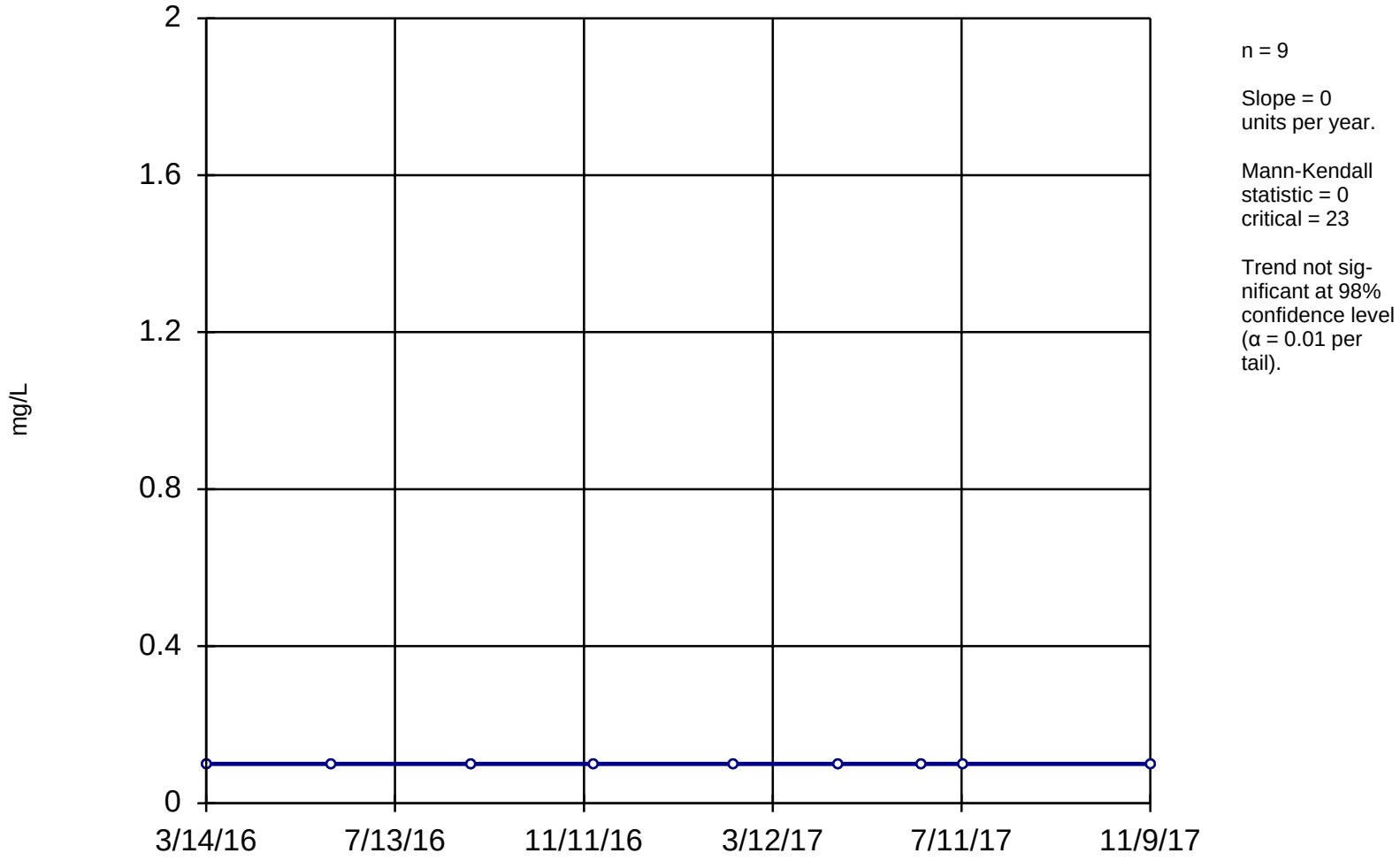
OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017) Printed 1/3/2018, 3:25 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	MW13 (bg)	0	0	23	No	9	100	n/a	n/a	0.02	NP
Boron (mg/L)	MW2	0.01258	6	23	No	9	11.11	n/a	n/a	0.02	NP
Boron (mg/L)	MW3	0	0	23	No	9	100	n/a	n/a	0.02	NP
Boron (mg/L)	MW4 (bg)	0	0	23	No	9	100	n/a	n/a	0.02	NP
Boron (mg/L)	MW5 (bg)	-0.09796	-2	-23	No	9	0	n/a	n/a	0.02	NP
Boron (mg/L)	MW6 (bg)	-0.1207	-2	-23	No	9	0	n/a	n/a	0.02	NP
Boron (mg/L)	MW7	0	8	23	No	9	88.89	n/a	n/a	0.02	NP
Calcium (mg/L)	MW13 (bg)	4.864	18	23	No	9	0	n/a	n/a	0.02	NP
Calcium (mg/L)	MW2	-73.38	-16	-23	No	9	0	n/a	n/a	0.02	NP
Calcium (mg/L)	MW3	18.68	10	23	No	9	0	n/a	n/a	0.02	NP
Calcium (mg/L)	MW4 (bg)	0	0	23	No	9	0	n/a	n/a	0.02	NP
Calcium (mg/L)	MW5 (bg)	-24.81	-9	-23	No	9	0	n/a	n/a	0.02	NP
Calcium (mg/L)	MW6 (bg)	3.499	2	23	No	9	0	n/a	n/a	0.02	NP
Calcium (mg/L)	MW7	-0.905	-1	-23	No	9	0	n/a	n/a	0.02	NP
Chloride (mg/L)	MW13 (bg)	1.241	18	23	No	9	0	n/a	n/a	0.02	NP
Chloride (mg/L)	MW2	0	1	23	No	9	77.78	n/a	n/a	0.02	NP
Chloride (mg/L)	MW3	0	1	23	No	9	77.78	n/a	n/a	0.02	NP
Chloride (mg/L)	MW4 (bg)	0	-9	-23	No	9	66.67	n/a	n/a	0.02	NP
Chloride (mg/L)	**MW5 (bg)**	**-21.04**	**-28**	**-23**	**Yes**	**9**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Chloride (mg/L)	MW6 (bg)	-4.252	-7	-23	No	9	33.33	n/a	n/a	0.02	NP
Chloride (mg/L)	MW7	1.038	10	23	No	9	0	n/a	n/a	0.02	NP
Fluoride (mg/L)	MW13 (bg)	0	5	23	No	9	66.67	n/a	n/a	0.02	NP
Fluoride (mg/L)	MW2	0	-5	-23	No	9	66.67	n/a	n/a	0.02	NP
Fluoride (mg/L)	MW3	0	6	23	No	9	55.56	n/a	n/a	0.02	NP
Fluoride (mg/L)	MW4 (bg)	0	2	23	No	9	44.44	n/a	n/a	0.02	NP
Fluoride (mg/L)	MW5 (bg)	0	-1	-23	No	9	66.67	n/a	n/a	0.02	NP
Fluoride (mg/L)	MW6 (bg)	0	-1	-23	No	9	77.78	n/a	n/a	0.02	NP
Fluoride (mg/L)	MW7	0	-5	-23	No	9	66.67	n/a	n/a	0.02	NP
pH (SU)	MW13 (bg)	0.1963	12	23	No	9	0	n/a	n/a	0.02	NP
pH (SU)	MW2	0.197	7	23	No	9	0	n/a	n/a	0.02	NP
pH (SU)	MW3	0.3036	23	23	No	9	0	n/a	n/a	0.02	NP
pH (SU)	MW4 (bg)	0.2104	14	23	No	9	0	n/a	n/a	0.02	NP
pH (SU)	MW5 (bg)	0.1042	12	23	No	9	0	n/a	n/a	0.02	NP
pH (SU)	MW6 (bg)	0.000...	0	23	No	9	0	n/a	n/a	0.02	NP
pH (SU)	MW7	0.09988	4	23	No	9	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	MW13 (bg)	-0.8525	-2	-23	No	9	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	**MW2**	**-181.2**	**-28**	**-23**	**Yes**	**9**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Sulfate (mg/L)	MW3	-5.759	-2	-23	No	9	11.11	n/a	n/a	0.02	NP
Sulfate (mg/L)	MW4 (bg)	-4.611	-8	-23	No	9	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	MW5 (bg)	-186.9	-22	-23	No	9	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	MW6 (bg)	-14.93	-6	-23	No	9	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	MW7	0	1	23	No	9	77.78	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	**MW13 (bg)**	**74.37**	**24**	**23**	**Yes**	**9**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Total Dissolved Solids (mg/L)	MW2	-276.8	-18	-23	No	9	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	MW3	105.7	18	23	No	9	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	MW4 (bg)	6.952	3	23	No	9	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	MW5 (bg)	-106.1	-14	-23	No	9	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	MW6 (bg)	-1.943	0	23	No	9	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	MW7	62.72	14	23	No	9	0	n/a	n/a	0.02	NP

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).

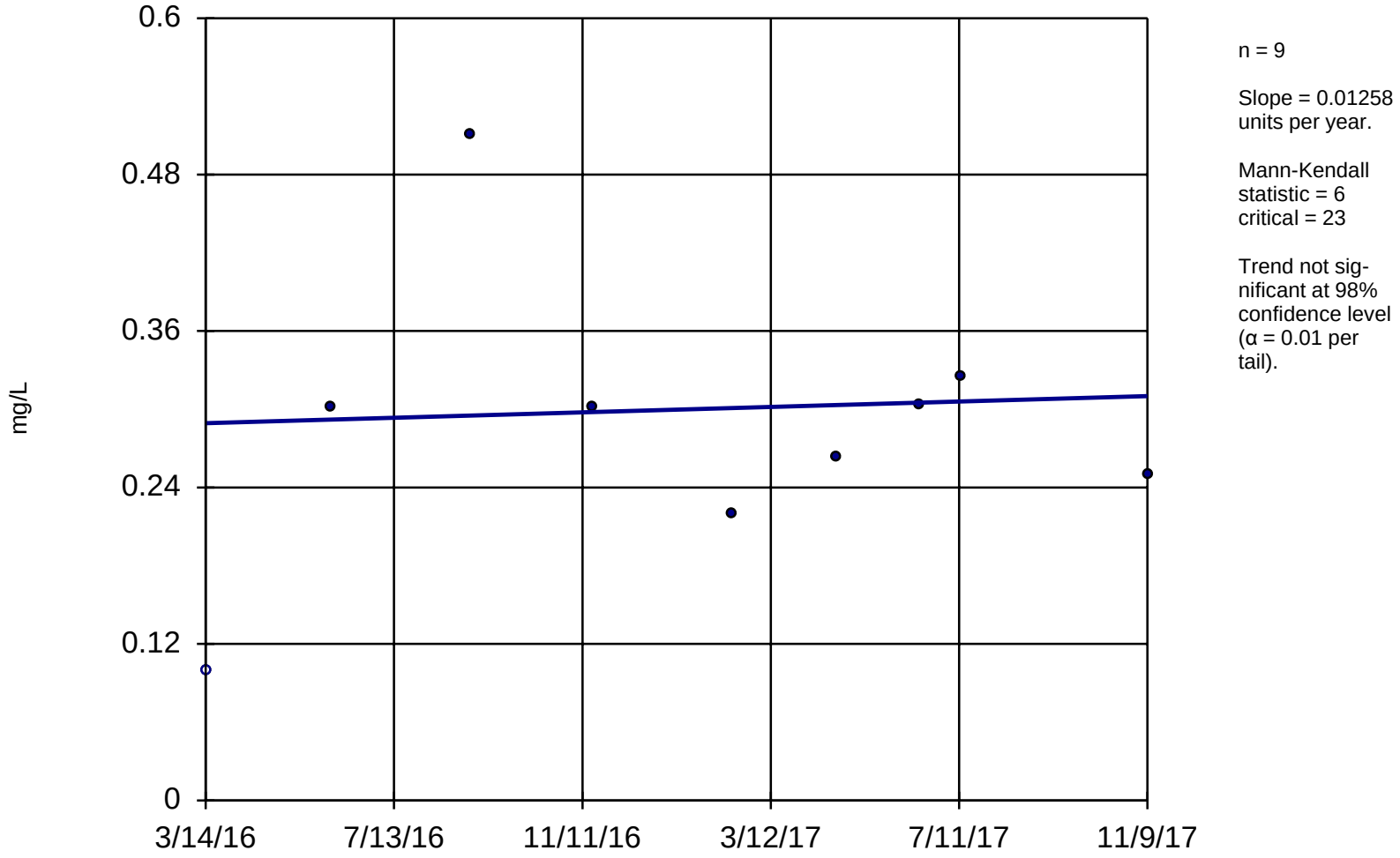
Constituent: Boron Analysis Run 1/3/2018 3:23 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW2



n = 9

Slope = 0.01258 units per year.

Mann-Kendall statistic = 6
critical = 23

Trend not significant at 98% confidence level (α = 0.01 per tail).

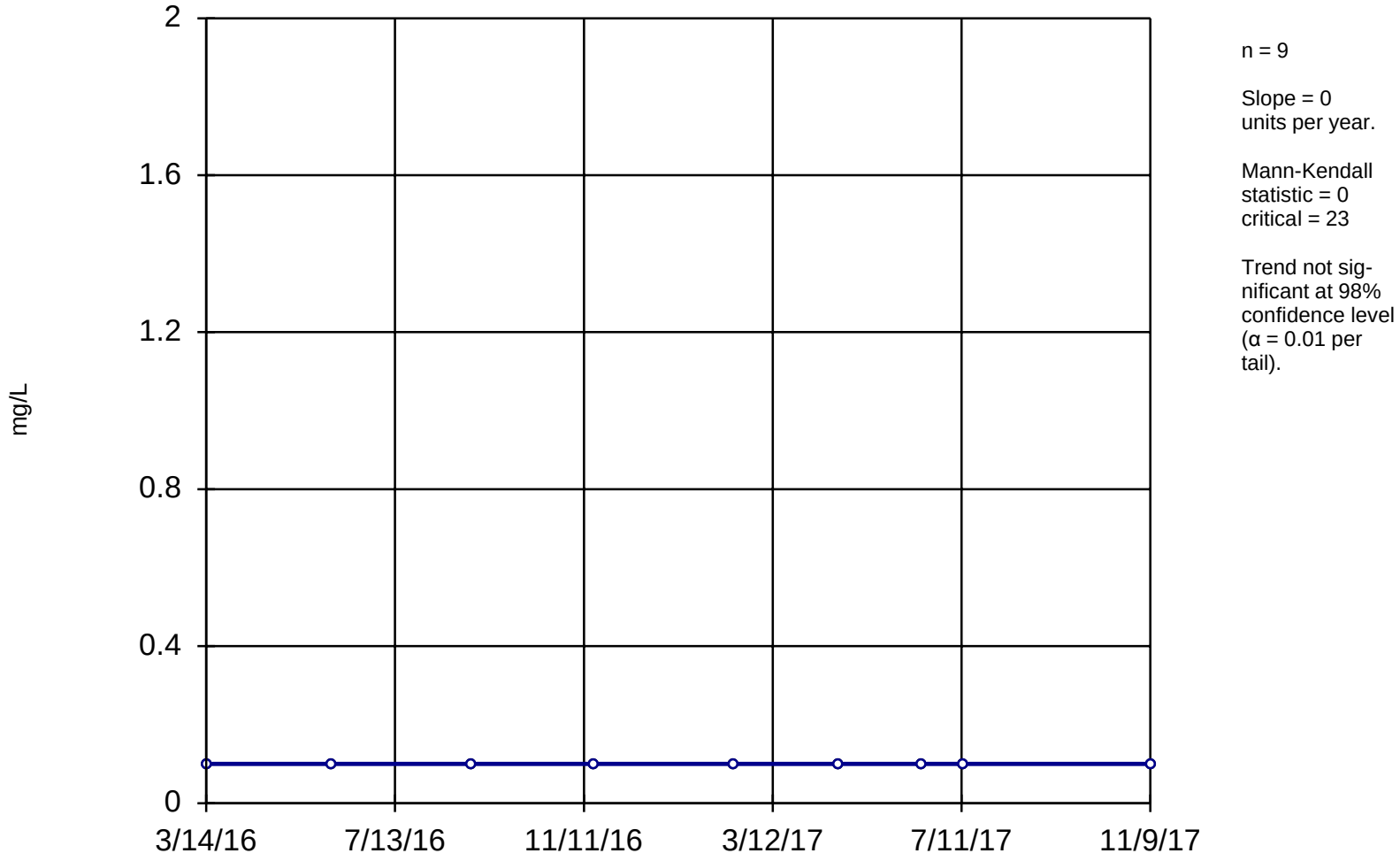
Constituent: Boron Analysis Run 1/3/2018 3:23 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW3



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).

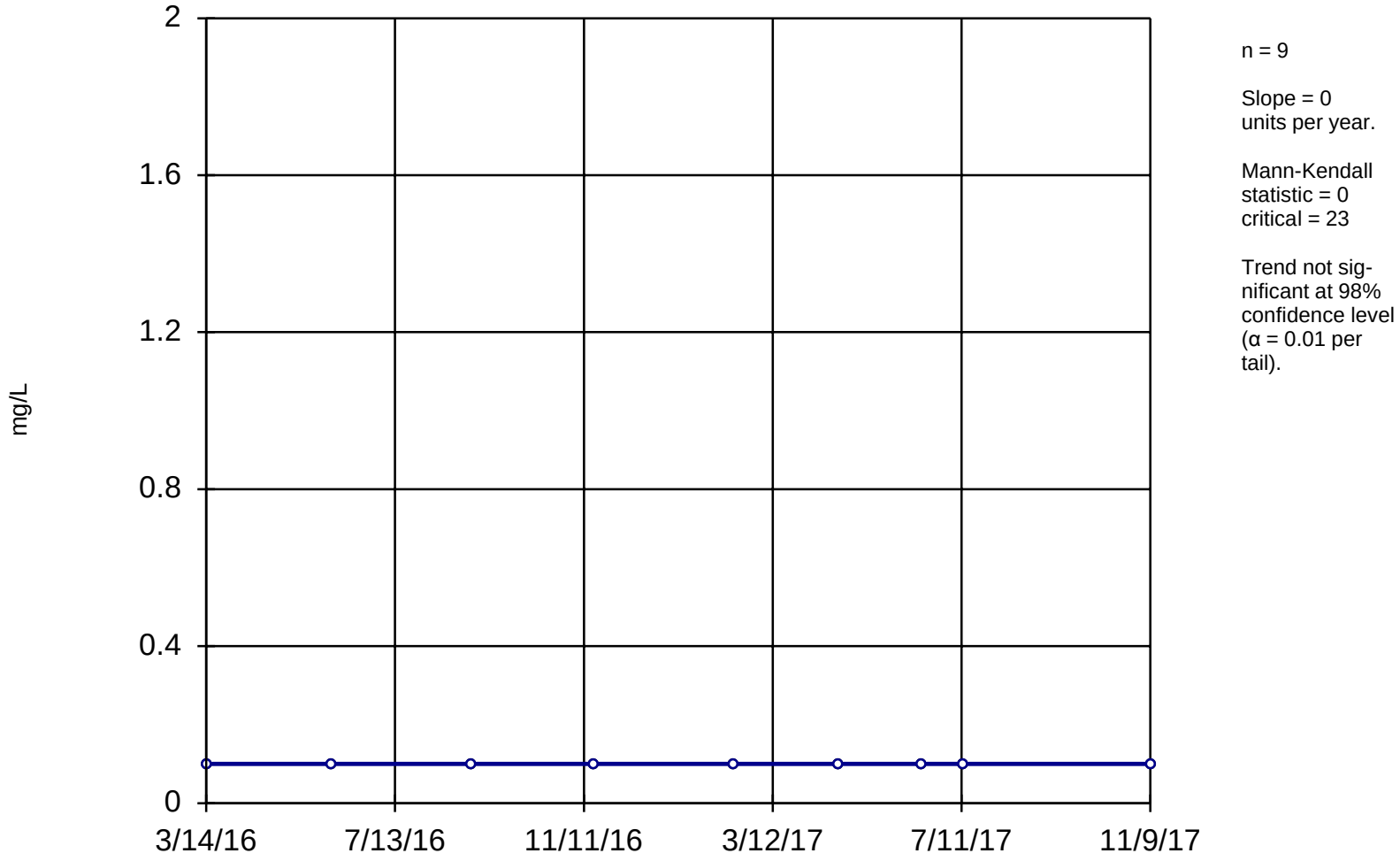
Constituent: Boron Analysis Run 1/3/2018 3:23 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4 (bg)



n = 9

Slope = 0
units per year.

Mann-Kendall
statistic = 0
critical = 23

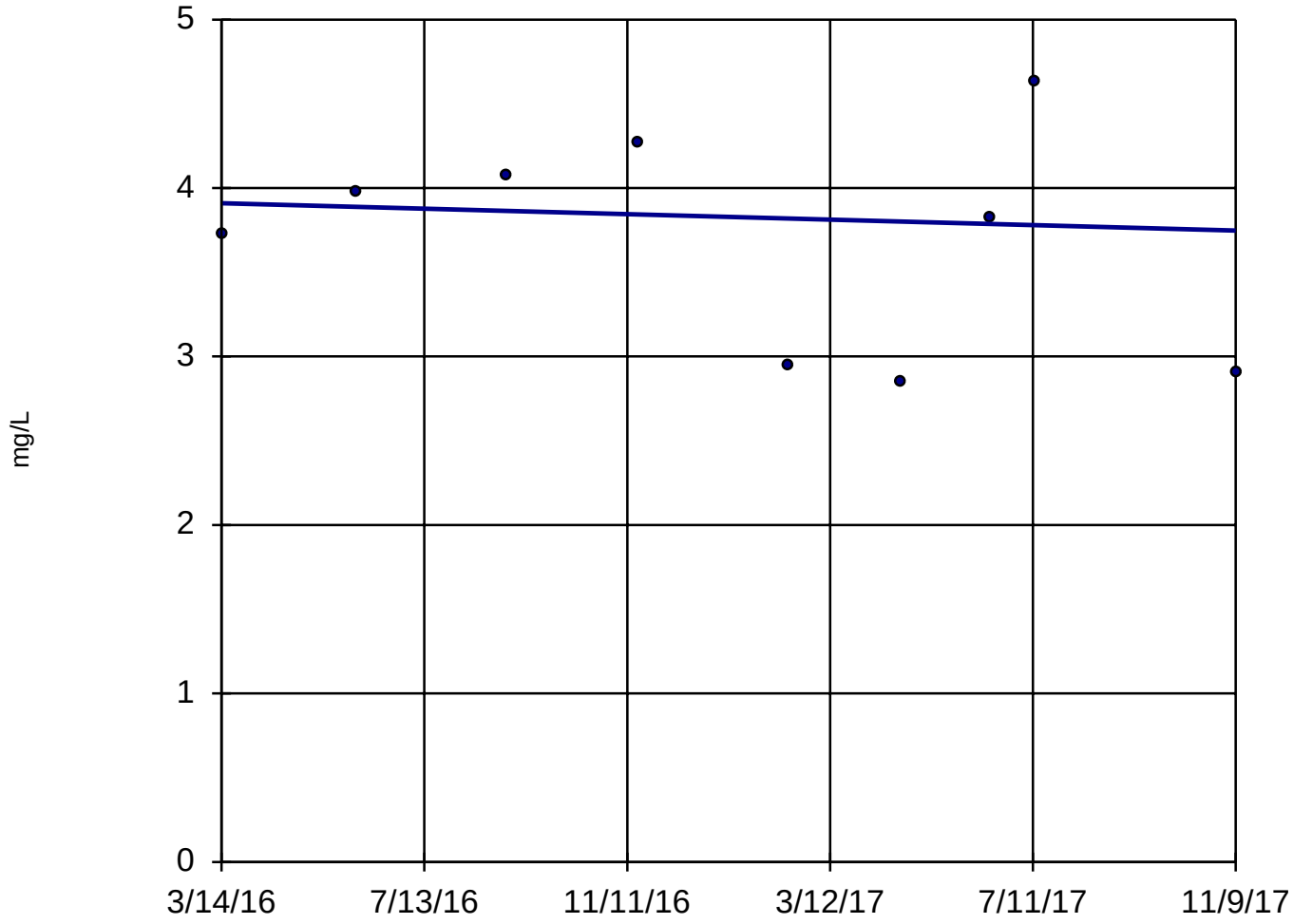
Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

Constituent: Boron Analysis Run 1/3/2018 3:23 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW5 (bg)



n = 9

Slope = -0.09796 units per year.

Mann-Kendall statistic = -2
critical = -23

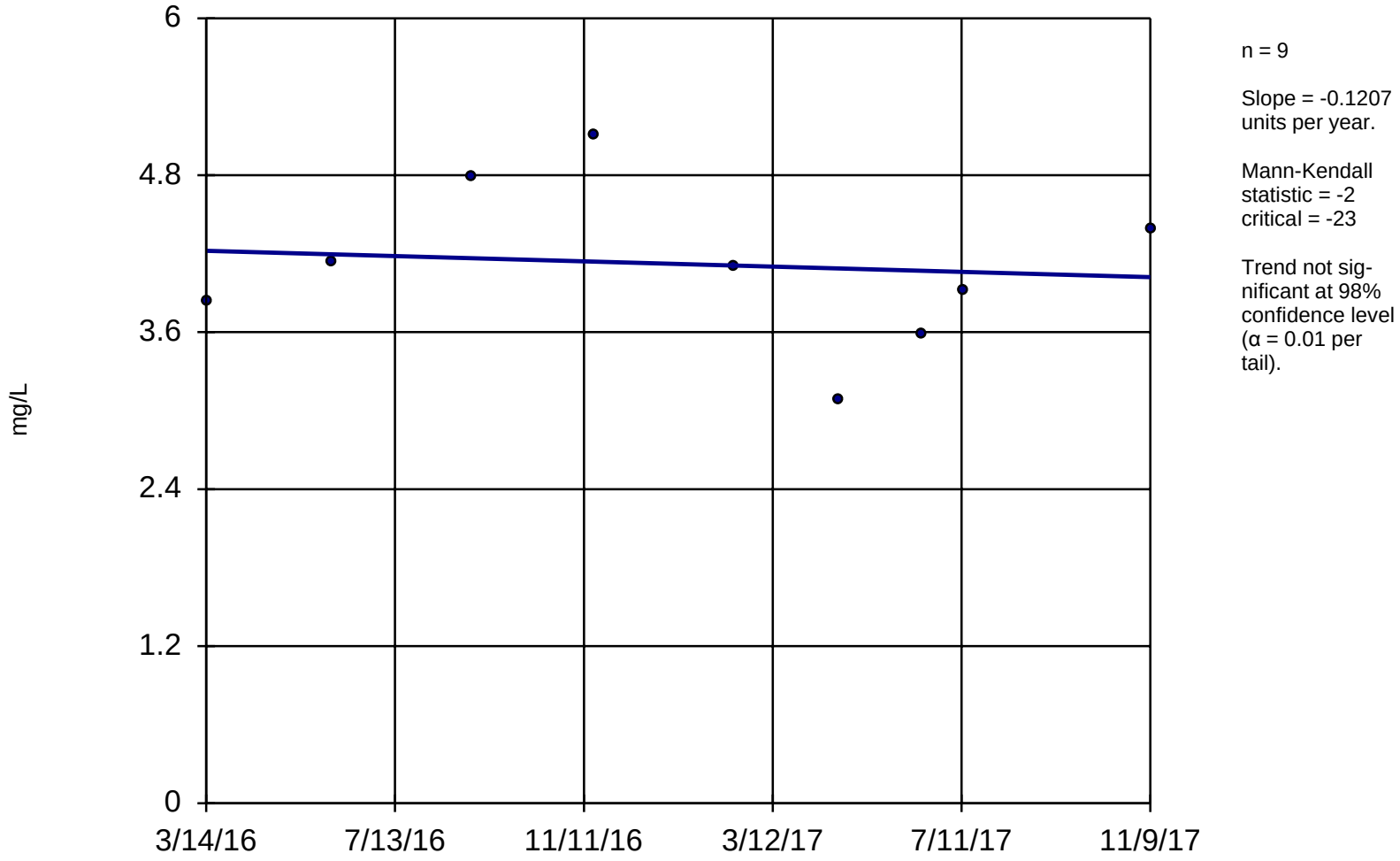
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Boron Analysis Run 1/3/2018 3:23 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW6 (bg)



n = 9

Slope = -0.1207 units per year.

Mann-Kendall statistic = -2
critical = -23

Trend not significant at 98% confidence level (α = 0.01 per tail).

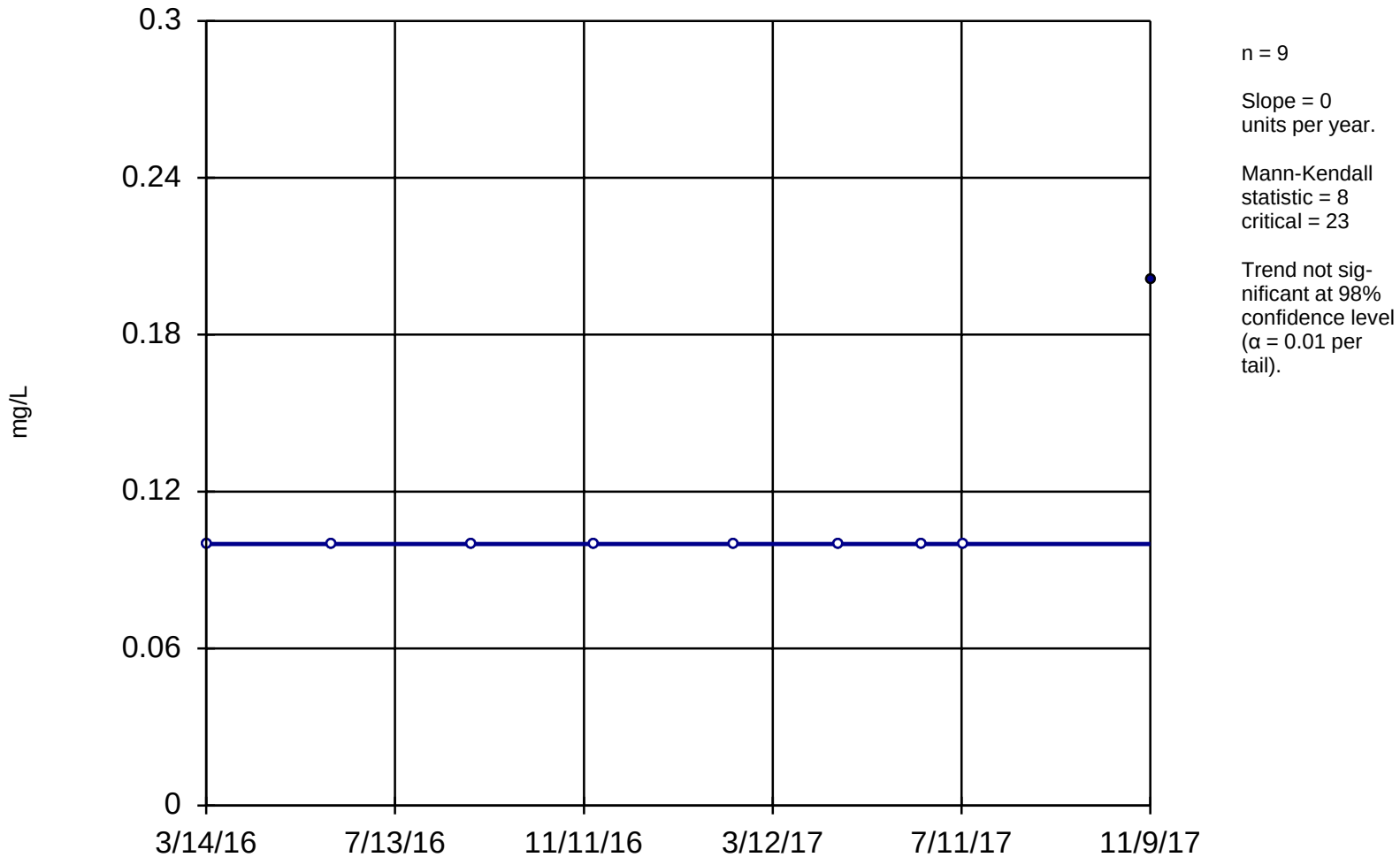
Constituent: Boron Analysis Run 1/3/2018 3:23 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW7



n = 9

Slope = 0
units per year.

Mann-Kendall
statistic = 8
critical = 23

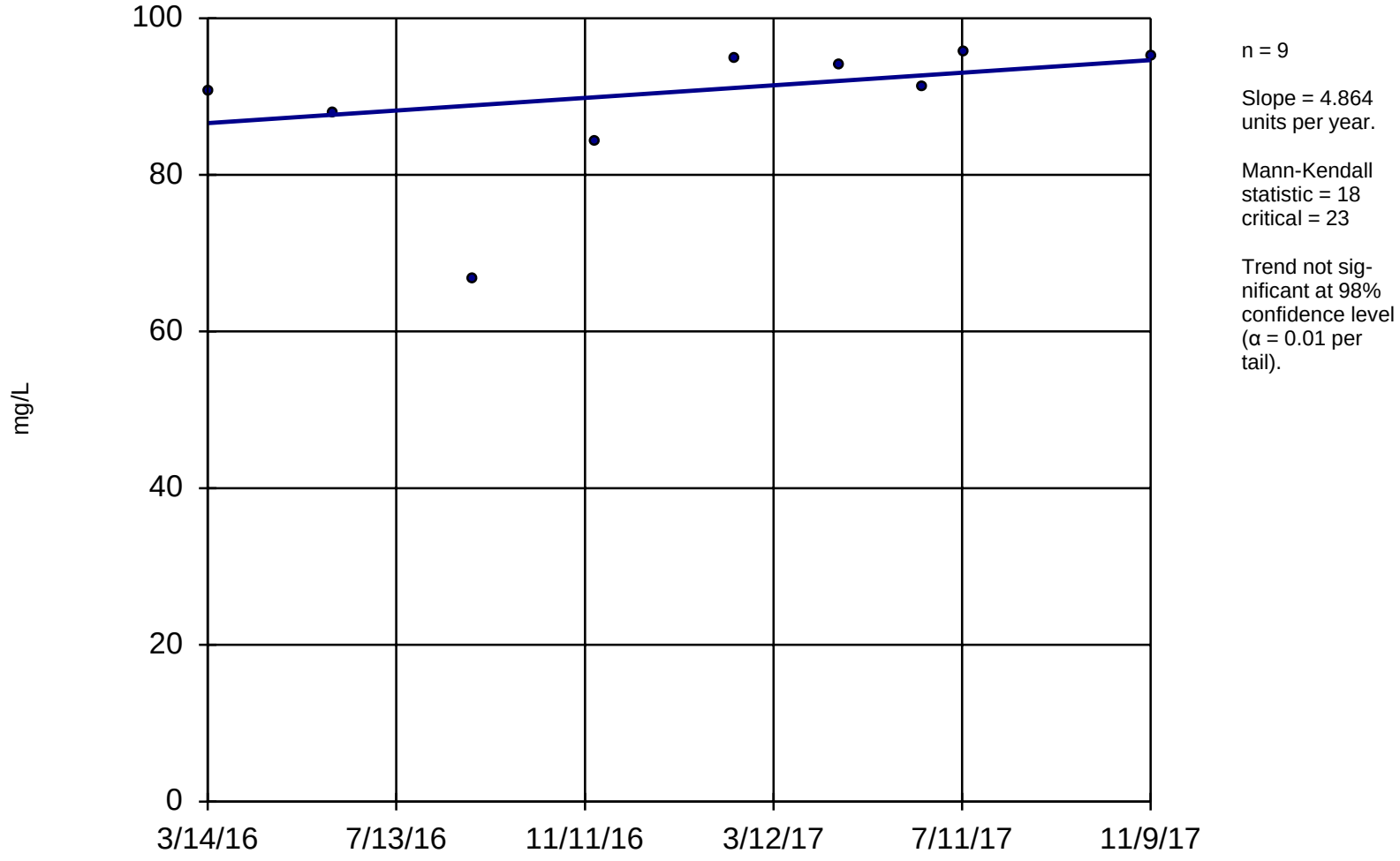
Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

Constituent: Boron Analysis Run 1/3/2018 3:23 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW13 (bg)



n = 9

Slope = 4.864 units per year.

Mann-Kendall statistic = 18
critical = 23

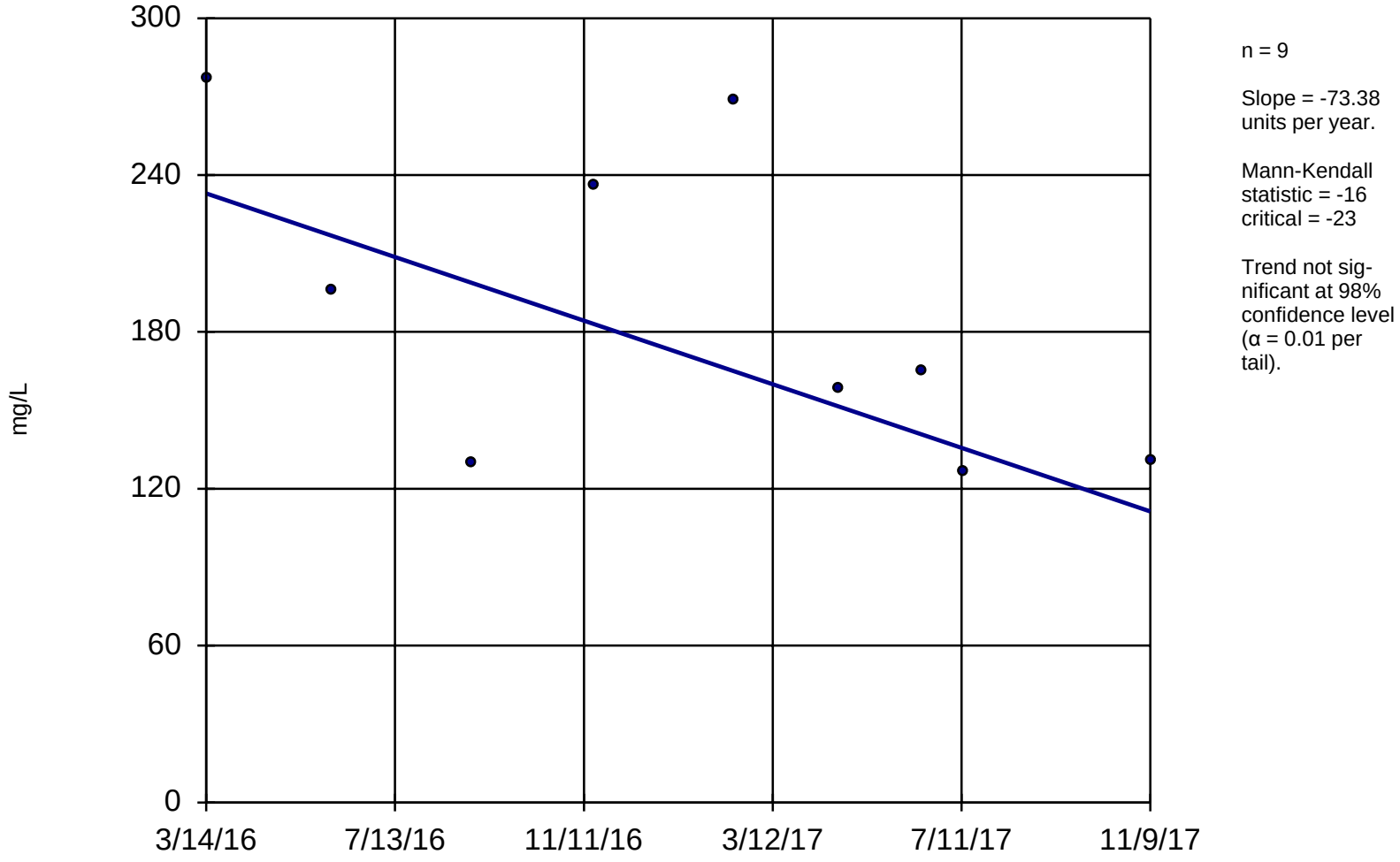
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Calcium Analysis Run 1/3/2018 3:23 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW2



n = 9

Slope = -73.38 units per year.

Mann-Kendall statistic = -16
critical = -23

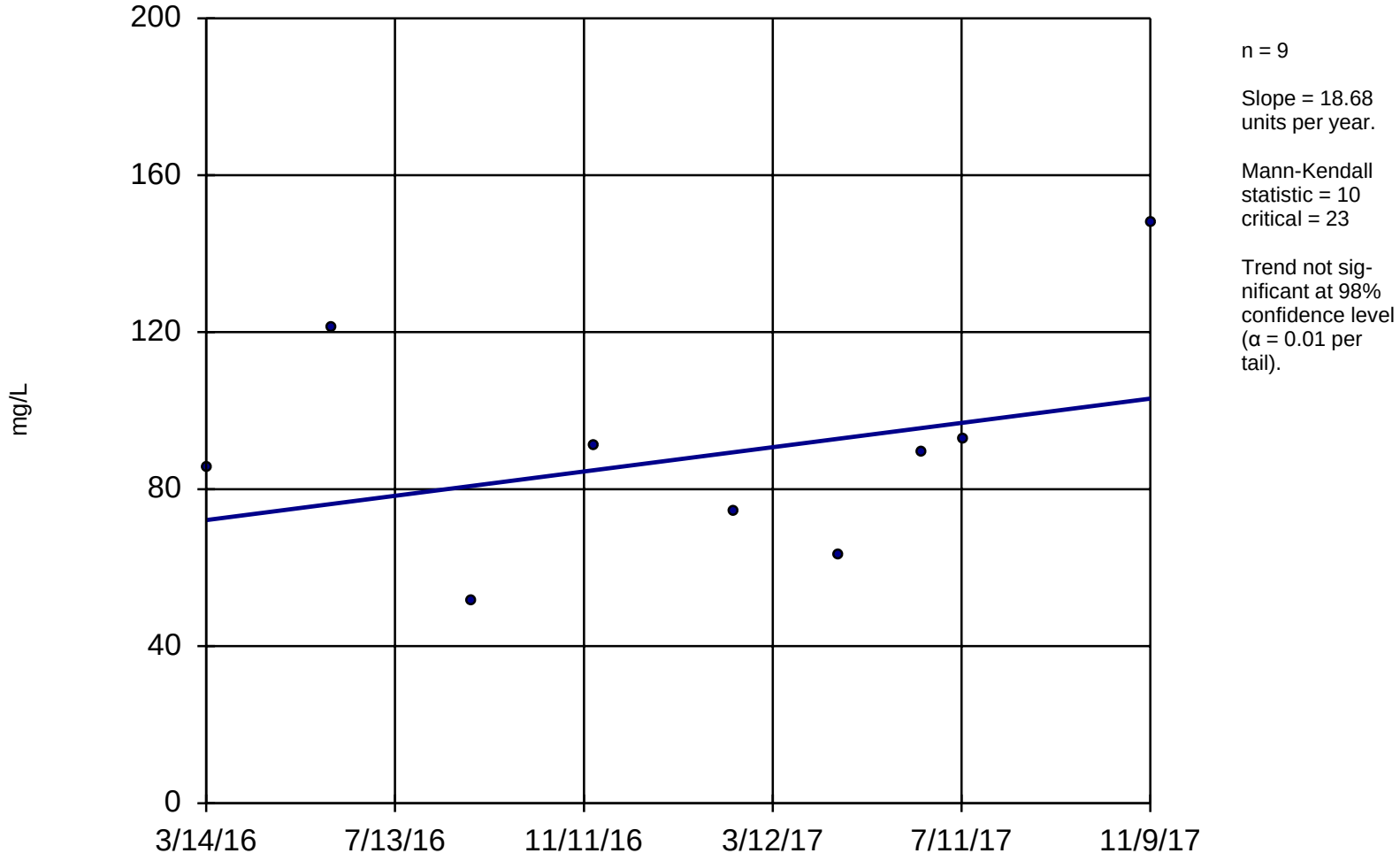
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Calcium Analysis Run 1/3/2018 3:23 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW3



n = 9

Slope = 18.68 units per year.

Mann-Kendall statistic = 10
critical = 23

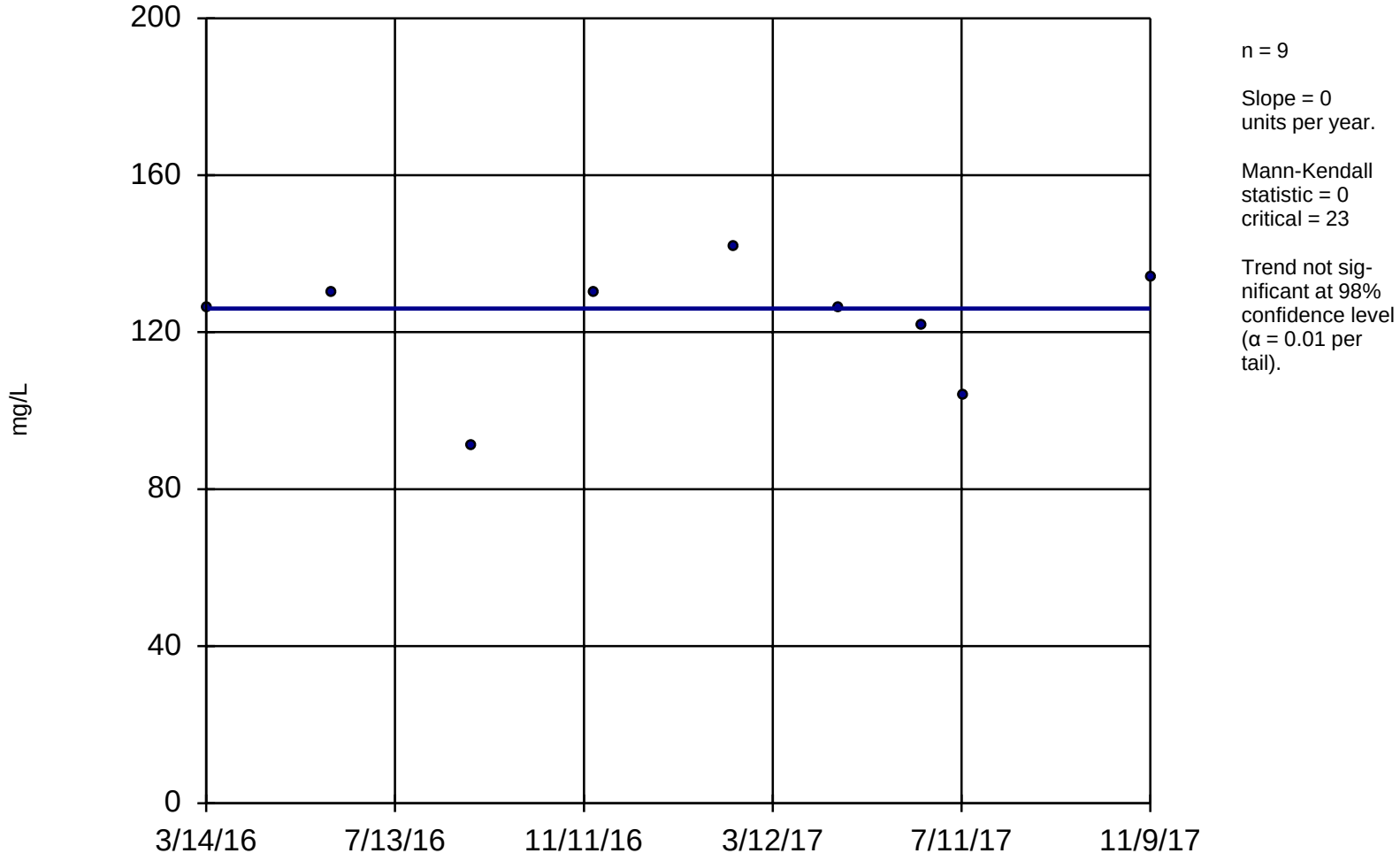
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Calcium Analysis Run 1/3/2018 3:23 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW4 (bg)



n = 9

Slope = 0
units per year.

Mann-Kendall
statistic = 0
critical = 23

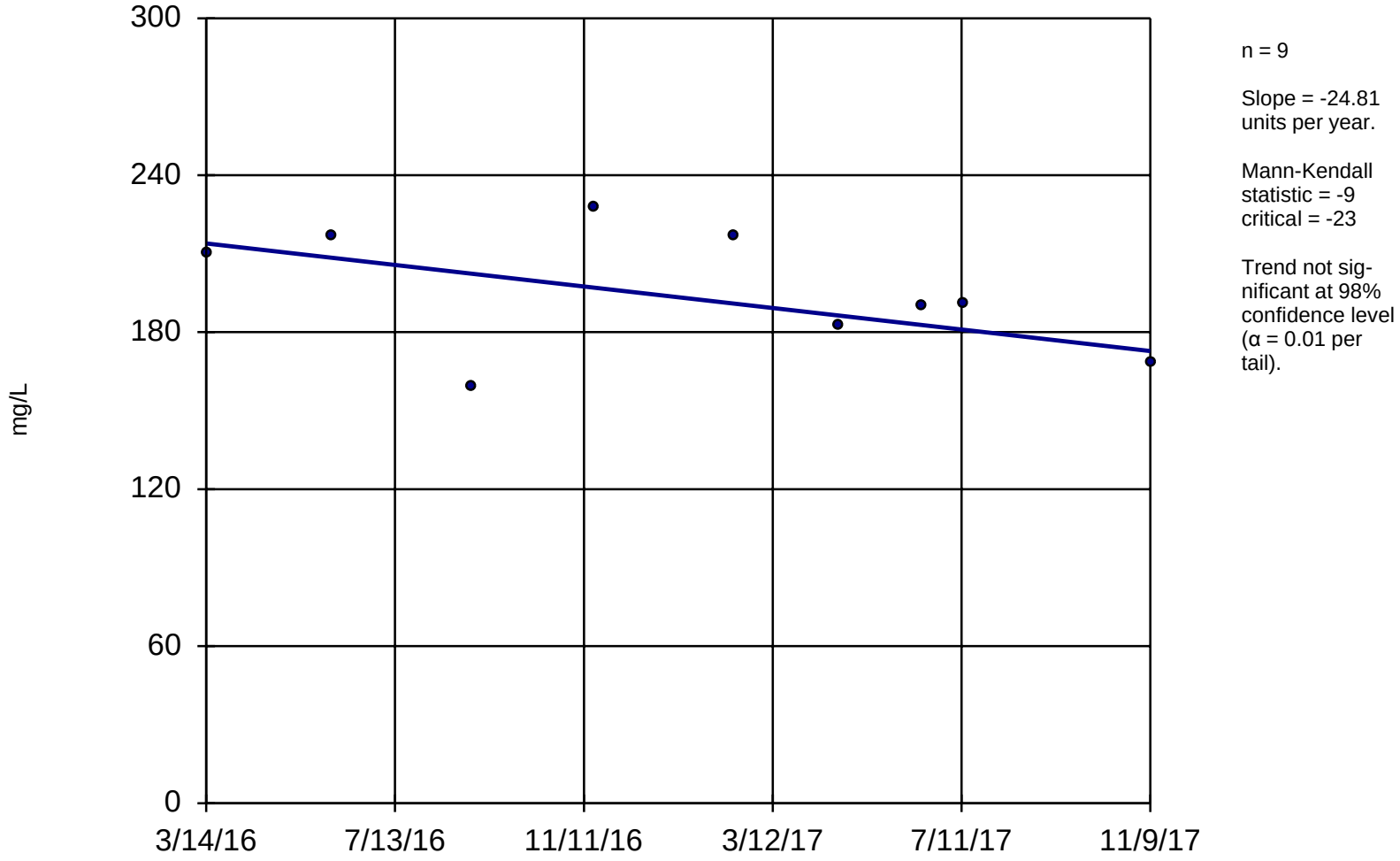
Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

Constituent: Calcium Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW5 (bg)



n = 9

Slope = -24.81 units per year.

Mann-Kendall statistic = -9
critical = -23

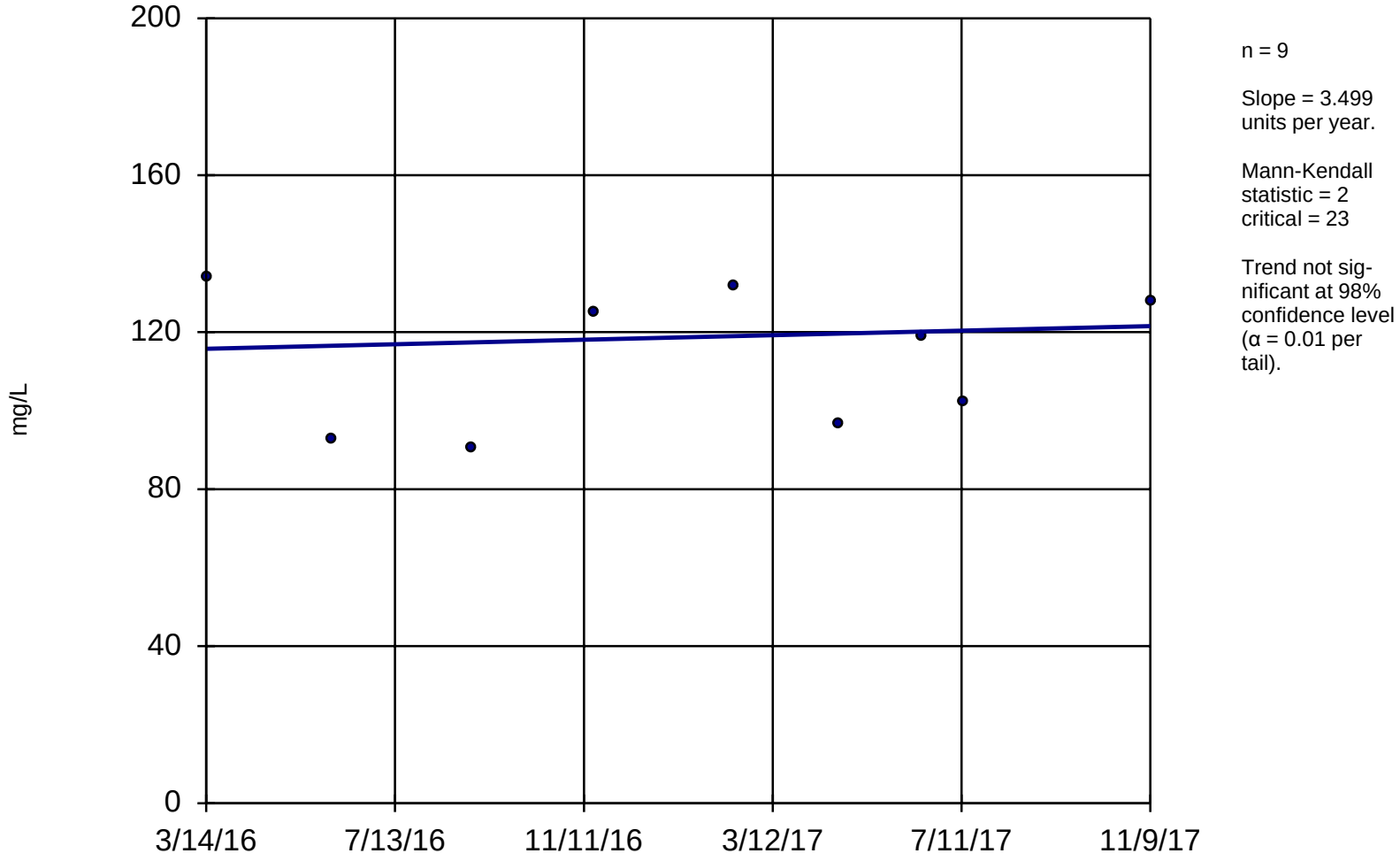
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Calcium Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW6 (bg)



n = 9

Slope = 3.499 units per year.

Mann-Kendall statistic = 2
critical = 23

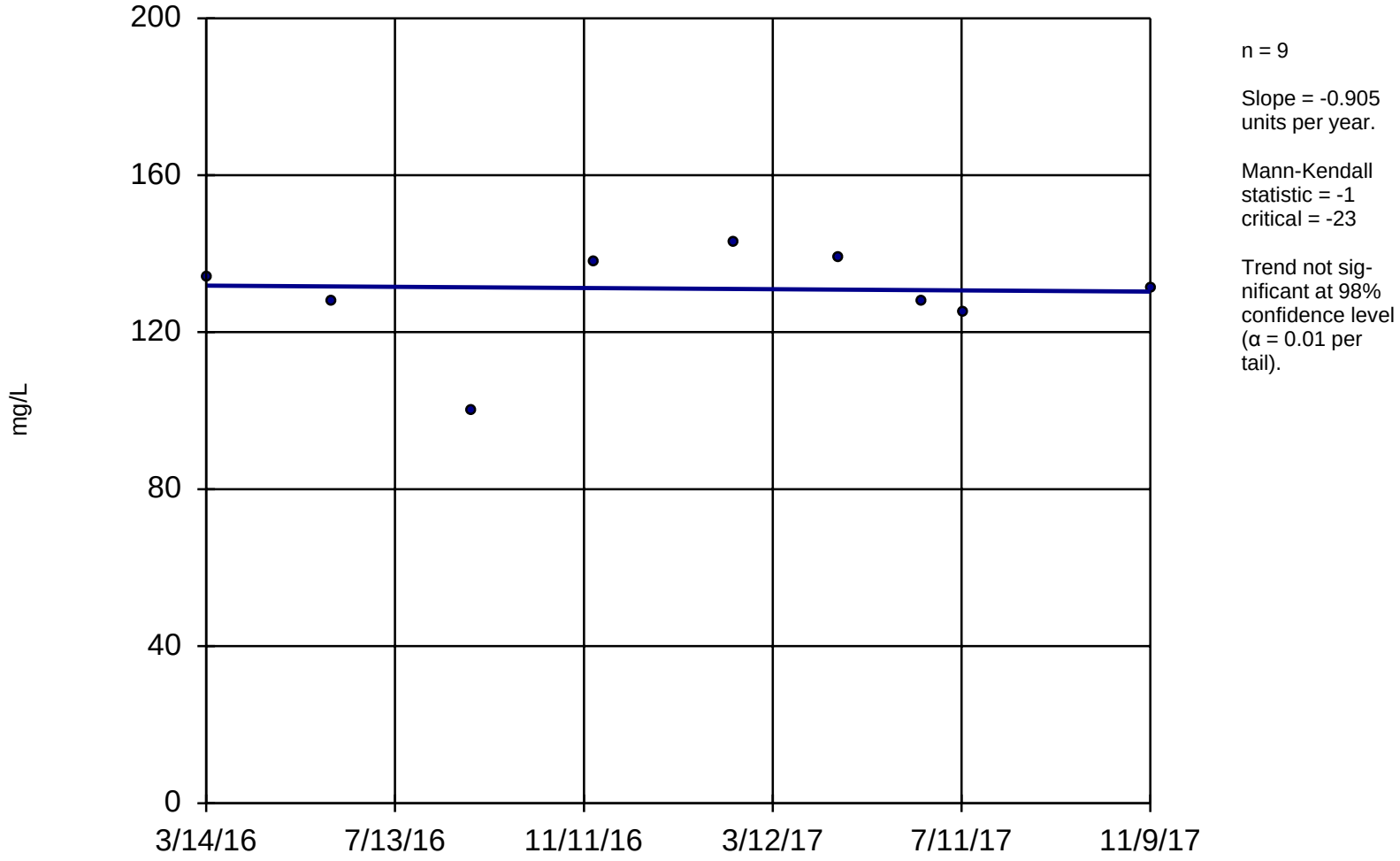
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Calcium Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW7



n = 9

Slope = -0.905 units per year.

Mann-Kendall statistic = -1
critical = -23

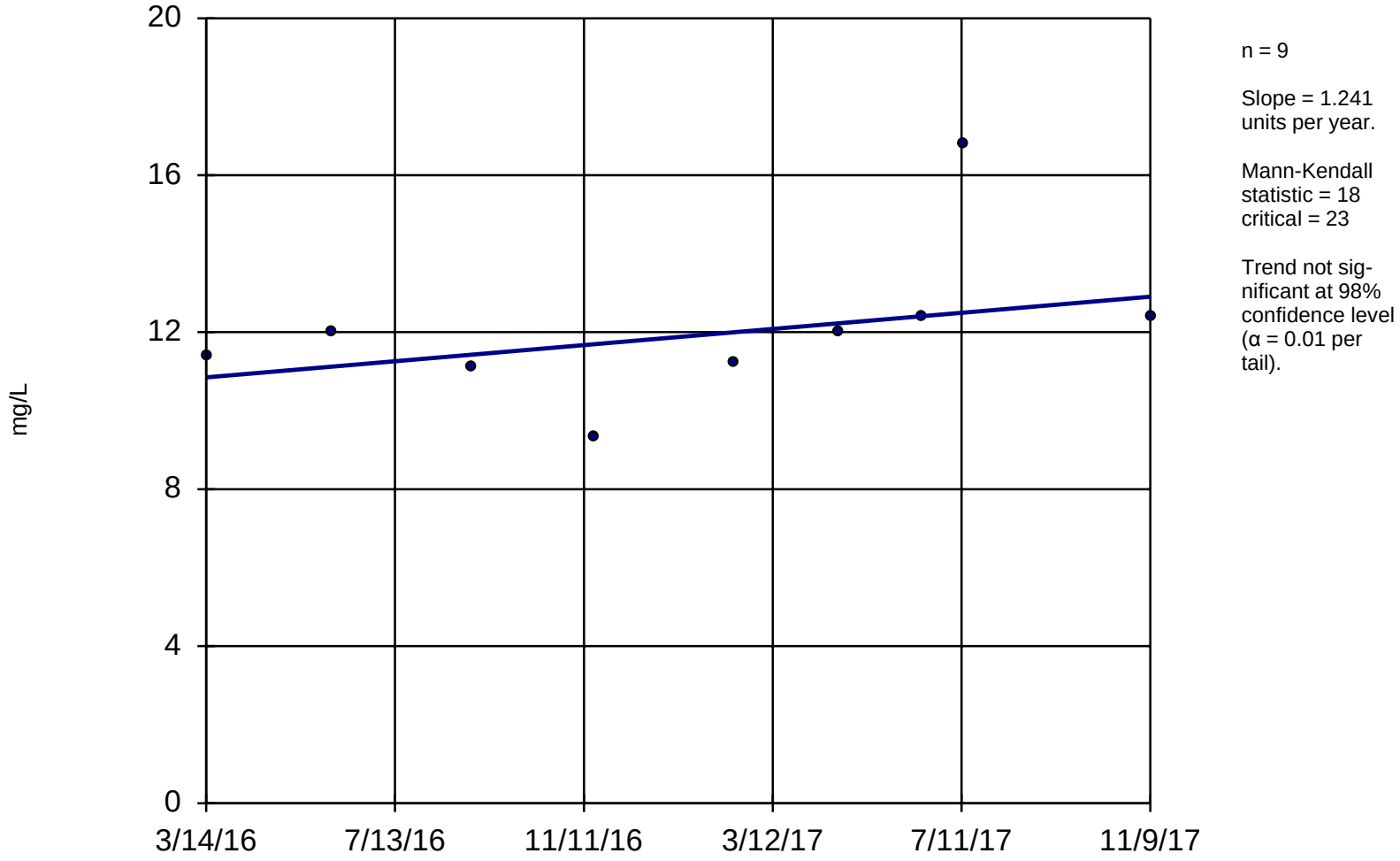
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Calcium Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW13 (bg)



n = 9

Slope = 1.241 units per year.

Mann-Kendall statistic = 18
critical = 23

Trend not significant at 98% confidence level (α = 0.01 per tail).

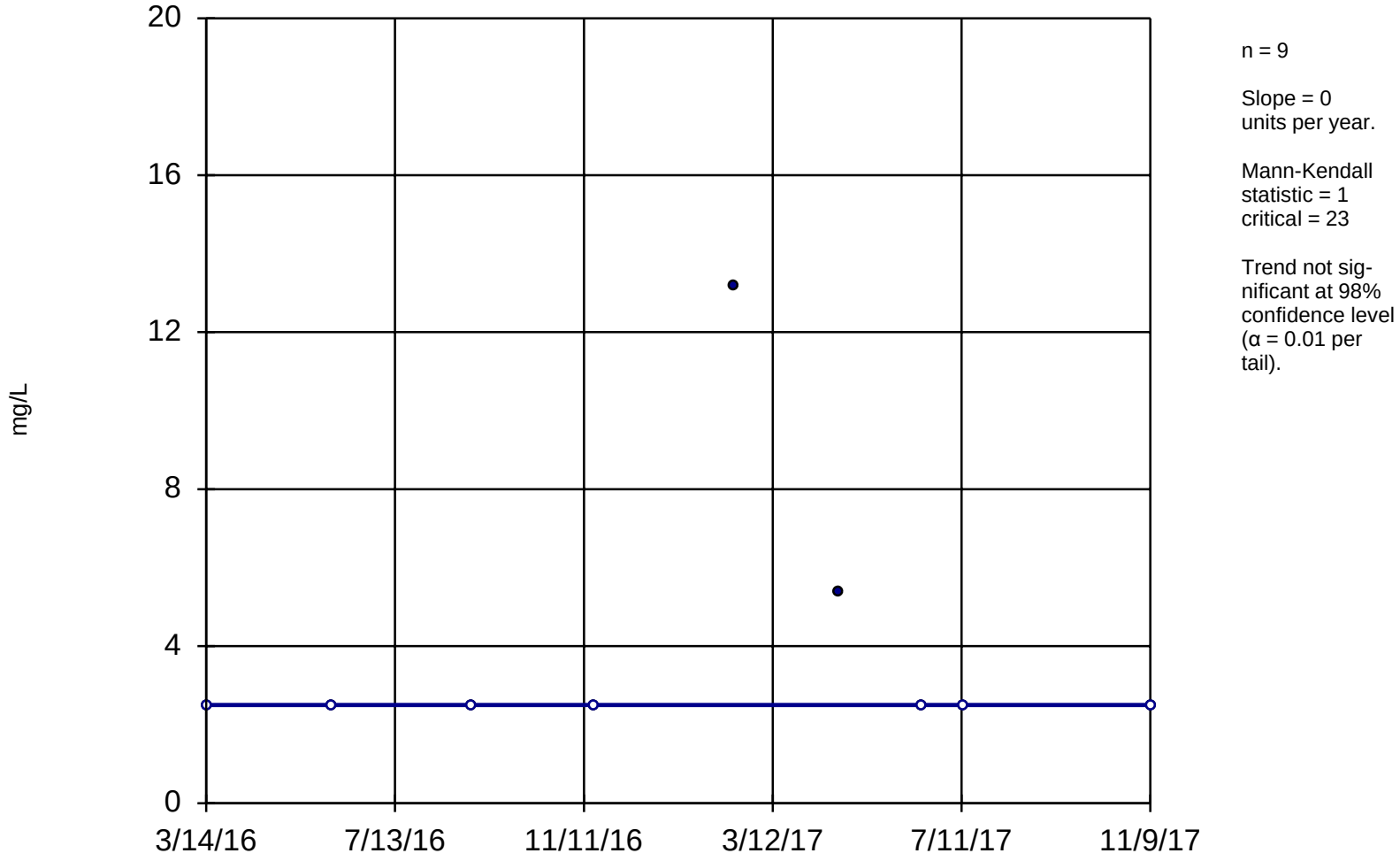
Constituent: Chloride Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW2



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).

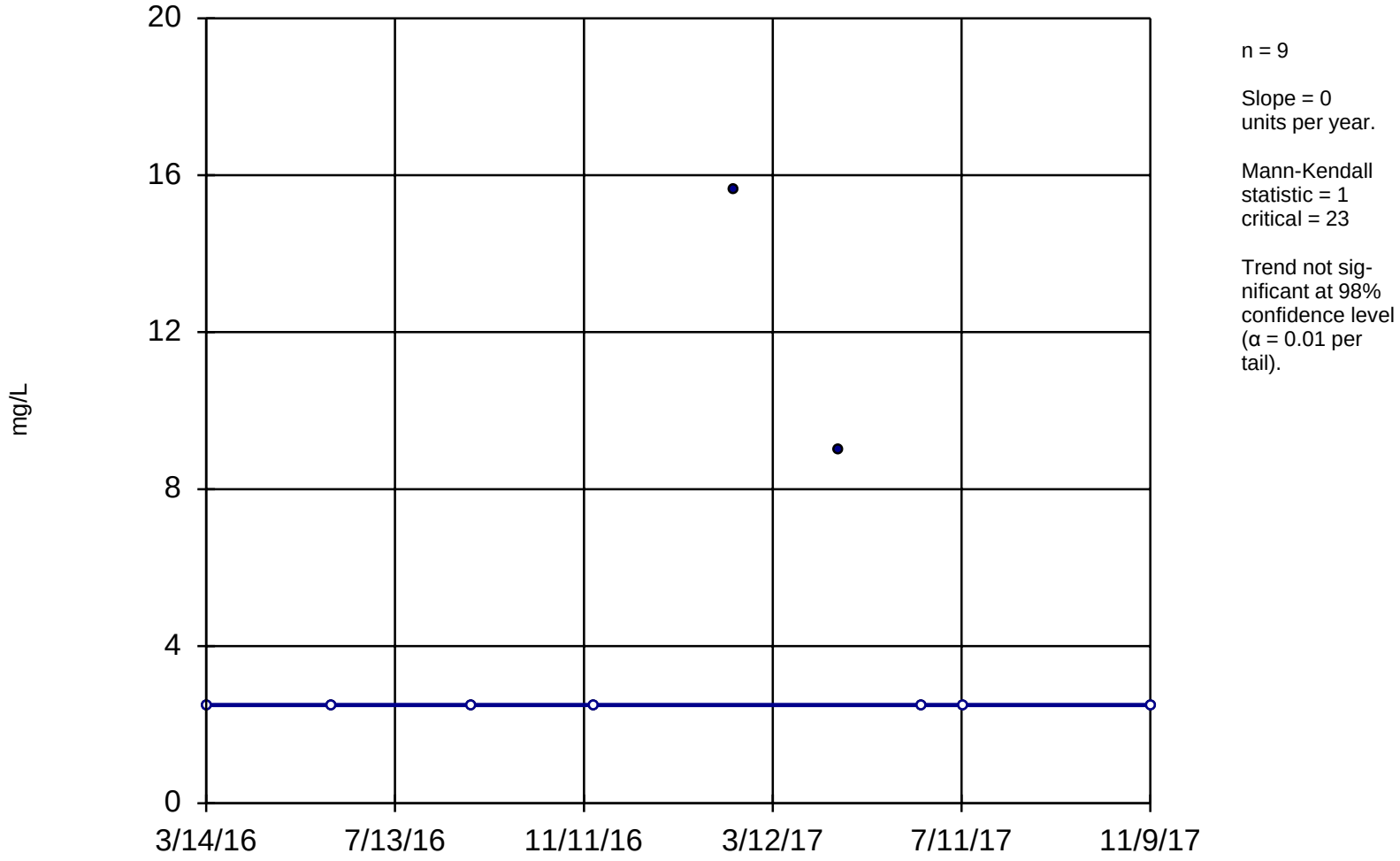
Constituent: Chloride Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW3



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).

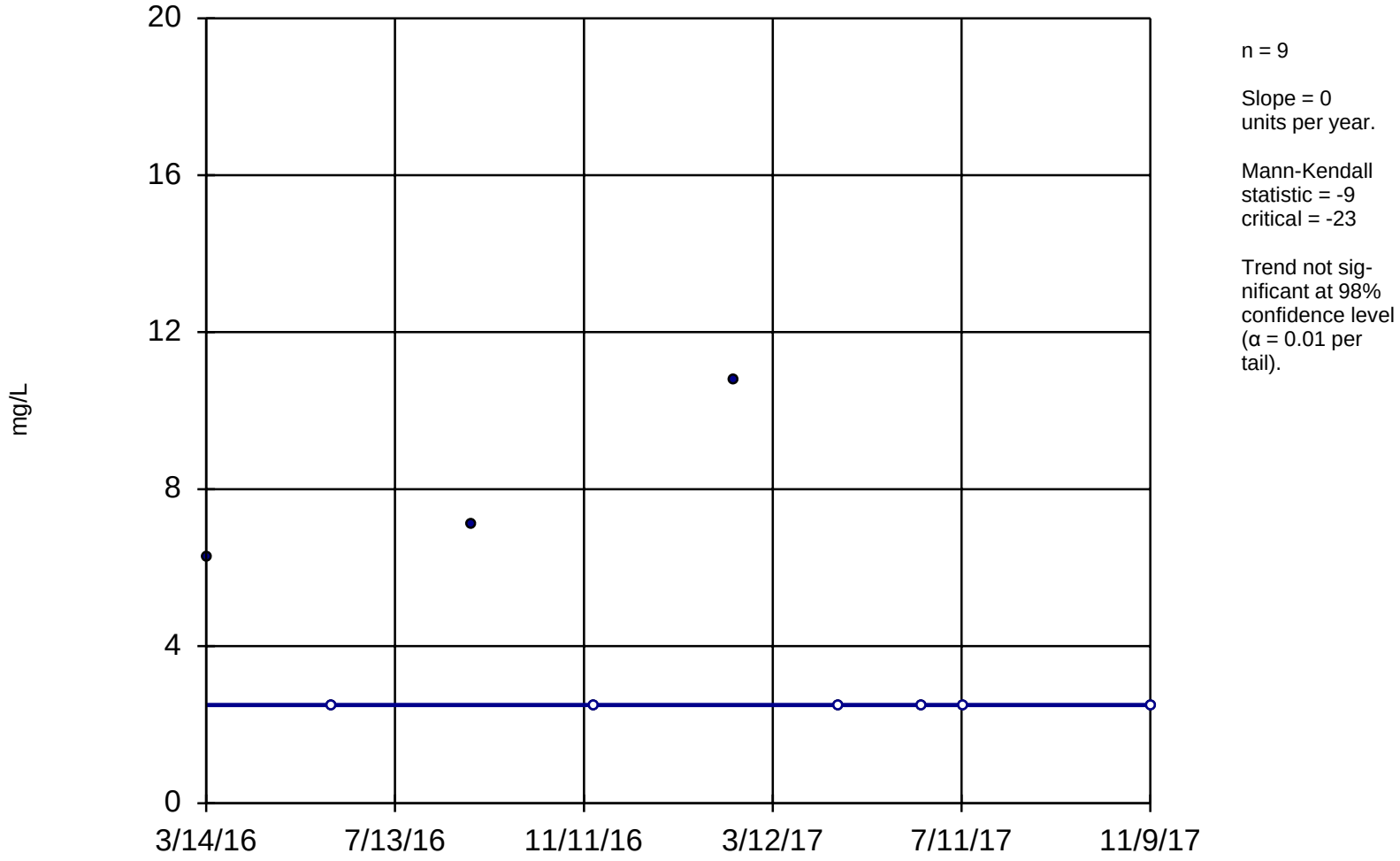
Constituent: Chloride Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4 (bg)



n = 9

Slope = 0
units per year.

Mann-Kendall
statistic = -9
critical = -23

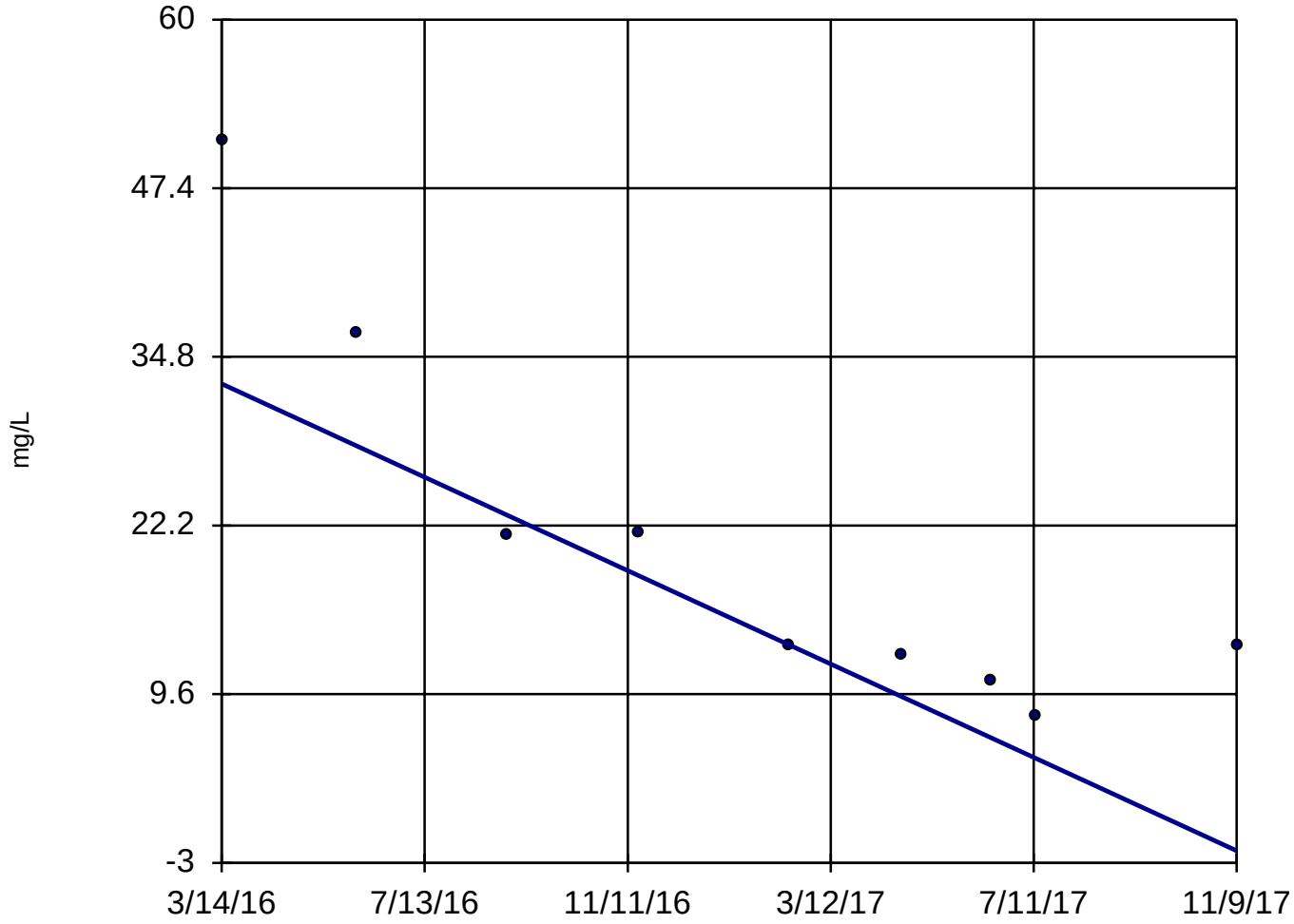
Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

Constituent: Chloride Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW5 (bg)



n = 9

Slope = -21.04 units per year.

Mann-Kendall statistic = -28
critical = -23

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

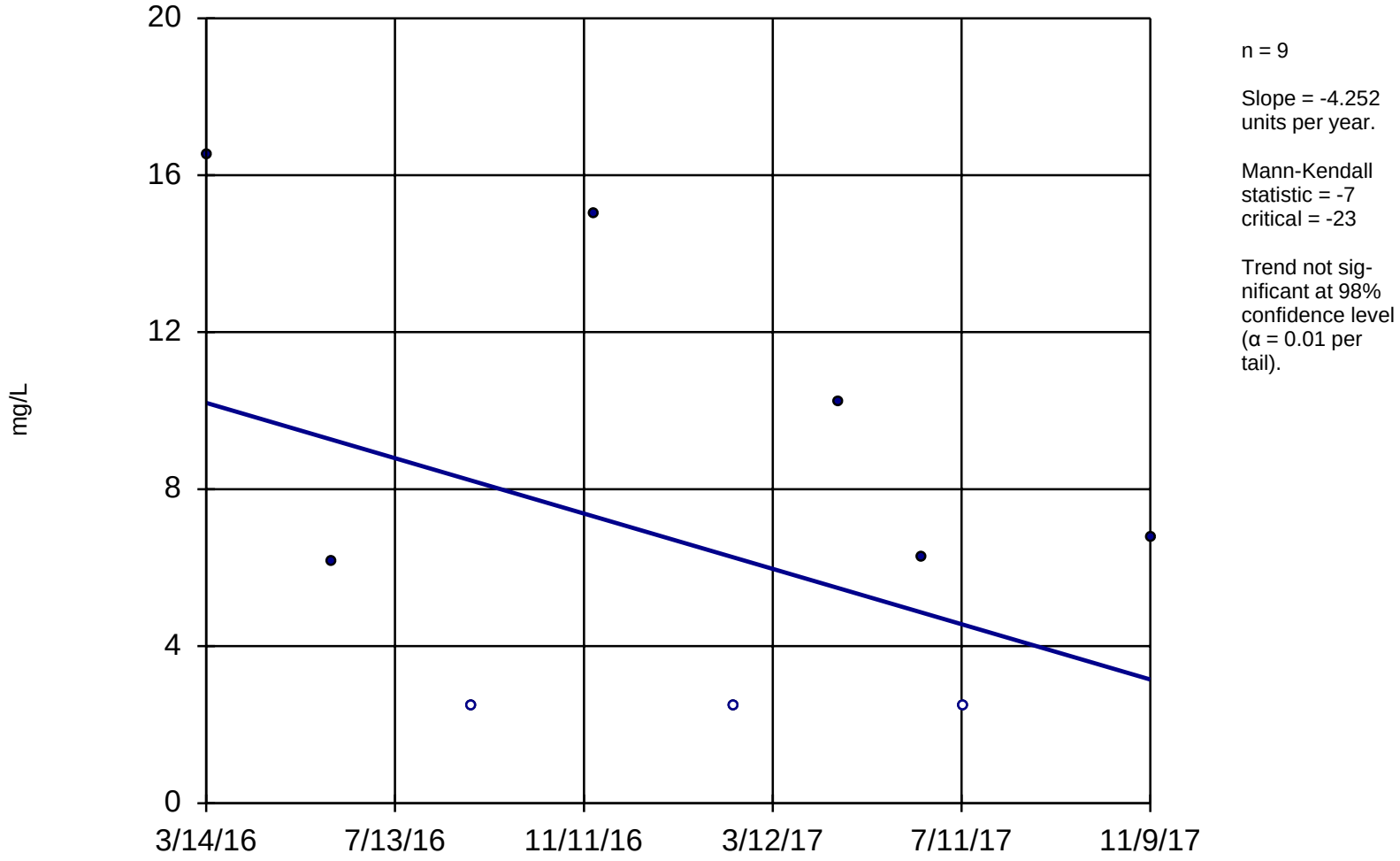
Constituent: Chloride Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW6 (bg)



n = 9

Slope = -4.252 units per year.

Mann-Kendall statistic = -7
critical = -23

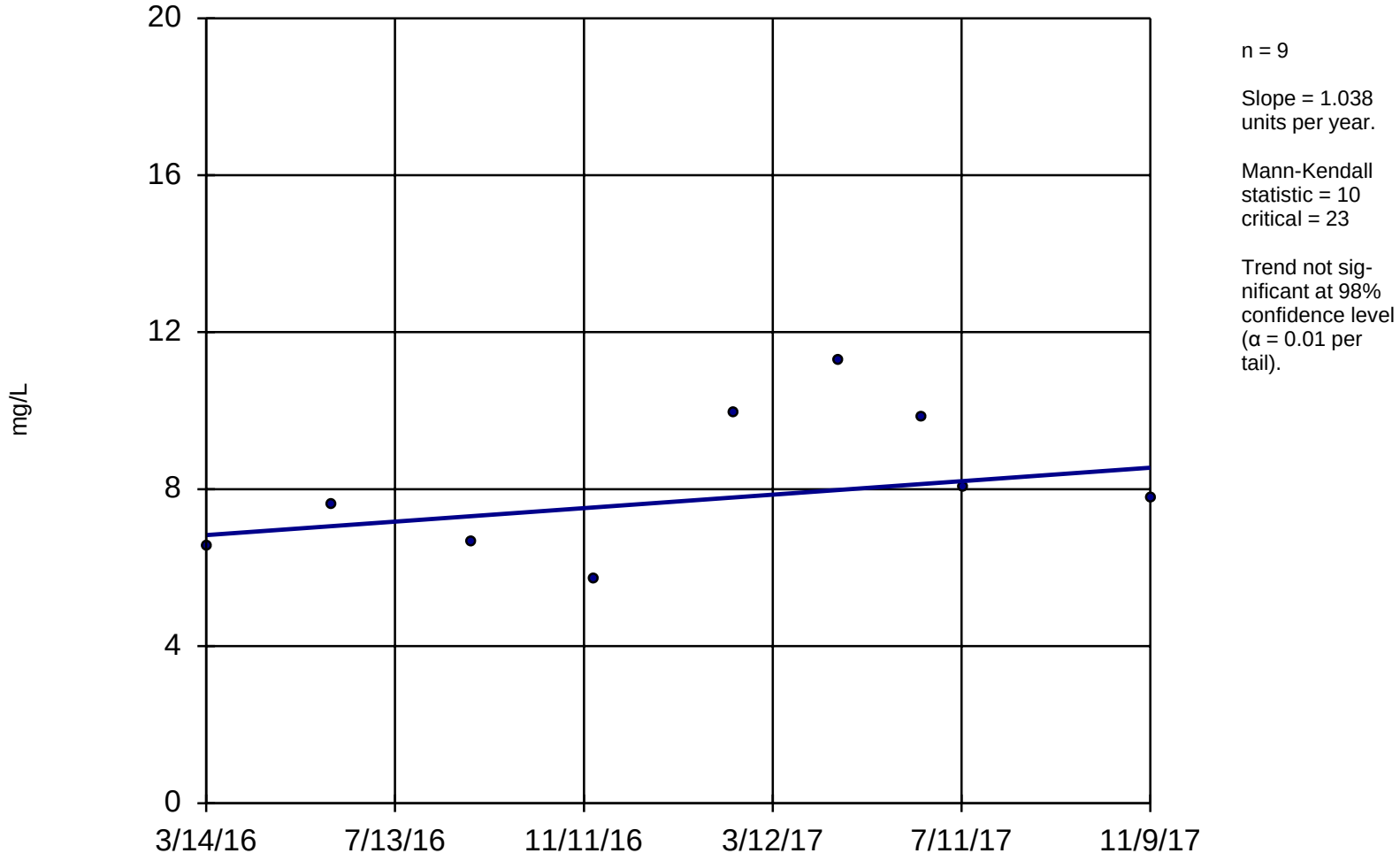
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Chloride Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW7



n = 9

Slope = 1.038 units per year.

Mann-Kendall statistic = 10 critical = 23

Trend not significant at 98% confidence level (α = 0.01 per tail).

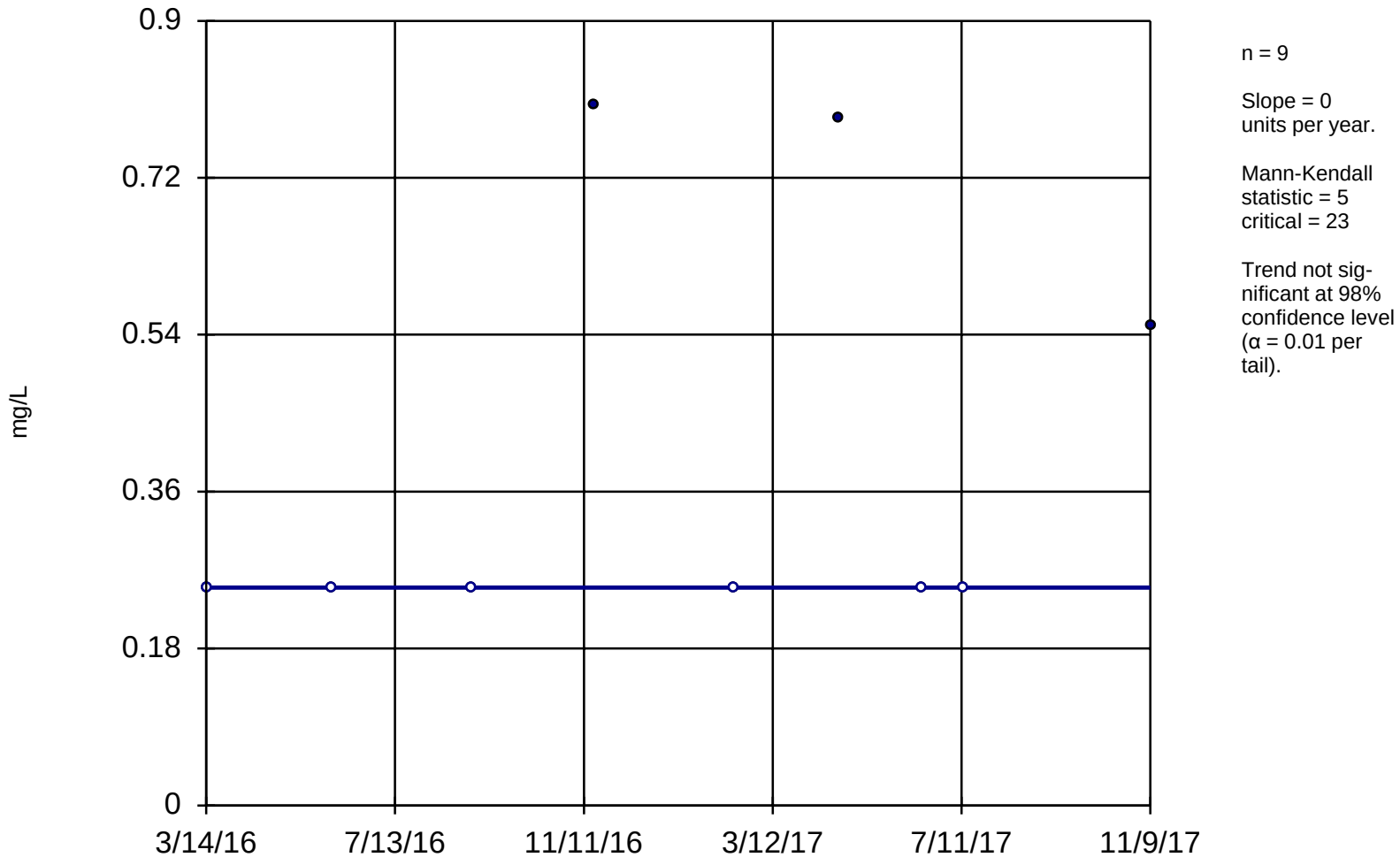
Constituent: Chloride Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 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 = 5
critical = 23

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

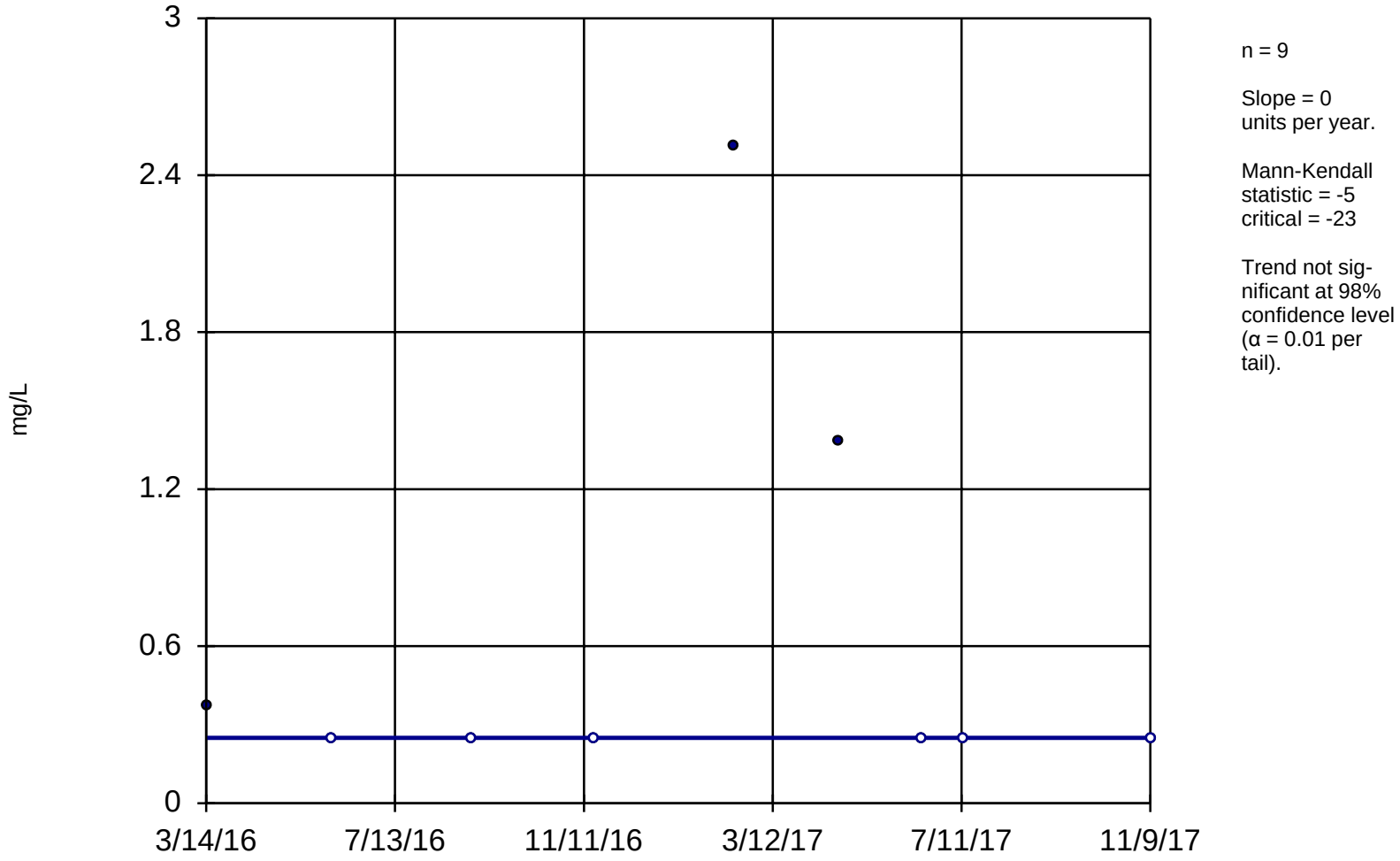
Constituent: Fluoride Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW2



n = 9

Slope = 0
units per year.

Mann-Kendall
statistic = -5
critical = -23

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

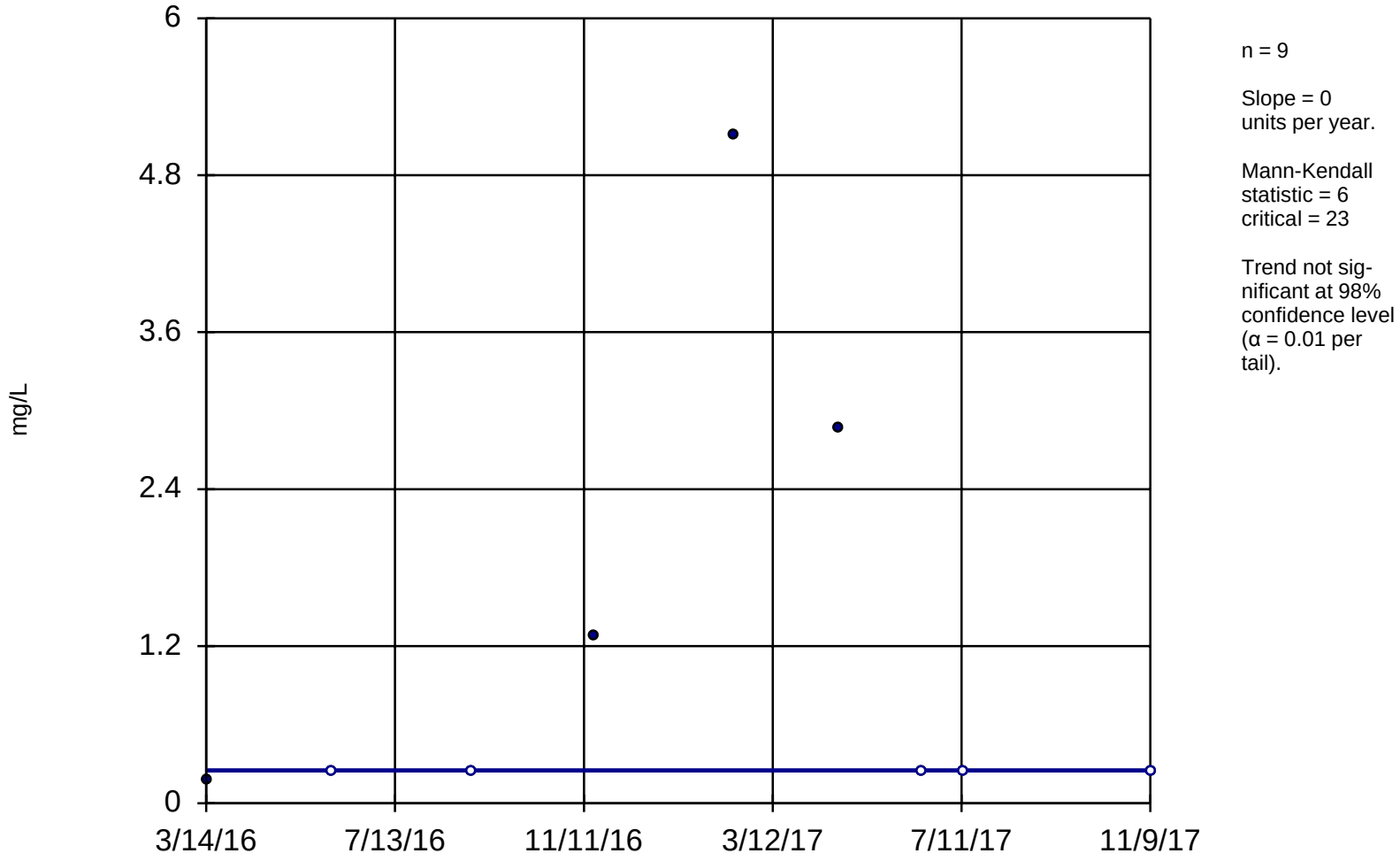
Constituent: Fluoride Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW3



n = 9

Slope = 0
units per year.

Mann-Kendall
statistic = 6
critical = 23

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

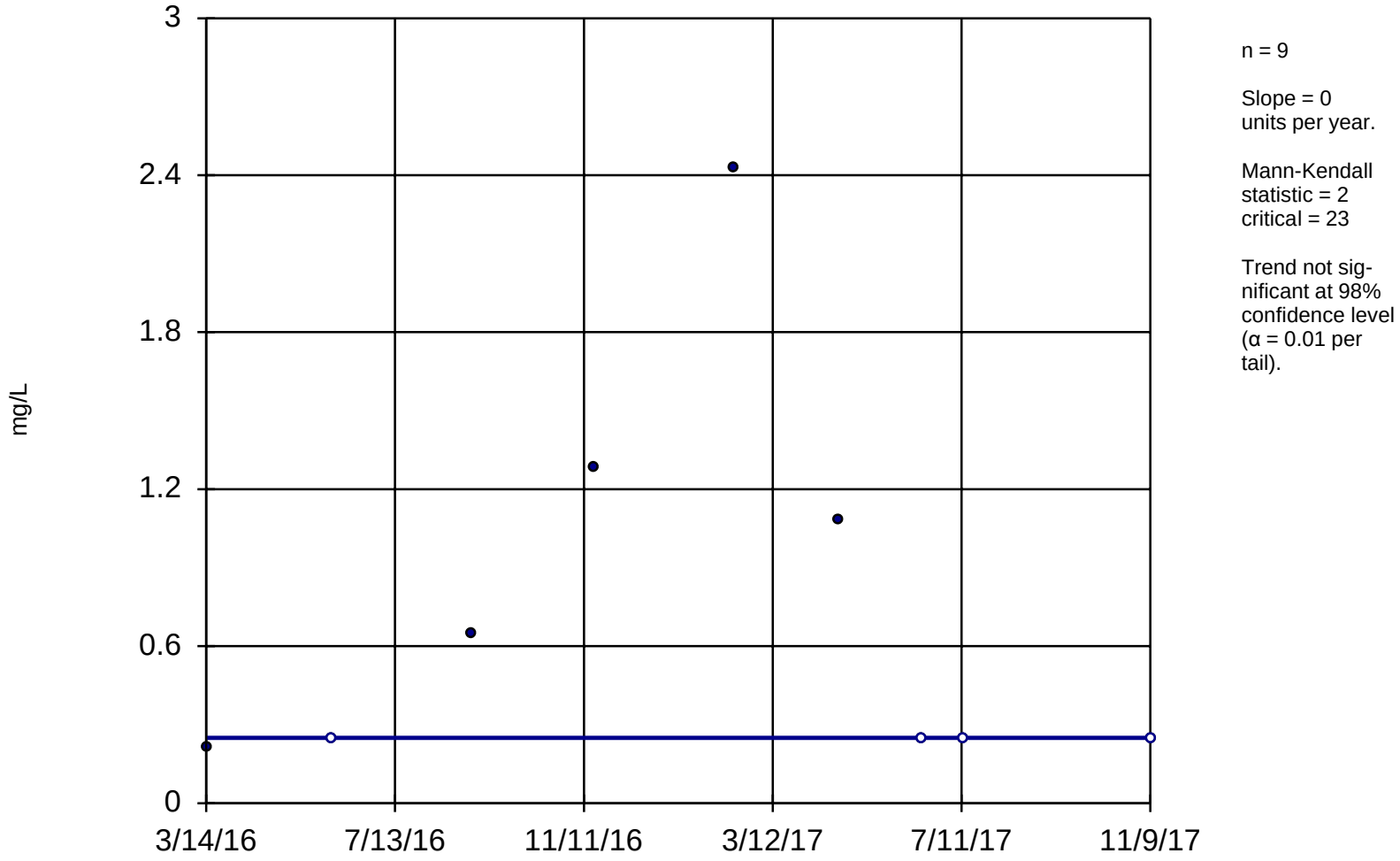
Constituent: Fluoride Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4 (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).

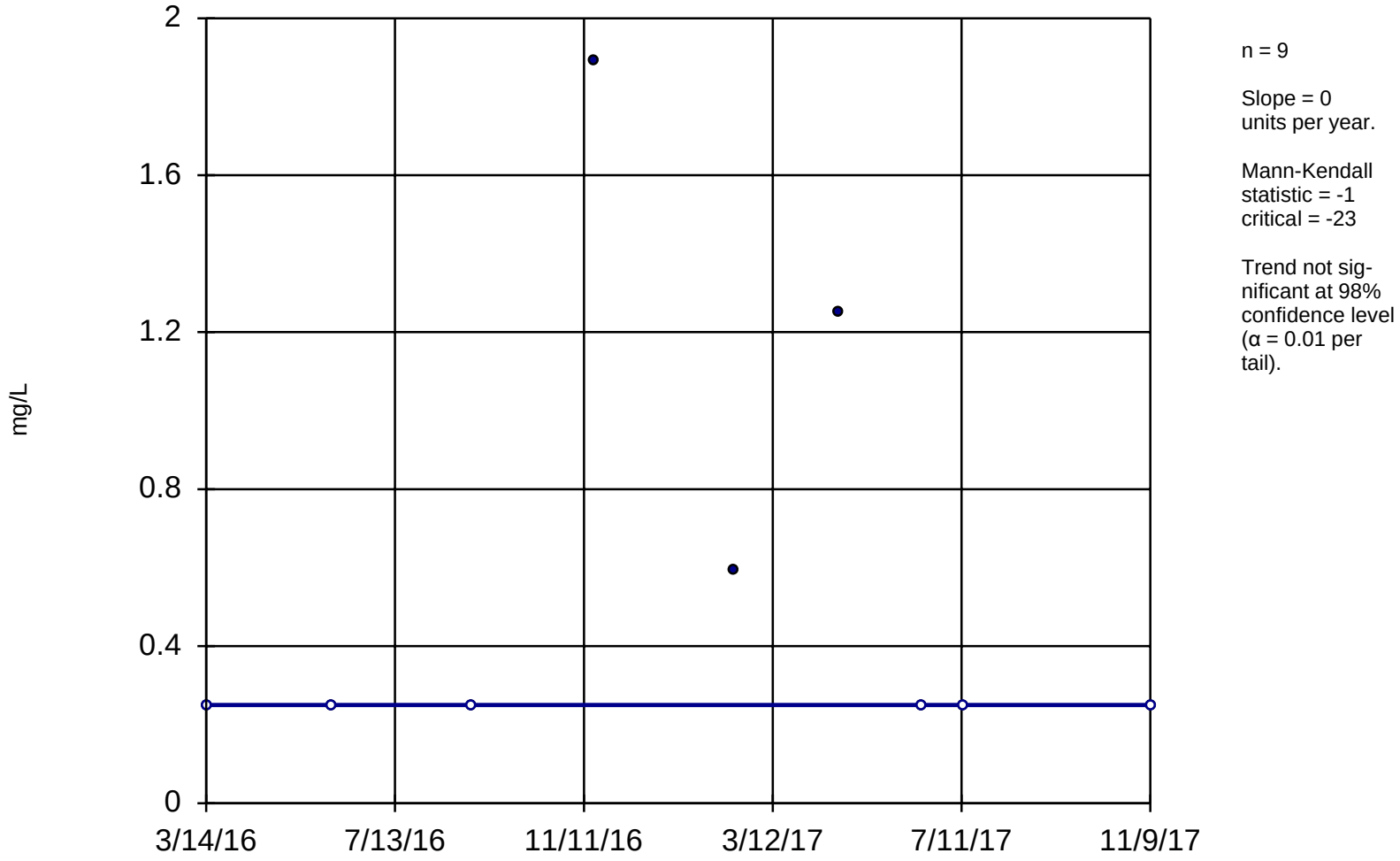
Constituent: Fluoride Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW5 (bg)



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).

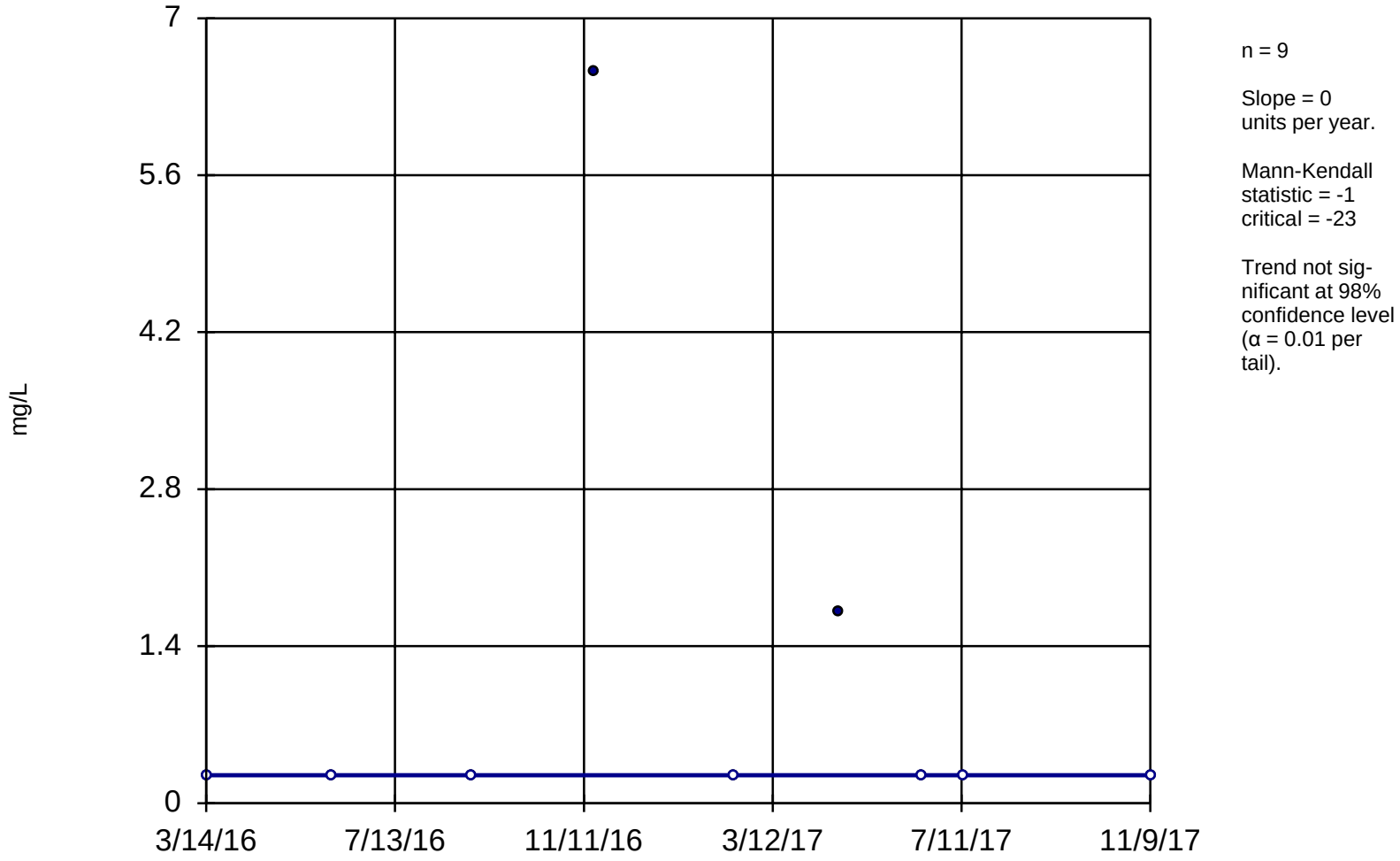
Constituent: Fluoride Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW6 (bg)



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).

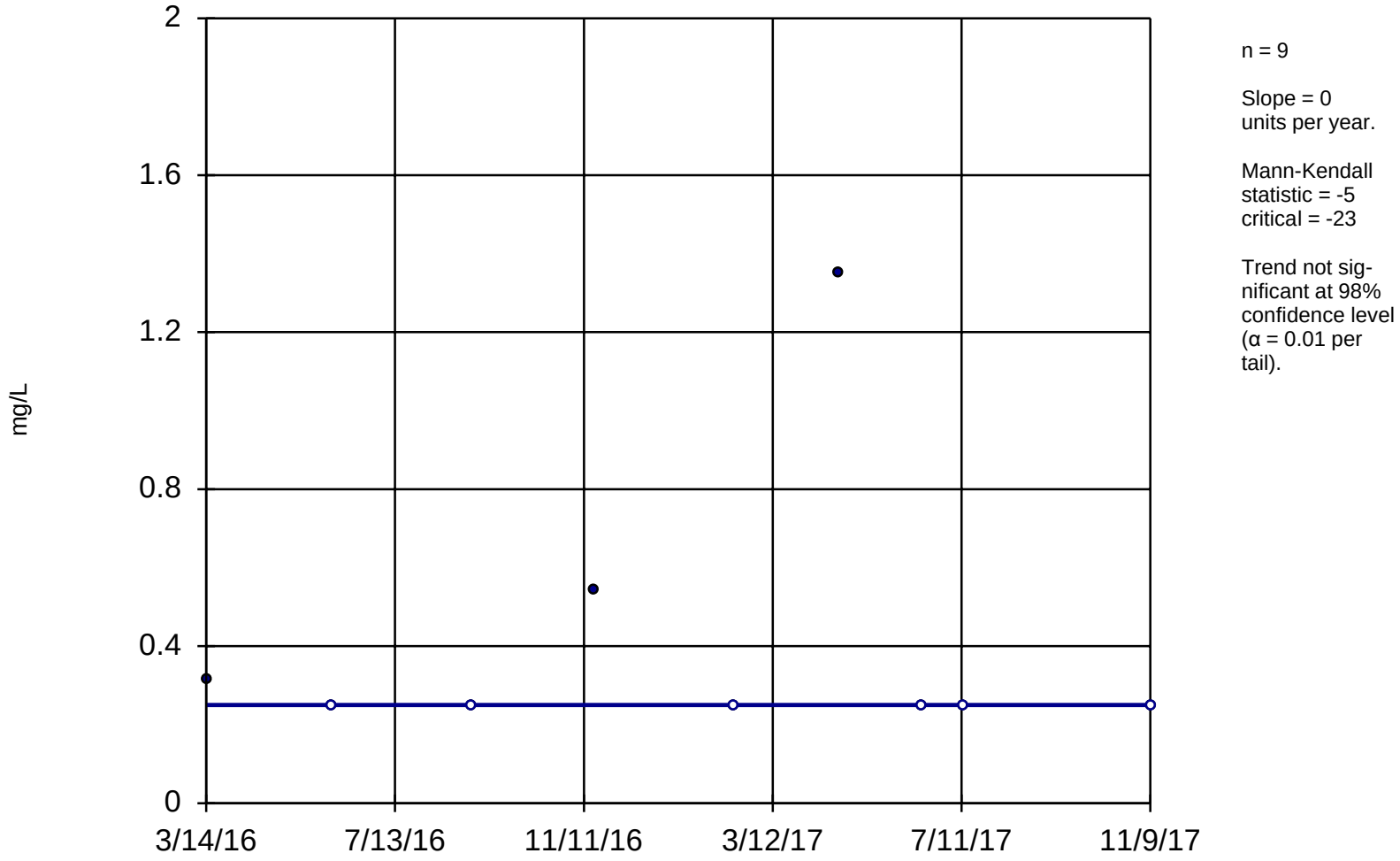
Constituent: Fluoride Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW7



n = 9

Slope = 0
units per year.

Mann-Kendall
statistic = -5
critical = -23

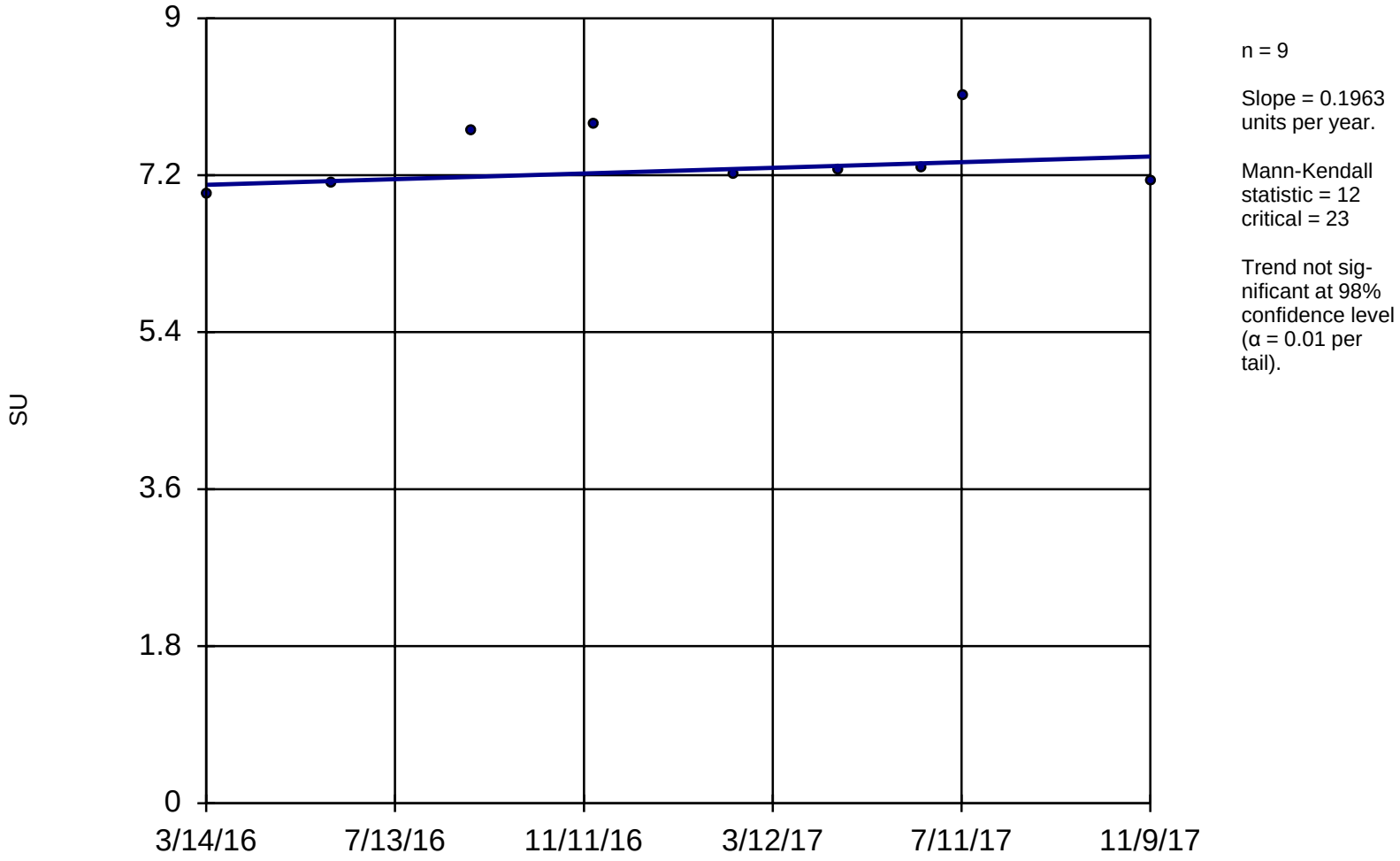
Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

Constituent: Fluoride Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW13 (bg)



n = 9

Slope = 0.1963 units per year.

Mann-Kendall statistic = 12
critical = 23

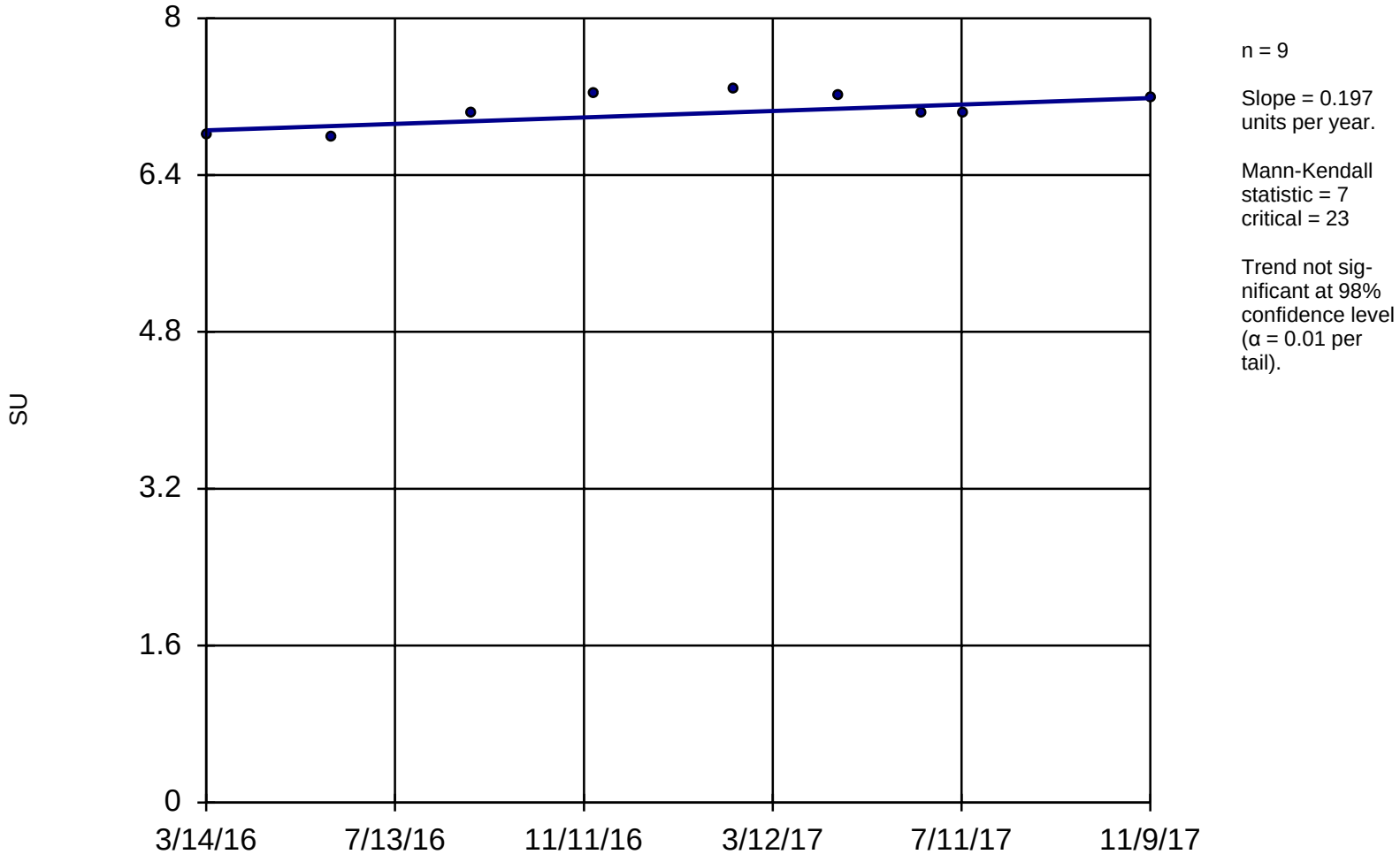
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: pH Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW2



n = 9

Slope = 0.197 units per year.

Mann-Kendall statistic = 7
critical = 23

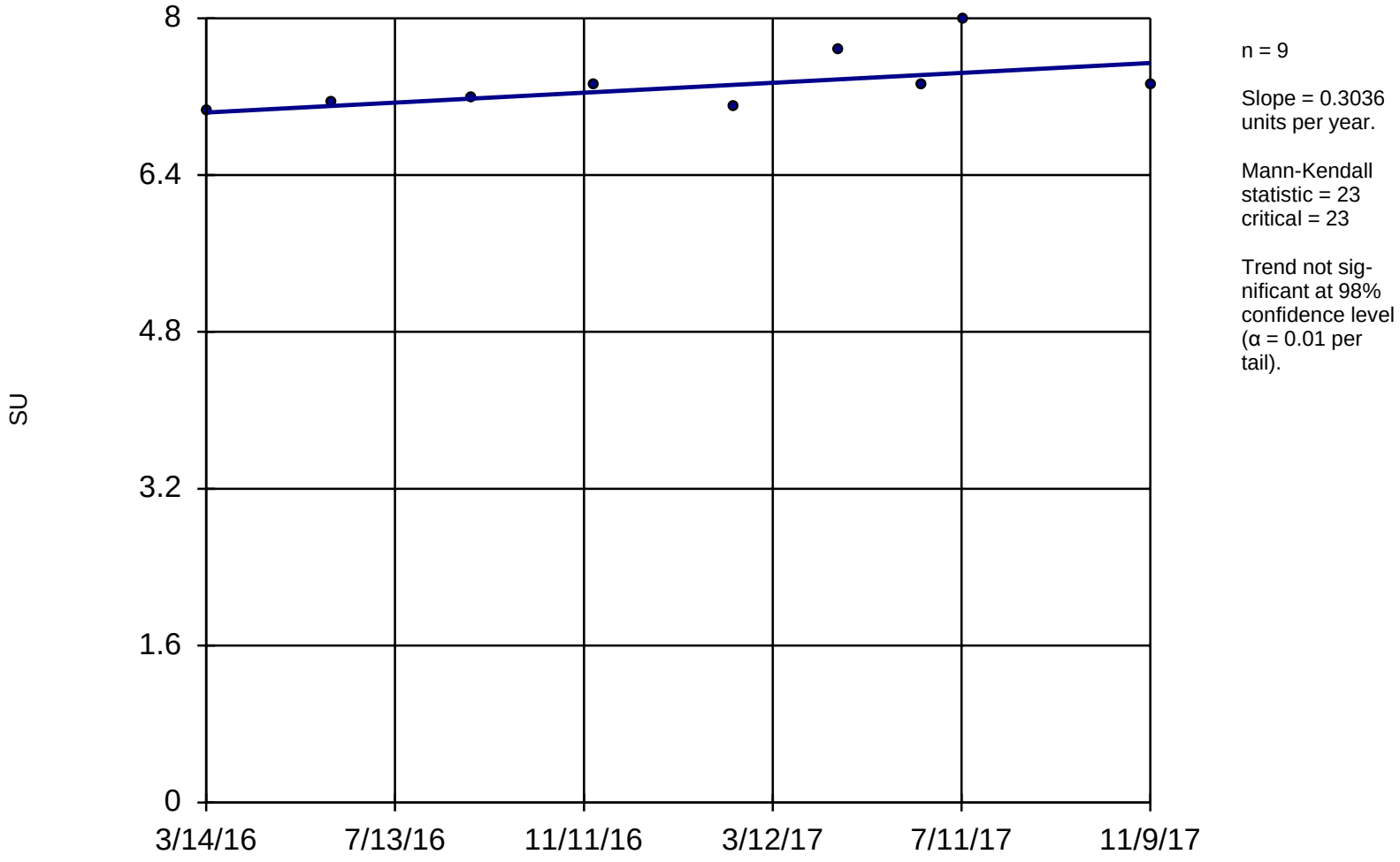
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: pH Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW3



n = 9

Slope = 0.3036 units per year.

Mann-Kendall statistic = 23
critical = 23

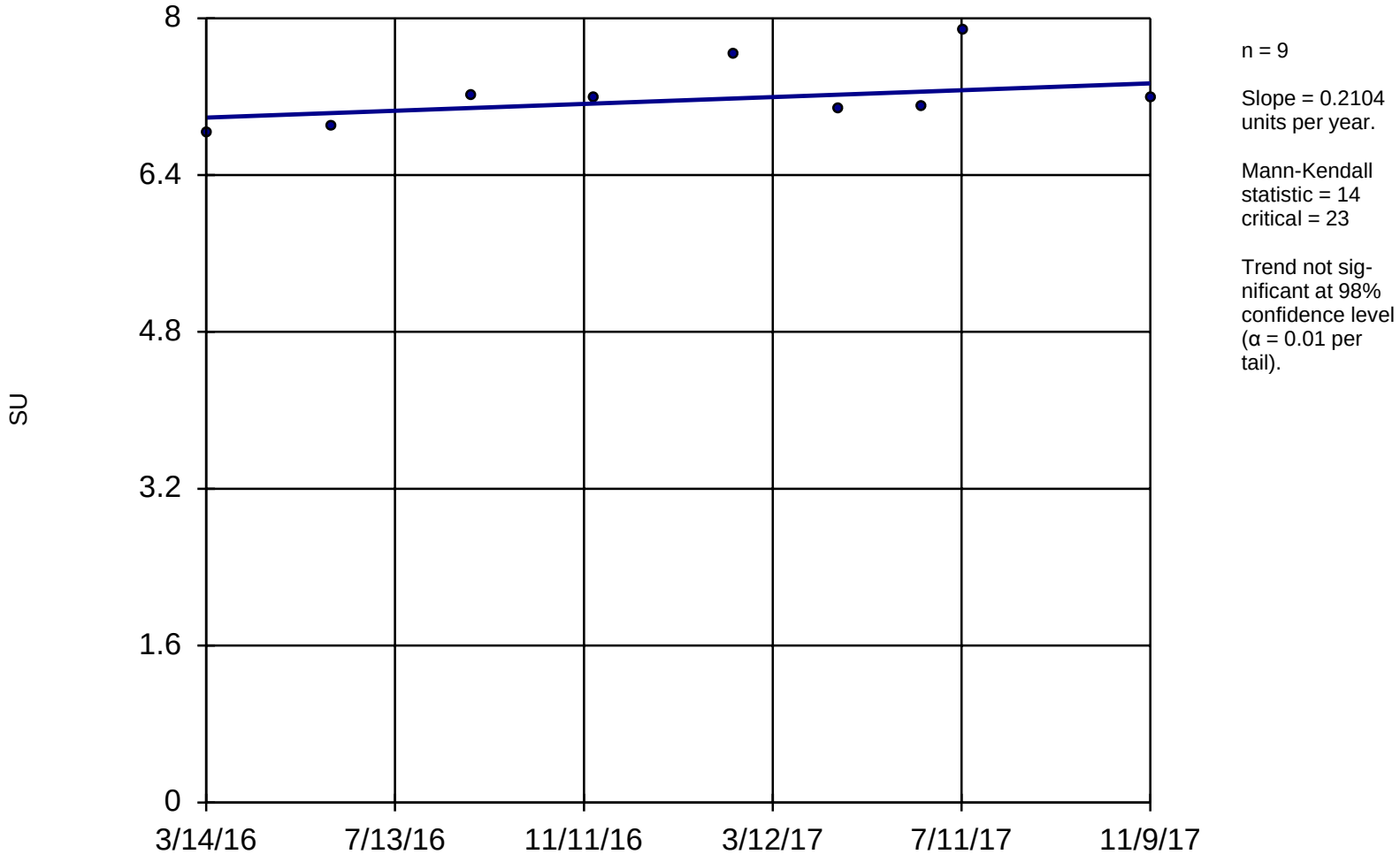
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: pH Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW4 (bg)



n = 9

Slope = 0.2104 units per year.

Mann-Kendall statistic = 14
critical = 23

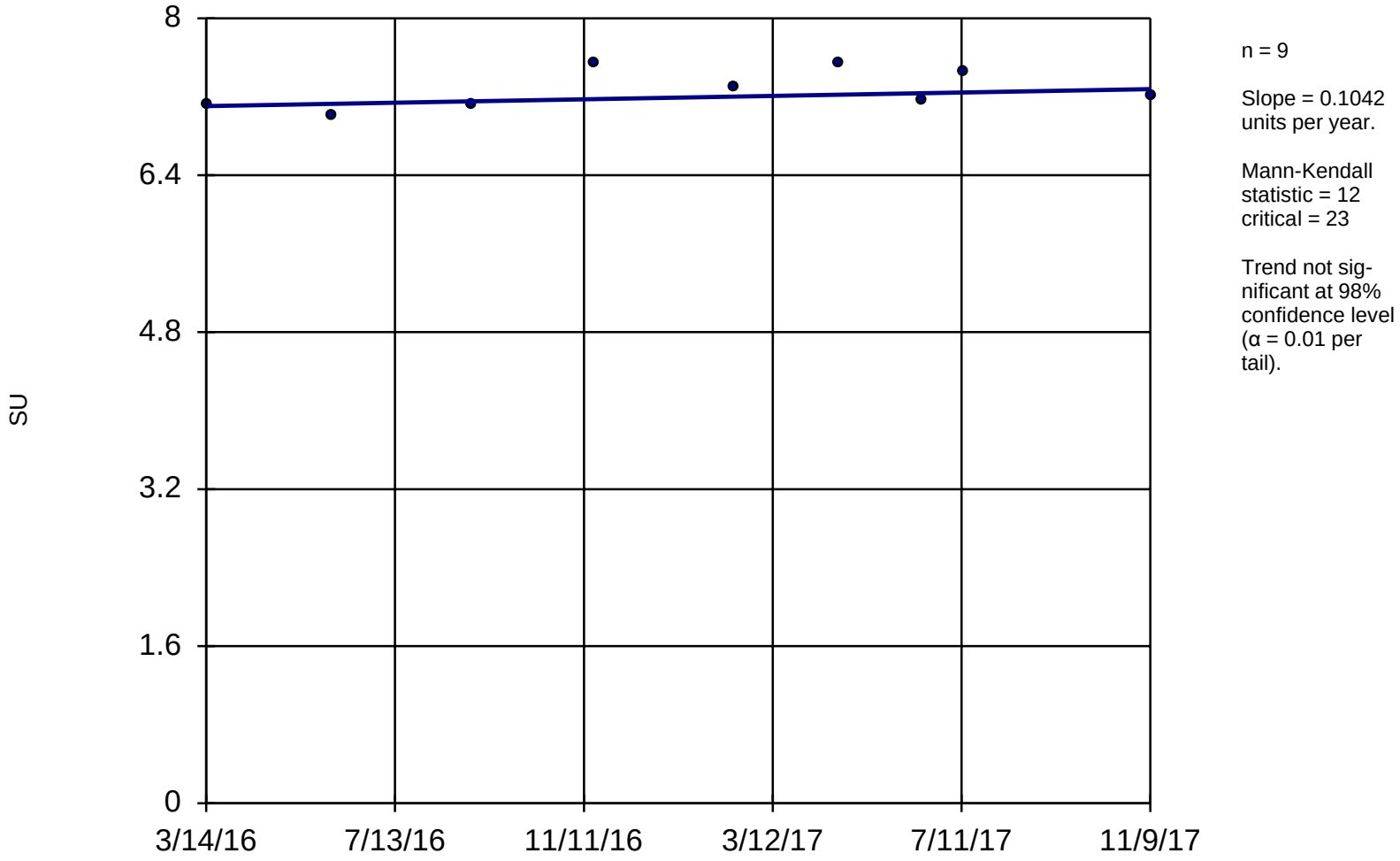
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: pH Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW5 (bg)



n = 9

Slope = 0.1042 units per year.

Mann-Kendall statistic = 12
critical = 23

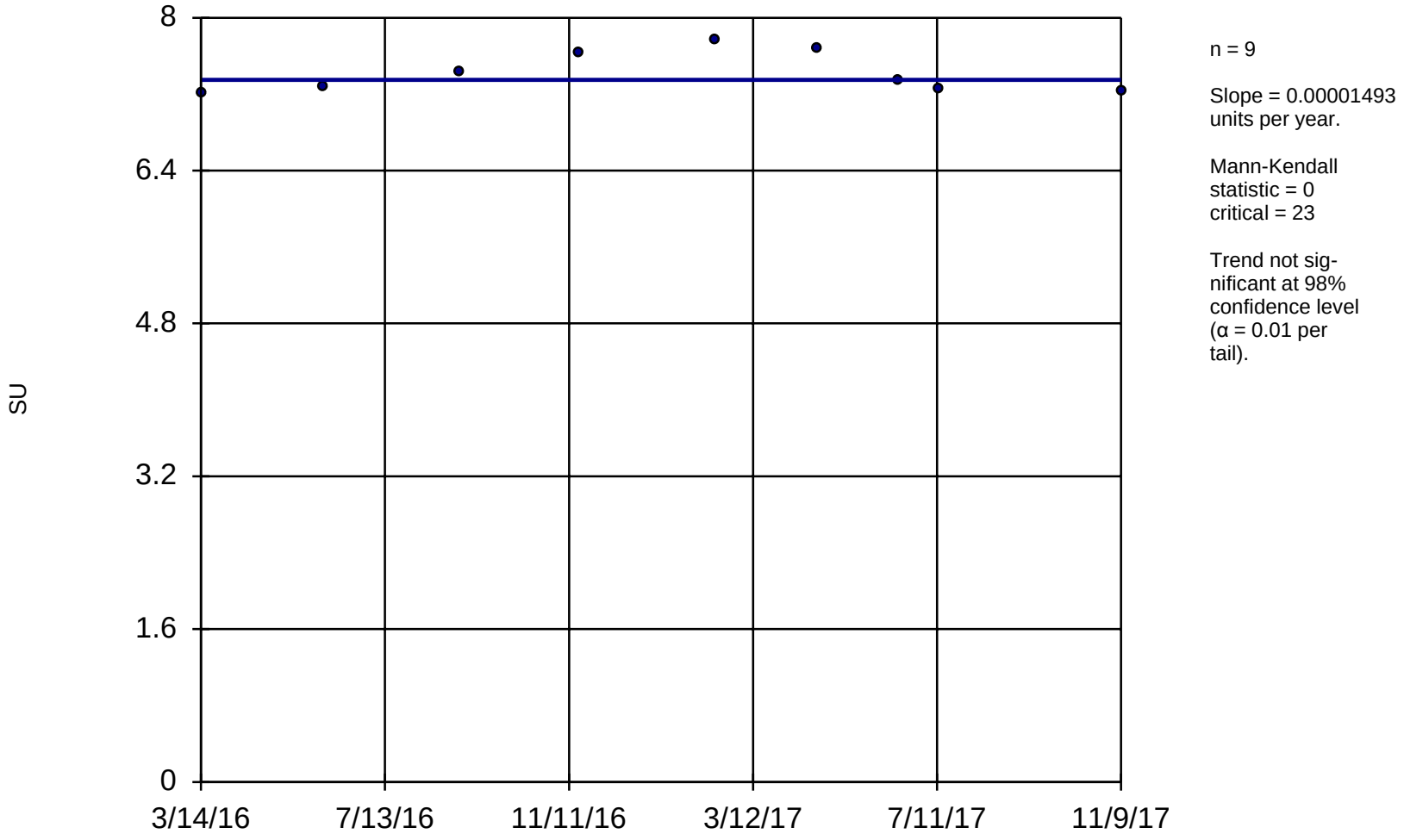
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: pH Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW6 (bg)



n = 9

Slope = 0.00001493 units per year.

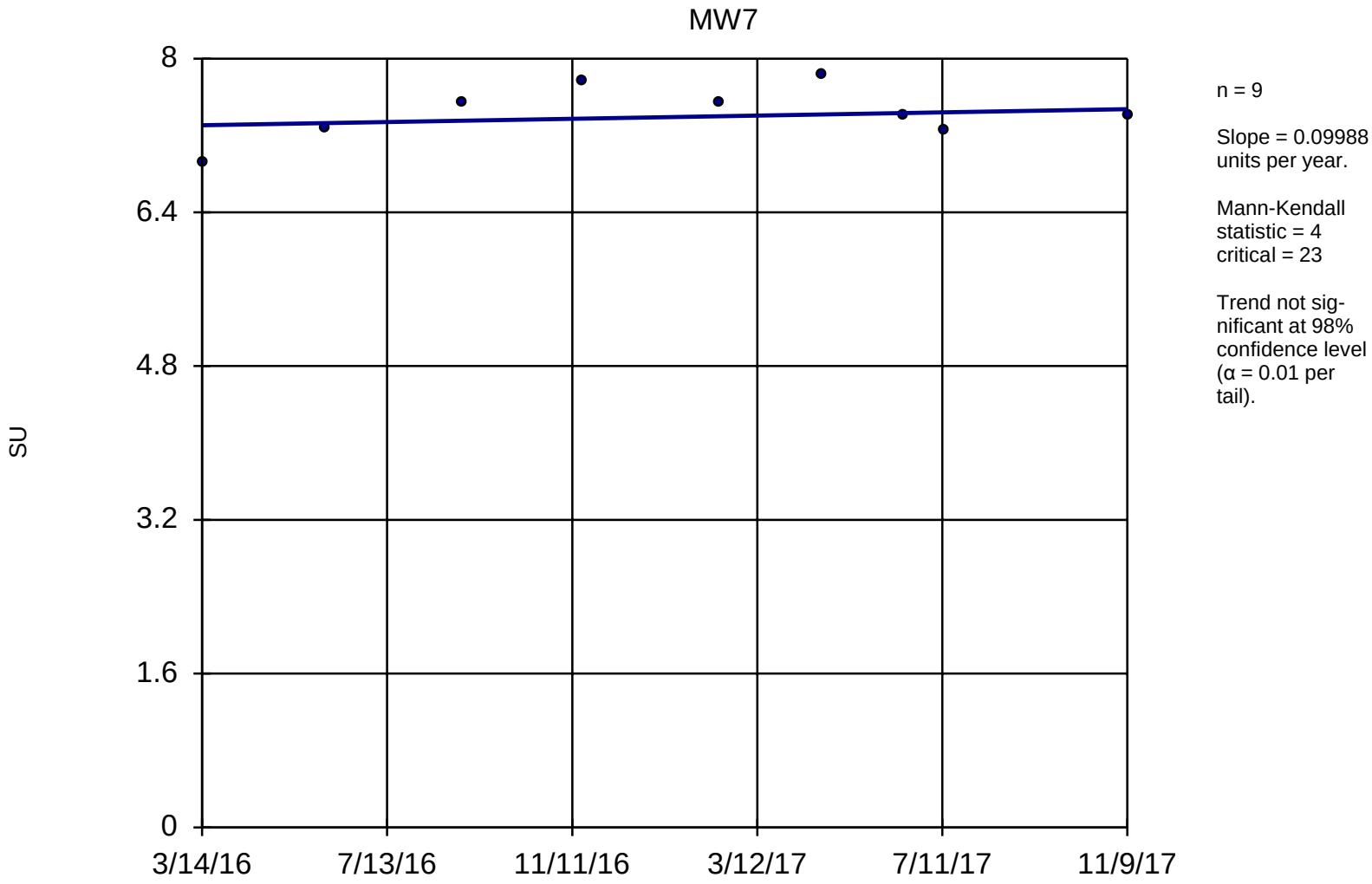
Mann-Kendall statistic = 0
critical = 23

Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: pH Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

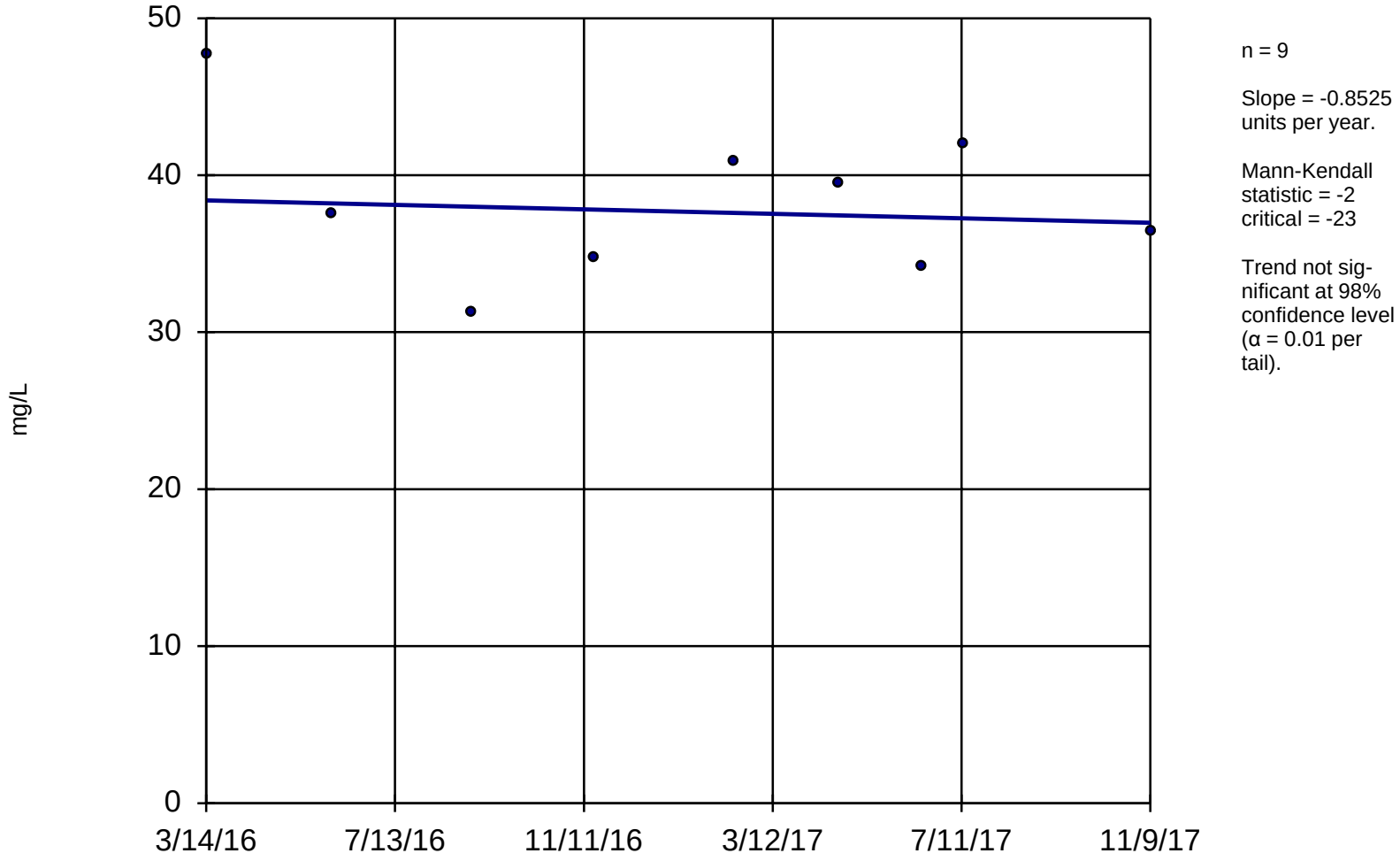


Constituent: pH Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW13 (bg)



n = 9

Slope = -0.8525 units per year.

Mann-Kendall statistic = -2
critical = -23

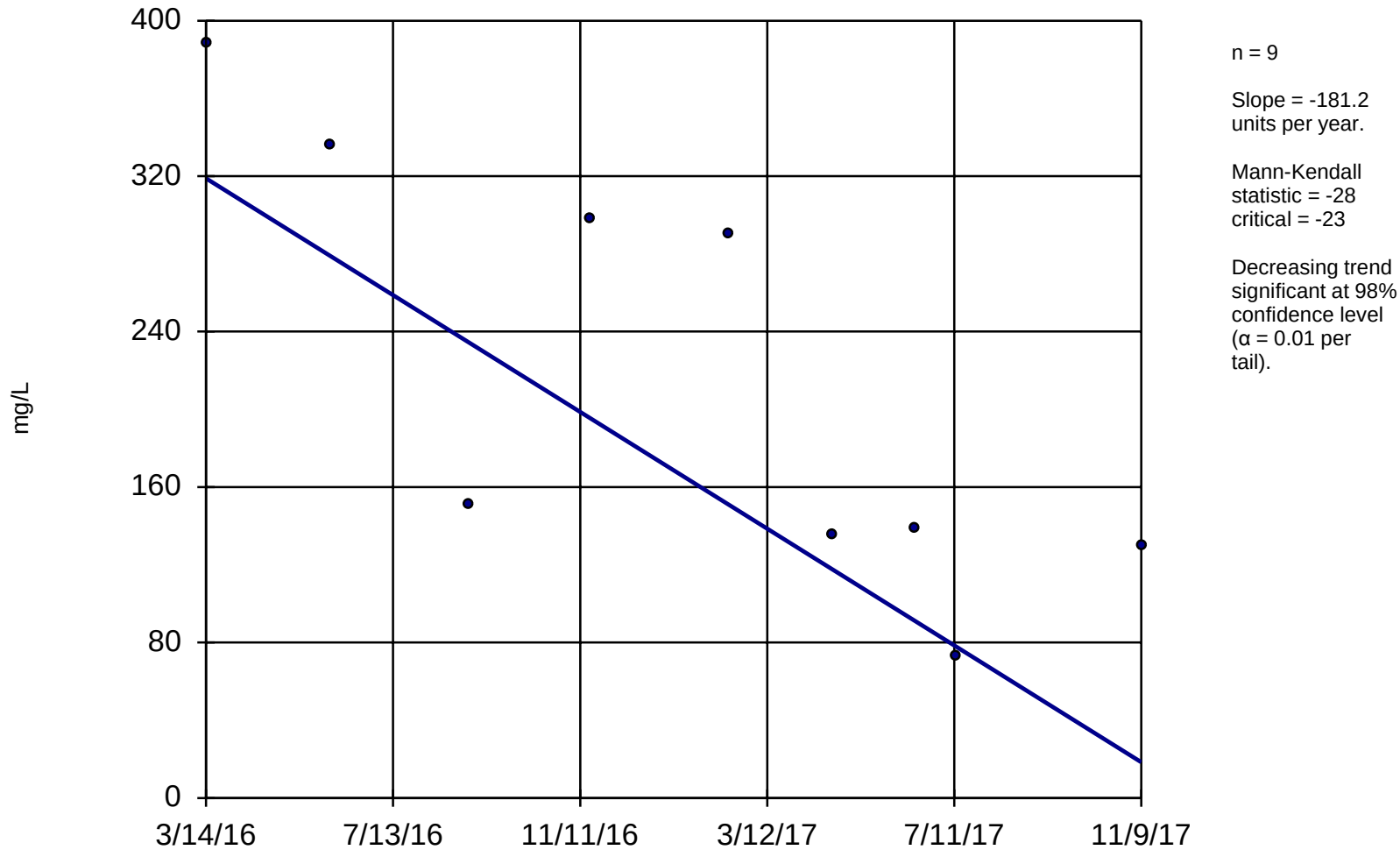
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Sulfate Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW2



n = 9

Slope = -181.2 units per year.

Mann-Kendall statistic = -28
critical = -23

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

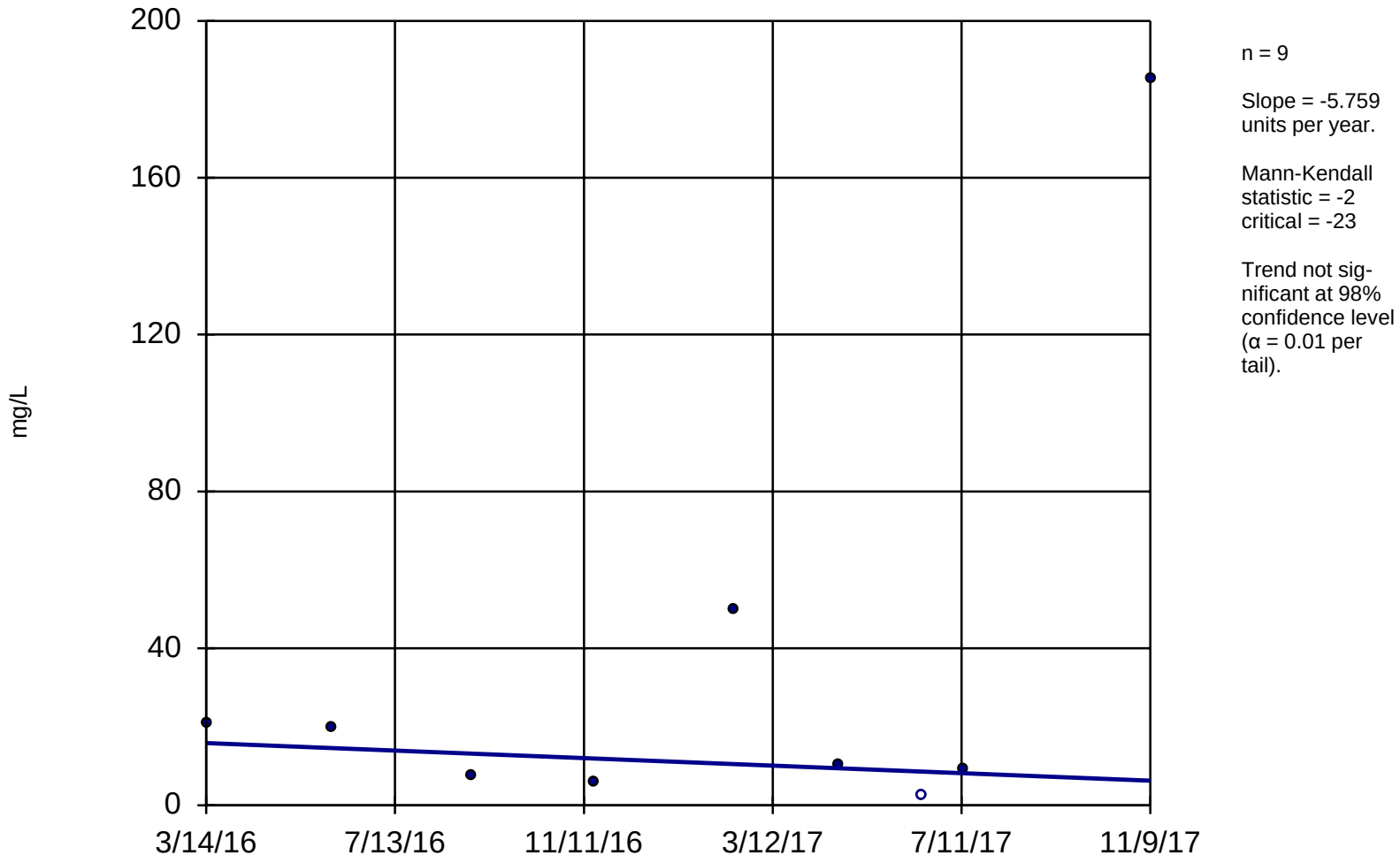
Constituent: Sulfate Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW3



n = 9

Slope = -5.759 units per year.

Mann-Kendall statistic = -2
critical = -23

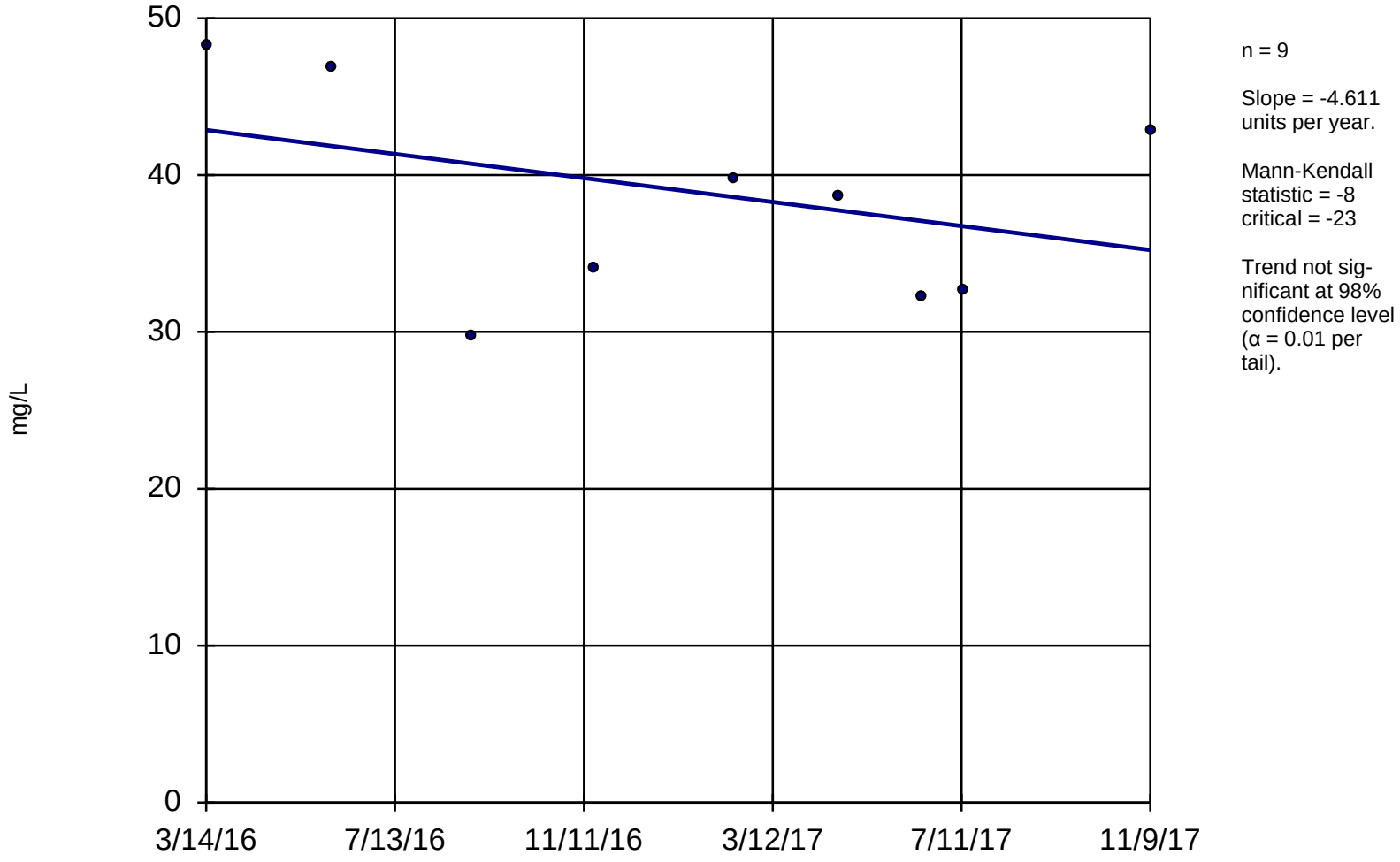
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Sulfate Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW4 (bg)



n = 9

Slope = -4.611 units per year.

Mann-Kendall statistic = -8
critical = -23

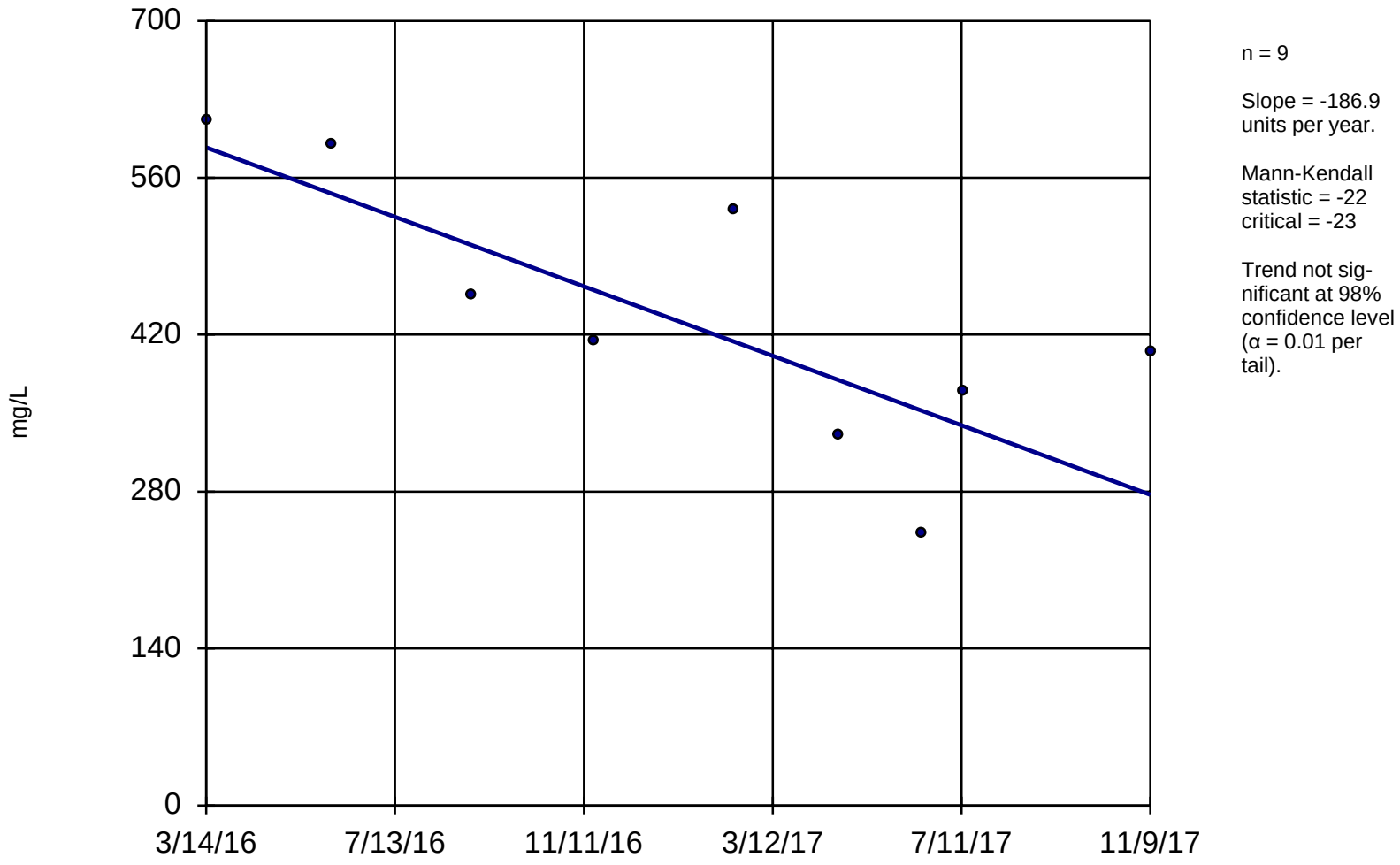
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Sulfate Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW5 (bg)



n = 9

Slope = -186.9 units per year.

Mann-Kendall statistic = -22
critical = -23

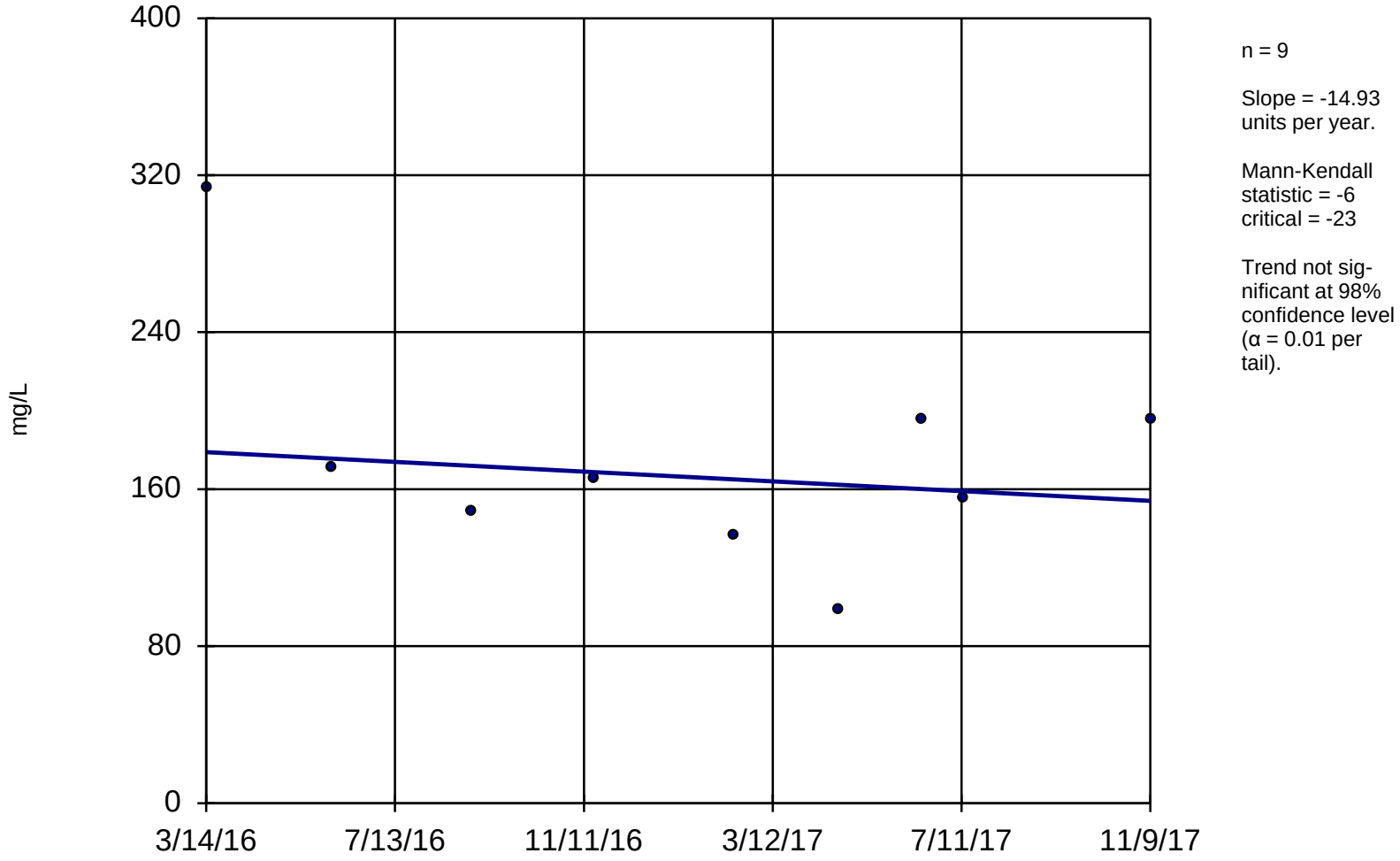
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Sulfate Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW6 (bg)



n = 9

Slope = -14.93 units per year.

Mann-Kendall statistic = -6
critical = -23

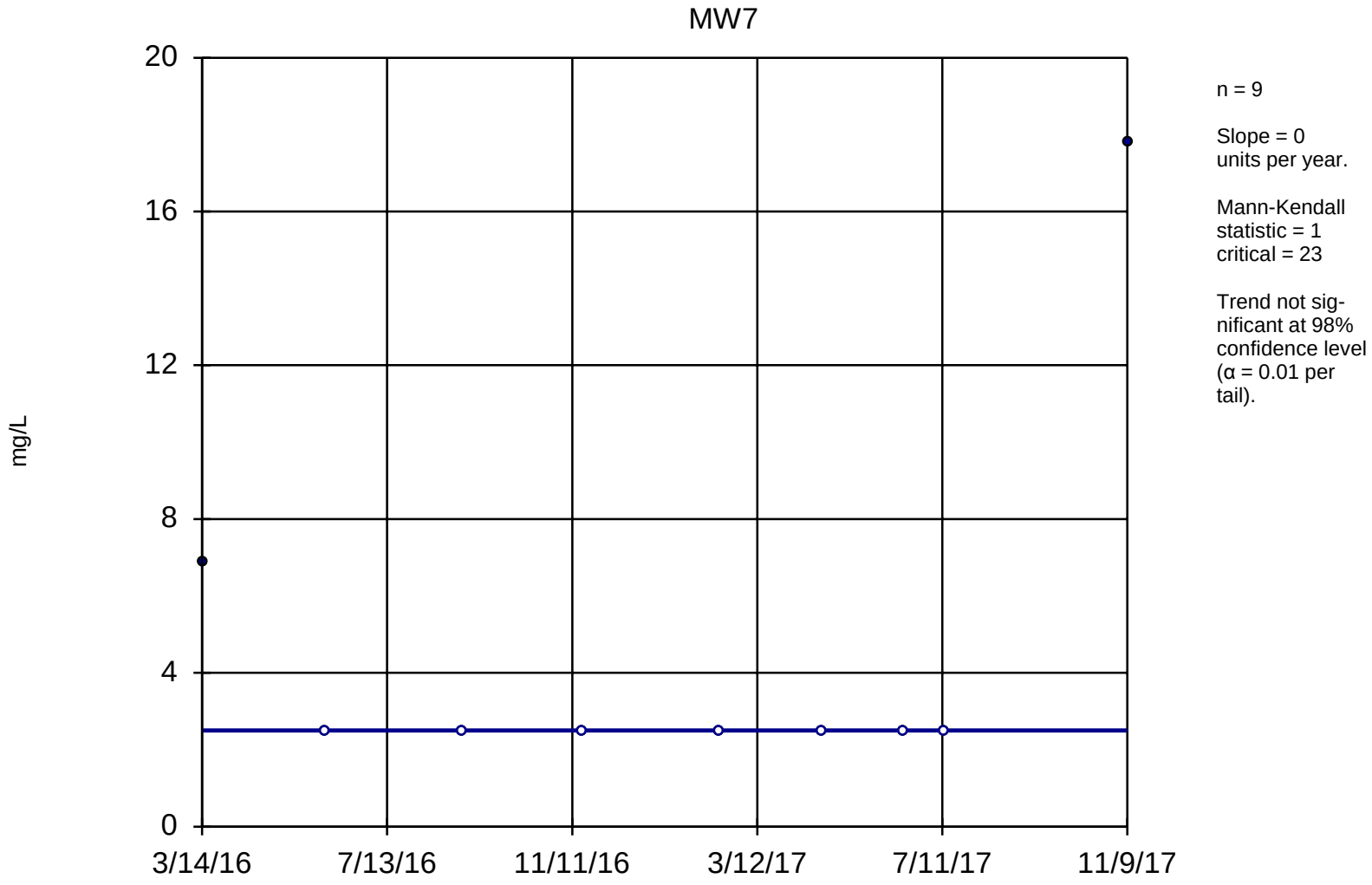
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Sulfate Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Hollow symbols indicate censored values.

Sen's Slope Estimator

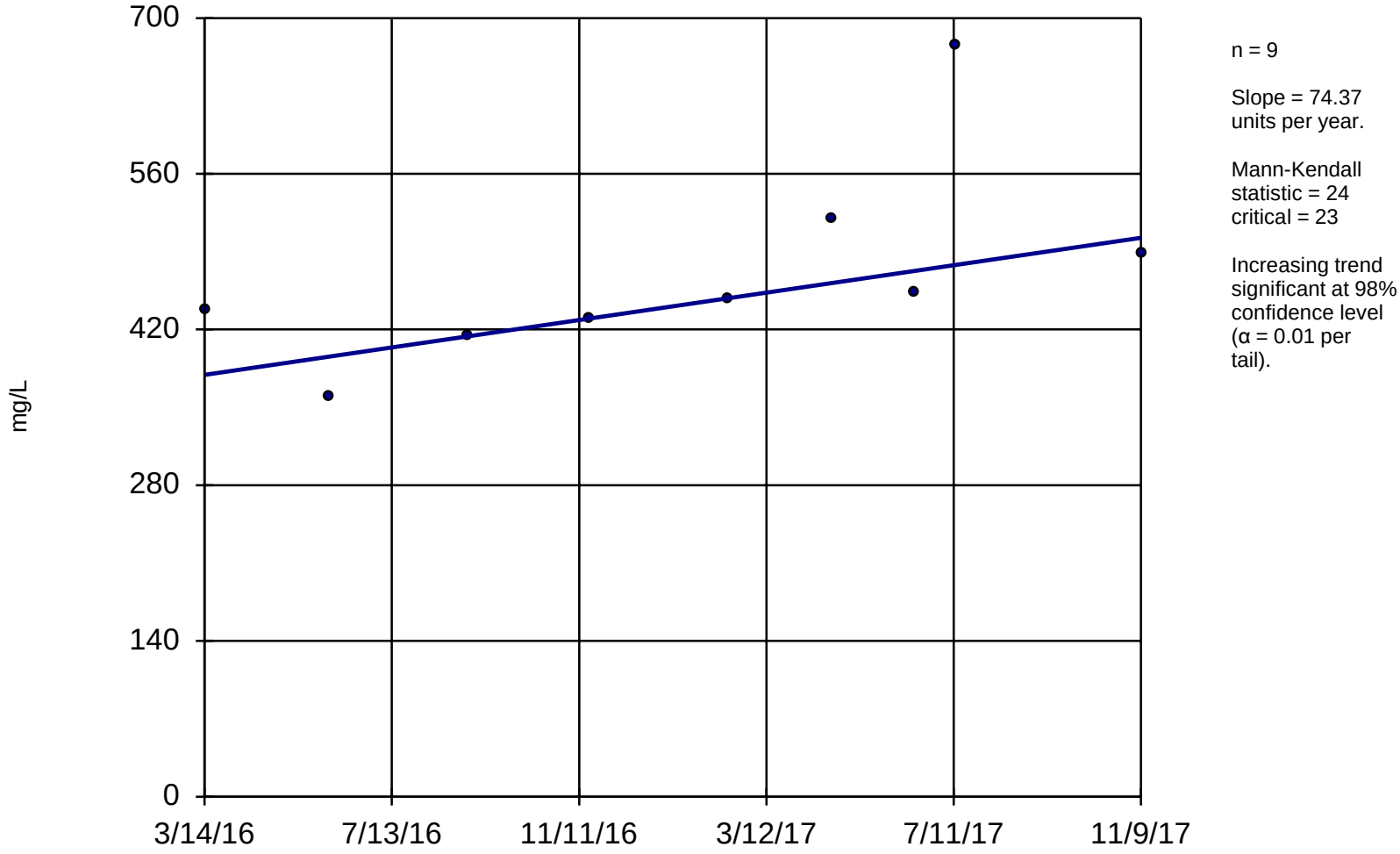


Constituent: Sulfate Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW13 (bg)



n = 9

Slope = 74.37 units per year.

Mann-Kendall statistic = 24
critical = 23

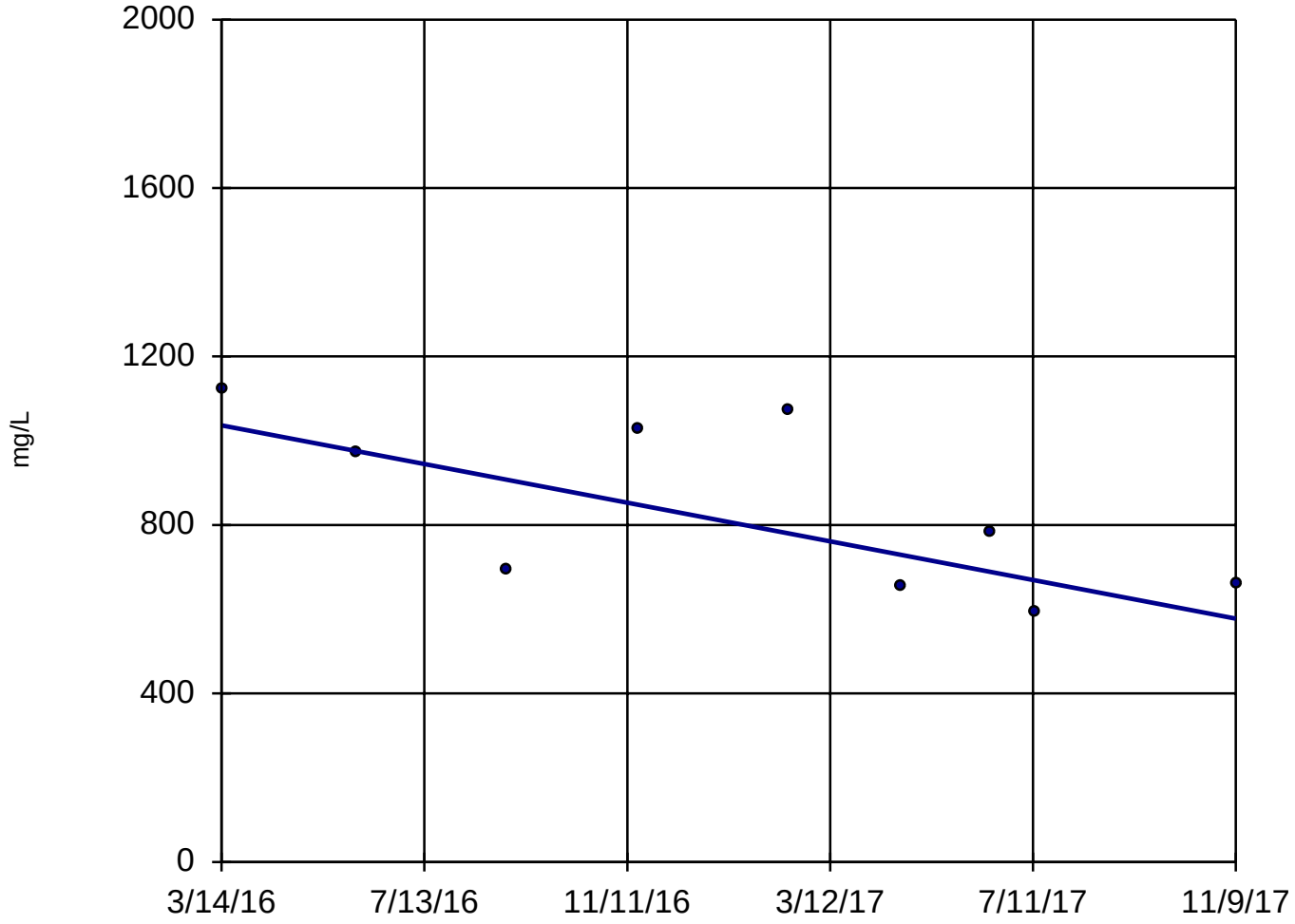
Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Total Dissolved Solids Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW2



n = 9

Slope = -276.8 units per year.

Mann-Kendall statistic = -18
critical = -23

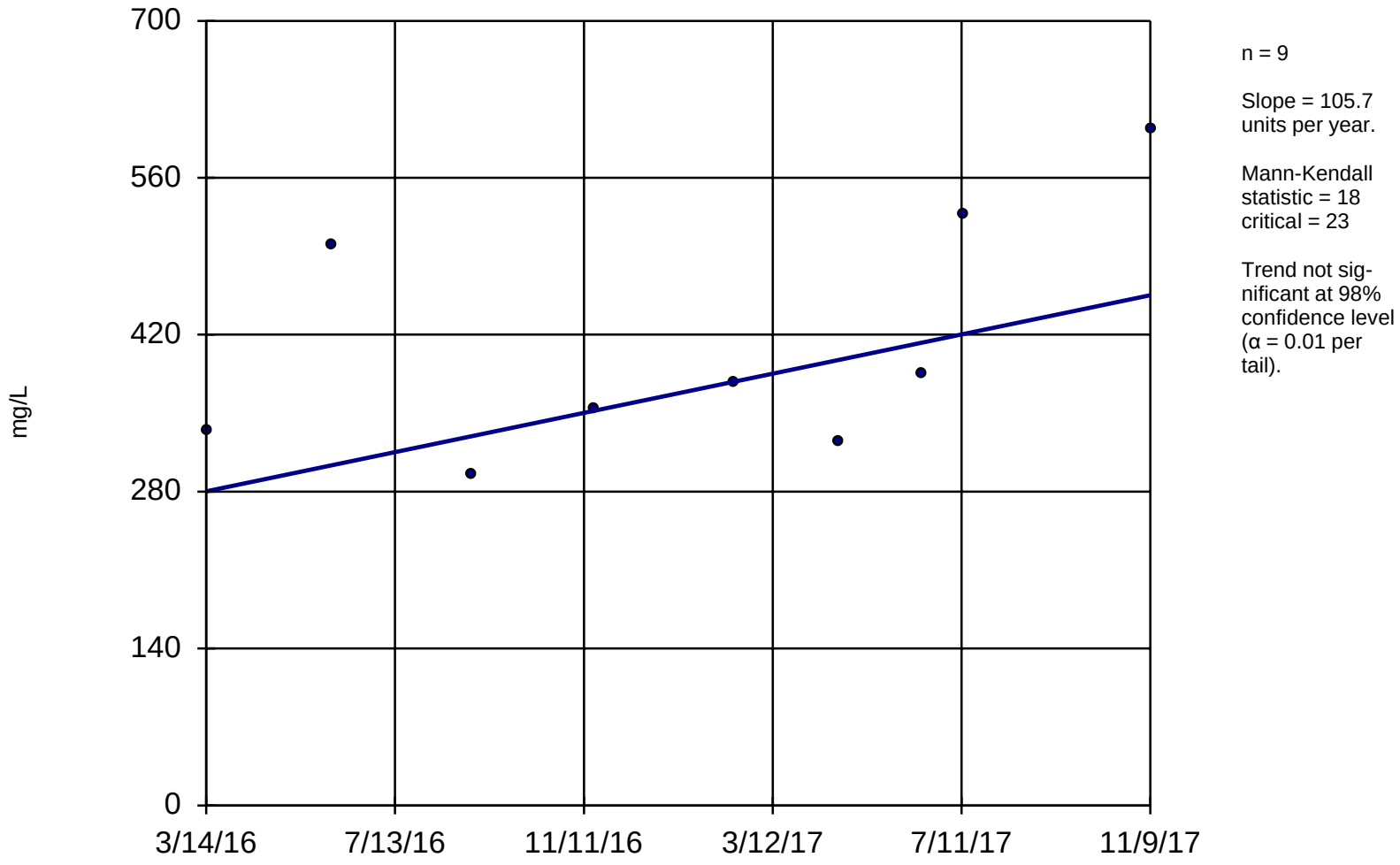
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Total Dissolved Solids Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW3



n = 9

Slope = 105.7 units per year.

Mann-Kendall statistic = 18
critical = 23

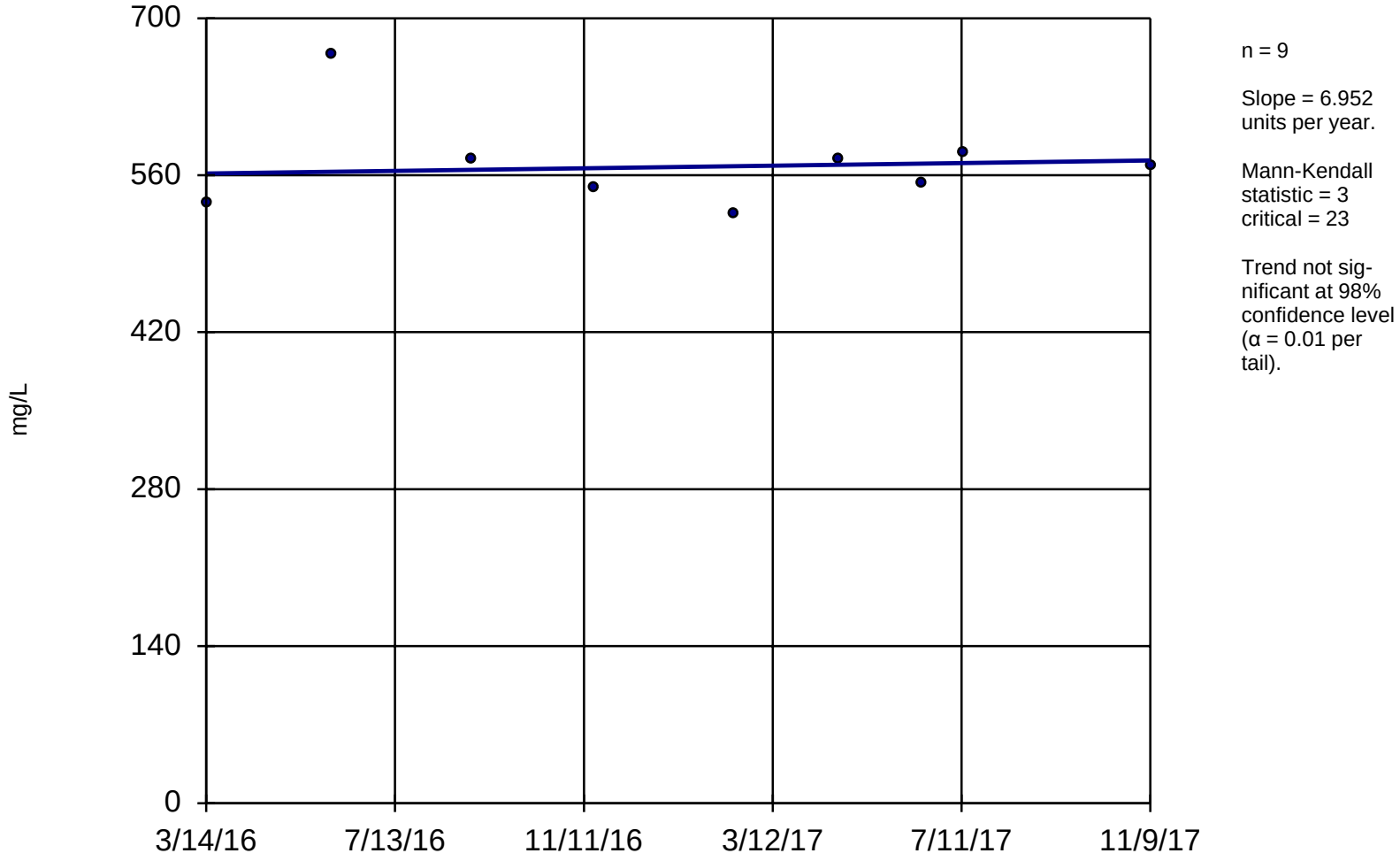
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Total Dissolved Solids Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW4 (bg)



n = 9

Slope = 6.952 units per year.

Mann-Kendall statistic = 3
critical = 23

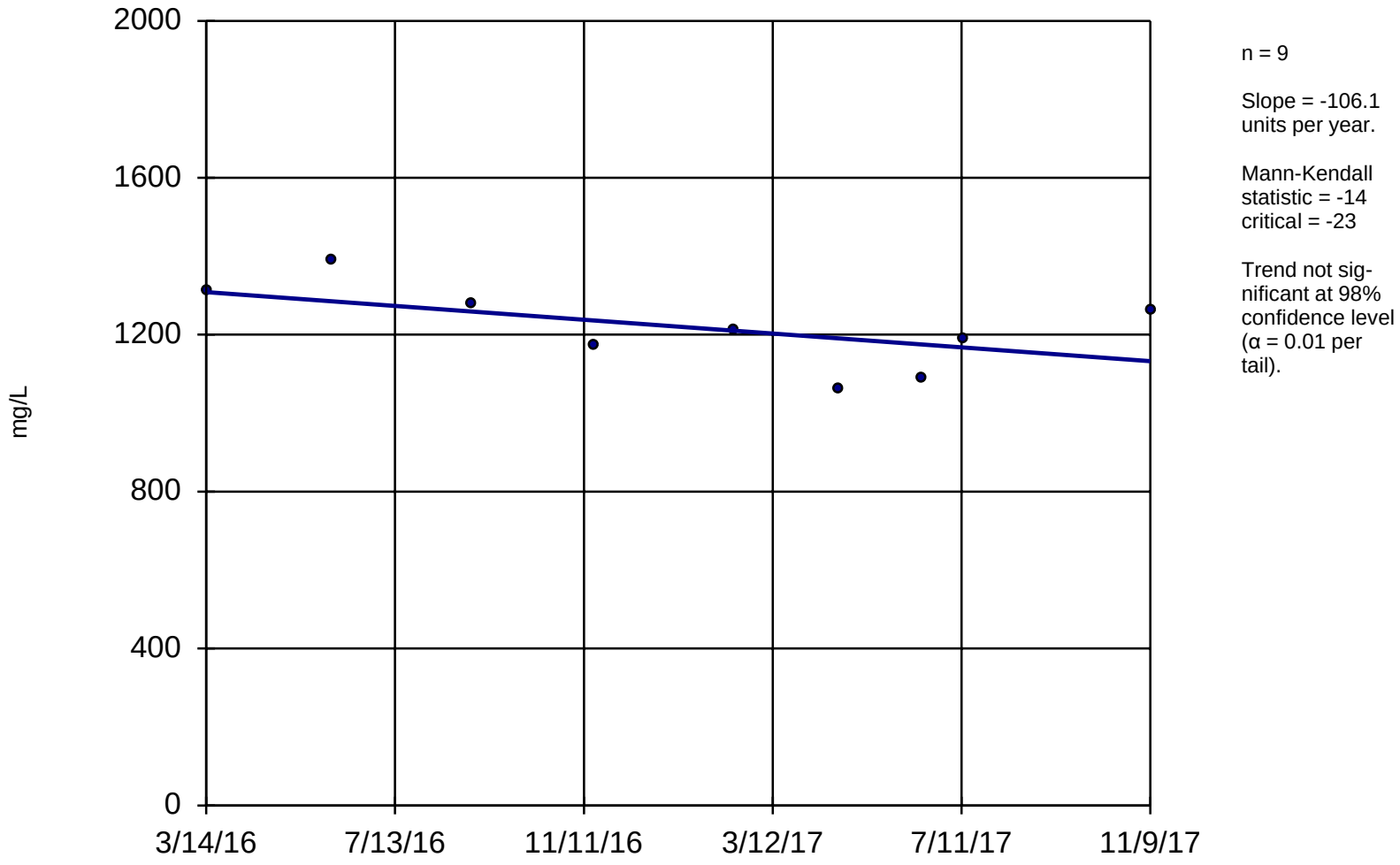
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Total Dissolved Solids Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW5 (bg)



n = 9

Slope = -106.1 units per year.

Mann-Kendall statistic = -14
critical = -23

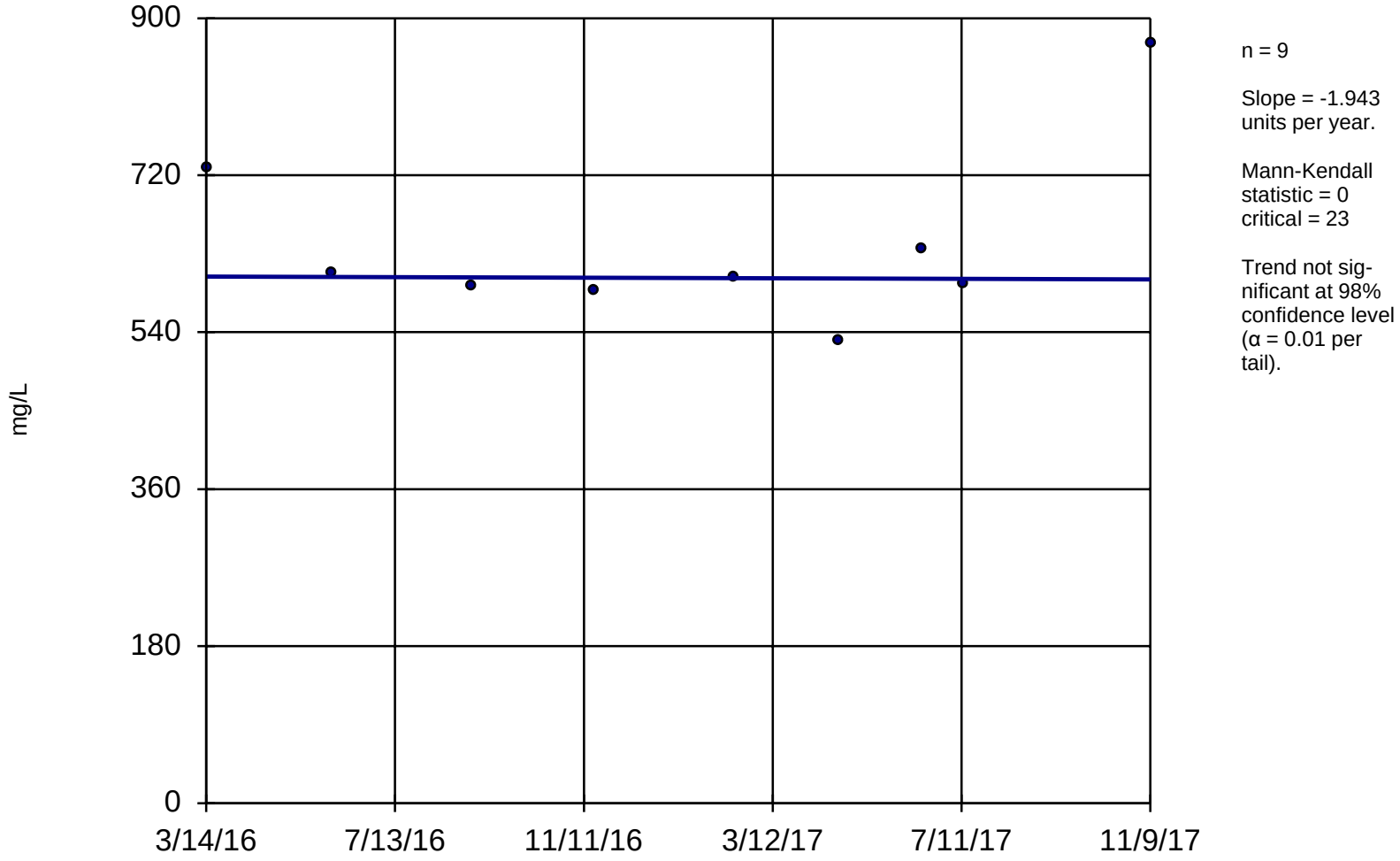
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Total Dissolved Solids Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW6 (bg)



n = 9

Slope = -1.943 units per year.

Mann-Kendall statistic = 0
critical = 23

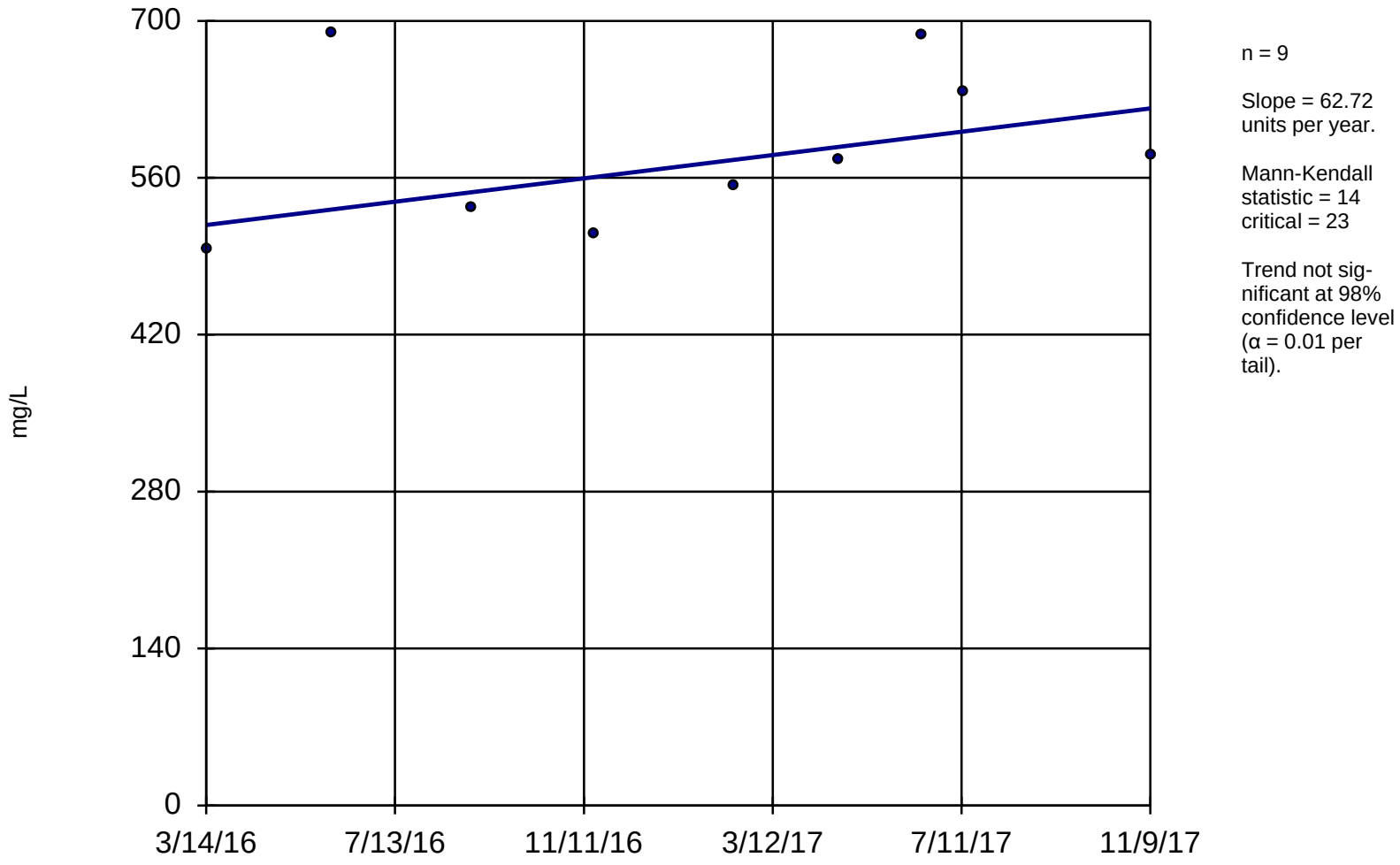
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Total Dissolved Solids Analysis Run 1/3/2018 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)

Sen's Slope Estimator

MW7



n = 9

Slope = 62.72 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 3:24 PM

OPPD Client: Terracon Data: NE2 SanitasMatrix CCR (Q4 2017)