



# 2017 NOS CCR Landfill Annual Groundwater Monitoring and Corrective Action Report

## North Omaha Ash Landfill



Omaha Public Power District  
North Omaha Station

*Omaha, Nebraska*  
January 31, 2018

**OPPD North Omaha Station  
North Omaha Ash Landfill  
2017 CCR Landfill Annual Groundwater  
Monitoring and Corrective Action Report**

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# **OPPD North Omaha Station North Omaha Ash Landfill 2017 CCR Landfill Annual Groundwater Monitoring and Corrective Action Report**

## **Summary**

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

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

Boron: MW-17, MW-2, MW-13, MW-15

Calcium: MW-2, MW-15, MW-13, MW-17

Chloride: MW-17

Sulfate: MW-15, MW-13, MW-2, MW-17

Total Dissolved Solids: MW-2, MW-15, MW-13, MW-17

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 has detected SSI's and is entering into the assessment monitoring program.

## 1 Introduction

On April 17, 2015 the U.S. Environmental Protection Agency (EPA) published the final rule for the regulation and management of coal combustion residuals (CCR) under Subtitle D of the Resource Conservation and Recovery Act (RCRA). The CCR rule defines a set of requirements for the disposal and handling of CCR within CCR units (defined as either landfills or surface impoundments). The Omaha Public Power District (OPPD), North Omaha Generating Station (Station) currently has one (1) active CCR landfill. Section 40 CFR 257.90(e) specifies that an owner or operator of a 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 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 fossil fuel-fired generating plant at the Station in Omaha, Nebraska. The Station is located east of Pershing Drive and Craig Street, approximately 3.5 miles northwest of the Eppley Airfield, along the west shore of the Missouri River at river mile 625.2. The active CCR landfill, known as the North Omaha Ash Landfill, is permitted under the current NDEQ Title 132 regulations for fossil fuel combustion ash disposal areas (NDEQ Permit No. NE0054739, Facility ID 59763). The active, unlined CCR landfill is located on the north-northwest portion of the station property and encompasses approximately 18 acres.

## 2 Changes in Well Network (40 CFR 257.90(e)(2))

There were no monitoring wells installed during 2017. There was one monitoring well decommissioned during the year. MW-16 was decommissioned on August 7, 2017. Since side slope closure work on the landfill was taking place and the monitoring well was within the actual boundary of the landfill, the decision was made to abandon the well with no replacement. The

monitoring well network was recertified by a licensed engineer with the removal of the well.

### **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 as part of this event were MW-2, MW-9, MW-13, MW-15, MW-17, MW-18, and MW-19.

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

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

The site is currently transitioning from Detection Monitoring to Assessment Monitoring. Since OPPD has determined that there 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:

Boron: MW-17, MW-2, MW-13, MW-15

Calcium: MW-2, MW-15, MW-13, MW-17

Chloride: MW-17

Sulfate: MW-15, MW-13, MW-2, MW-17

Total Dissolved Solids: MW-2, MW-15, MW-13, MW-17

### **5 Upcoming Activities**

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

Appendix A  
Groundwater Monitoring Report

**OMAHA PUBLIC POWER DISTRICT'S  
NORTH OMAHA STATION  
2017 NOS CCR GROUNDWATER REPORT**

**Omaha Public Power District  
444 South 16<sup>th</sup> Street Mall  
Omaha, Nebraska 68102-2247**

**JANUARY 2018**



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## **APPENDIX A**

SUMMARY OF GROUNDWATER ELEVATIONS  
NORTH OMAHA STATION

Location	Date	Top of Casing Elevation	Depth to Water	Groundwater Elevation	Comments
MW-2	3/22/2016	1001.41	21.20	980.21	
MW-2	6/14/2016	1001.41	21.65	979.76	
MW-2	9/2/2016	1001.41	22.90	978.51	
MW-2	11/28/2016	1001.41	22.06	979.35	
MW-2	2/17/2017	1001.41	22.45	978.96	
MW-2	5/2/2017	1001.41	22.00	979.41	
MW-2	6/19/2017	1001.41	22.00	979.41	
MW-2	7/31/2017	1001.41	23.10	978.31	
MW-2	11/7/2017	1001.41	22.95	978.46	
MW-4	3/22/2016	1004.59	11.85	992.74	
MW-4	6/14/2016	1004.59	11.19	993.40	
MW-4	9/2/2016	1004.59	12.20	992.39	
MW-4	11/28/2016	1004.59	12.30	992.29	
MW-4	2/17/2017	1004.59	12.90	991.69	
MW-4	5/2/2017	1004.59	12.35	992.24	
MW-4	6/19/2017	1004.59	11.85	992.74	
MW-4	7/31/2017	1004.59	12.45	992.14	
MW-4	11/7/2017	1004.59	12.80	991.79	
MW-5	3/22/2016	1000.96	20.30	980.66	
MW-5	6/14/2016	1000.96	19.15	981.81	
MW-5	9/2/2016	1000.96	20.50	980.46	
MW-5	11/28/2016	1000.96	20.55	980.41	
MW-5	2/17/2017	1000.96	20.73	980.23	
MW-5	5/2/2017	1000.96	20.25	980.71	
MW-5	6/19/2017	1000.96	19.60	981.36	
MW-5	7/31/2017	1000.96	20.21	980.75	
MW-5	11/7/2017	1000.96	23.45	977.51	
MW-6	3/22/2016	1002.65	12.74	989.91	
MW-6	6/14/2016	1002.65	12.05	990.60	
MW-6	9/2/2016	1002.65	13.30	989.35	
MW-6	11/28/2016	1002.65	13.48	989.17	
MW-6	2/17/2017	1002.65	13.89	988.76	
MW-6	5/2/2017	1002.65	13.40	989.25	
MW-6	6/19/2017	1002.65	12.50	990.15	
MW-6	7/31/2017	1002.65	13.37	989.28	
MW-6	11/7/2017	1002.65	12.20	990.45	
MW-7	3/22/2016	1001.85	16.57	985.28	
MW-7	6/14/2016	1001.85	15.70	986.15	
MW-7	9/2/2016	1001.85	17.21	984.64	
MW-7	11/28/2016	1001.85	17.80	984.05	
MW-7	2/17/2017	1001.85	18.30	983.55	
MW-7	5/2/2017	1001.85	16.69	985.16	
MW-7	6/19/2017	1001.85	16.15	985.70	
MW-7	7/31/2017	1001.85	16.72	985.13	
MW-7	11/7/2017	1001.85	15.65	986.20	
MW-8	3/22/2016	1003.59	17.54	986.05	
MW-8	6/14/2016	1003.59	16.00	987.59	
MW-8	9/2/2016	1003.59	17.48	986.11	
MW-8	11/28/2016	1003.59	18.18	985.41	
MW-8	2/17/2017	1003.59	18.67	984.92	
MW-8	5/2/2017	1003.59	11.32	992.27	

Measurements are in feet.

Well condition is compliant unless noted otherwise.

SUMMARY OF GROUNDWATER ELEVATIONS  
NORTH OMAHA STATION

Location	Date	Top of Casing Elevation	Depth to Water	Groundwater Elevation	Comments
MW-8	6/19/2017	1003.59	16.45	987.14	
MW-8	7/31/2017	1003.59	11.38	992.21	
MW-8	11/7/2017	1003.59	15.80	987.79	
MW-9	3/22/2016	1026.47	22.41	1004.06	
MW-9	6/14/2016	1026.47	22.10	1004.37	
MW-9	9/2/2016	1026.47	24.70	1001.77	
MW-9	11/28/2016	1026.47	24.65	1001.82	
MW-9	2/17/2017	1026.47	24.70	1001.77	
MW-9	5/2/2017	1026.47	23.71	1002.76	
MW-9	6/19/2017	1026.47	23.90	1002.57	
MW-9	7/31/2017	1026.47	26.65	999.82	
MW-9	11/7/2017	1026.47	21.30	1005.17	
MW-10	3/22/2016	1002.48	15.50	986.98	
MW-10	6/14/2016	1002.48	14.50	987.98	
MW-10	9/2/2016	1002.48	16.04	986.44	
MW-10	11/28/2016	1002.48	16.80	985.68	
MW-10	2/17/2017	1002.48	16.99	985.49	
MW-10	5/2/2017	1002.48	15.55	986.93	
MW-10	6/19/2017	1002.48	14.95	987.53	
MW-10	7/31/2017	1002.48	16.00	986.48	
MW-10	11/7/2017	1002.48	14.25	988.23	
MW-11	3/22/2016	1002.99	10.83	992.16	
MW-11	6/14/2016	1002.99	10.05	992.94	
MW-11	9/2/2016	1002.99	11.30	991.69	
MW-11	11/28/2016	1002.99	12.20	990.79	
MW-11	2/17/2017	1002.99	12.54	990.45	
MW-11	5/2/2017	1002.99	12.45	990.54	
MW-11	6/19/2017	1002.99	10.50	992.49	
MW-11	7/31/2017	1002.99	13.02	989.97	
MW-11	11/7/2017	1002.99	12.00	990.99	
MW-12	3/22/2016	1003.78	16.35	987.43	
MW-12	6/14/2016	1003.78	14.55	989.23	
MW-12	9/2/2016	1003.78	15.60	988.18	
MW-12	11/28/2016	1003.78	17.25	986.53	
MW-12	2/17/2017	1003.78	17.71	986.07	
MW-12	5/2/2017	1003.78	9.39	994.39	
MW-12	6/19/2017	1003.78	15.00	988.78	
MW-12	7/31/2017	1003.78	10.20	993.58	
MW-12	11/7/2017	1003.78	14.42	989.36	
MW-13	3/22/2016	1001.91	17.40	984.51	
MW-13	6/14/2016	1001.91	17.40	984.51	
MW-13	9/2/2016	1001.91	22.50	979.41	
MW-13	11/28/2016	1001.91	18.20	983.71	
MW-13	2/17/2017	1001.91	18.80	983.11	
MW-13	5/2/2017	1001.91	18.41	983.50	
MW-13	6/19/2017	1001.91	18.30	983.61	
MW-13	7/31/2017	1001.91	19.25	982.66	
MW-13	11/7/2017	1001.91	19.40	982.51	
MW-15	3/22/2016	1005.39	10.90	994.49	
MW-15	6/14/2016	1005.39	10.40	994.99	
MW-15	9/2/2016	1005.39	10.90	994.49	

Measurements are in feet.

Well condition is compliant unless noted otherwise.

SUMMARY OF GROUNDWATER ELEVATIONS  
NORTH OMAHA STATION

Location	Date	Top of Casing Elevation	Depth to Water	Groundwater Elevation	Comments
MW-15	11/28/2016	1005.39	11.30	994.09	
MW-15	2/17/2017	1005.39	11.65	993.74	
MW-15	5/2/2017	1005.39	10.45	994.94	
MW-15	6/19/2017	1005.39	10.60	994.79	
MW-15	7/31/2017	1005.39	12.15	993.24	
MW-15	11/7/2017	1005.39	12.75	992.64	
MW-16	3/22/2016	1004.41	11.69	992.72	
MW-16	6/14/2016	1004.41	10.90	993.51	
MW-16	9/2/2016	1004.41	12.30	992.11	
MW-16	11/28/2016	1004.41	12.10	992.31	
MW-16	2/17/2017	1004.41	13.10	991.31	
MW-16	5/2/2017	1004.41	12.25	992.16	
MW-16	6/19/2017	1004.41	11.45	992.96	
MW-16	7/31/2017	1004.41	12.50	991.91	
MW-16	11/7/2017	Not Measured After 7/31/17 - Decommissioned on 8/4/17			
MW-17	3/22/2016	1002.54	17.18	985.36	
MW-17	6/14/2016	1002.54	16.10	986.44	
MW-17	9/2/2016	1002.54	17.50	985.04	
MW-17	11/28/2016	1002.54	17.51	985.03	
MW-17	2/17/2017	1002.54	18.25	984.29	
MW-17	5/2/2017	1002.54	17.12	985.42	
MW-17	6/19/2017	1002.54	16.55	985.99	
MW-17	7/31/2017	1002.54	17.10	985.44	
MW-17	11/7/2017	1002.54	17.50	985.04	
MW-18	3/22/2016	1037.00	34.75	1002.25	
MW-18	6/14/2016	1037.00	33.92	1003.08	
MW-18	9/2/2016	1037.00	35.50	1001.50	
MW-18	11/28/2016	1036.70	35.35	1001.35	casing cut, new TOC elevation
MW-18	2/17/2017	1036.70	35.95	1000.75	
MW-18	5/2/2017	1036.70	34.80	1001.90	
MW-18	6/19/2017	1036.70	34.70	1002.00	
MW-18	7/31/2017	1036.70	36.40	1000.30	
MW-18	11/7/2017	1036.70	36.39	1000.31	
MW-19	3/22/2016	1037.10	33.85	1003.25	
MW-19	6/14/2016	1037.10	33.40	1003.70	
MW-19	9/2/2016	1037.10	34.95	1002.15	
MW-19	11/28/2016	1036.91	34.91	1002.00	casing cut, new TOC elevation
MW-19	2/17/2017	1036.91	35.30	1001.61	
MW-19	5/2/2017	1036.91	34.22	1002.69	
MW-19	6/19/2017	1036.91	34.20	1002.71	
MW-19	7/31/2017	1036.91	35.85	1001.06	
MW-19	11/7/2017	1036.91	35.86	1001.05	
MW-20	3/22/2016	993.47	8.17	985.30	
MW-20	6/14/2016	993.47	7.60	985.87	
MW-20	9/2/2016	993.47	8.35	985.12	
MW-20	11/28/2016	993.47	9.00	984.47	
MW-20	2/17/2017	993.47	9.41	984.06	
MW-20	5/2/2017	993.47	8.20	985.27	
MW-20	6/19/2017	993.47	8.05	985.42	
MW-20	7/31/2017	993.47	8.70	984.77	
MW-20	11/7/2017	993.47	9.03	984.44	

Measurements are in feet.

Well condition is compliant unless noted otherwise.



SUMMARY OF DETECTION MONITORING GROUNDWATER  
ANALYTICAL RESULTS FOR APPENDIX III CONSTITUENTS  
NORTH OMAHA STATION

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		a								
			3/22/2016	1.6	267	23.1	1320	1920	6.85	<0.5
			6/14/2016	1.52	278	25.7	774	1560	6.8	<0.5
			9/2/2016	1.22	197	24.9	503	2890	7.04	<0.5
			11/28/2016	1.31	262	24.4	650	1420	7.49	0.318
	x		11/28/2016	1.21	251	31.6	610	1350	n/a	0.308
			2/17/2017	1.92	292	19.3	915	2120	7.79	0.563
			5/2/2017	1.79	300	22.9	889	1840	7.27	1.94
			6/19/2017	1.48	277	24.1	631	2020	7.09	<0.5
			7/31/2017	1.81	299	24.8	799	1850	7.37	0.583
			11/7/2017	1.59	263	21.2	907	2210	7.29	0.529
MW9		u								
			3/22/2016	<0.2	147	121	23	708	6.83	1.35
			6/14/2016	<0.2	159	165	31.7	770	6.78	0.864
			9/2/2016	<0.2	122	146	19.9	766	7.27	<0.5
			11/28/2016	<0.2	166	177	35.4	790	7.02	<0.5
			2/17/2017	<0.2	116	120	26.2	640	7.47	0.585
			5/2/2017	<0.2	148	127	25.5	760	7.35	1.84
			6/19/2017	<0.2	150	149	22	888	6.99	0.517
			7/31/2017	<0.2	190	275	57.1	1180	7.87	0.617
			11/7/2017	<0.2	153	220	37.7	1090	7.46	0.55
MW13		d								
			3/22/2016	2.05	127	7.97	486	1050	6.89	0.796
	x		3/22/2016	1.96	130	7.55	498	1060	n/a	0.67
			6/14/2016	1.97	138	6.7	500	1030	6.7	<0.5
			9/2/2016	2.02	116	8.06	458	1170	7.03	0.652
			11/28/2016	2.21	155	11.3	583	1140	7.25	2.55
			2/17/2017	2.02	153	6.35	603	1320	7.44	<0.5
	x		2/17/2017	1.89	149	8.45	584	1260	n/a	0.571
			5/2/2017	1.8	156	7.52	650	1450	7.3	1.05
	x		5/2/2017	2.04	165	9.22	591	1390	n/a	3.24
			6/19/2017	2.09	179	7.83	590	1400	7.07	<0.5
	x		6/19/2017	2.02	169	7.24	565	1750	n/a	<0.5
			7/31/2017	2.26	133	6.3	512	1150	7.2	0.587
			11/7/2017	1.71	129	6.81	581	1080	6.79	0.67

SUMMARY OF DETECTION MONITORING GROUNDWATER  
ANALYTICAL RESULTS FOR APPENDIX III CONSTITUENTS  
NORTH OMAHA STATION

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)
MW15		d								
			3/22/2016	3.11	311	24.3	262	1510	7.09	<0.5
			6/14/2016	5.39	340	13	934	1640	6.8	<0.5
			9/2/2016	3.36	220	3.52	625	1460	6.97	0.278
			11/28/2016	2.87	285	28.2	886	1500	7.32	3.48
	x		11/28/2016	2.84	276	31.6	860	1440	n/a	5.01
			2/17/2017	2.81	266	16.8	863	1370	7.65	<0.5
			5/2/2017	2.8	263	11.2	861	1280	7.02	0.878
			6/19/2017	2.57	248	9.99	643	1320	7.05	<0.5
			7/31/2017	3.01	247	11.4	641	1140	7.02	<0.5
	x		7/31/2017	2.8	235	12.7	633	1180	n/a	<0.5
			11/7/2017	4.13	293	11.6	900	1520	7.1	<0.5
	x		11/7/2017	4.24	304	11.8	887	1750	n/a	<0.5
MW16		d								
			3/22/2016	0.367	180	64.7	345	948	6.86	1.84
			6/14/2016	0.409	180	65.5	340	968	6.67	<0.5
			9/2/2016	0.333	143	57.3	277	1160	7.18	<0.5
	x		9/2/2016	0.31	145	61.8	266	1060	n/a	0.817
			11/28/2016	0.312	184	60.7	357	1040	7.11	<0.5
			2/17/2017	0.433	181	59.2	374	1410	7.51	1.37
			5/2/2017	0.32	184	60.7	381	1030	7.26	1.85
			6/19/2017	0.371	194	59.3	326	1460	6.97	<0.5
			7/31/2017	0.423	200	57.9	352	1200	7.12	0.528
MW17		d								
			3/23/2016	0.668	392	51.3	1010	3150	6.6	1.36
			6/14/2016	0.706	376	50	990	2360	6.59	<0.5
			9/2/2016	0.637	320	43	807	2660	6.98	<0.5
			11/29/2016	0.644	390	49.7	1080	2640	6.76	<0.5
			2/17/2017	0.7	380	62.6	1010	2250	7.31	2.91
			5/2/2017	0.649	364	45.3	1090	3040	7.47	1.66
			6/19/2017	0.679	373	42.3	944	2640	6.93	<0.5
			7/31/2017	0.753	365	44.4	913	2300	7.05	<0.5
			11/7/2017	0.66	323	46.2	952	2590	7.14	<0.5
MW18		u								
			3/22/2016	<0.2	115	<5	24.8	504	6.86	<0.5
			6/14/2016	<0.2	96.1	<5	5	468	7.18	<0.5
			9/2/2016	<0.2	73.4	<5	<5	460	7.2	<0.5
			11/28/2016	<0.2	97.6	<5	<5	628	7.47	<0.5
			2/17/2017	<0.2	94.8	<5	<5	474	7.7	0.508
			5/2/2017	<0.2	98.9	<5	<5	542	7.27	1.32
			6/19/2017	<0.2	98.4	<5	<5	514	7.2	<0.5
			7/31/2017	<0.2	98.8	<5	<5	468	7.63	0.632
			11/7/2017	<0.2	87.5	<5	<5	518	7.22	0.704

SUMMARY OF DETECTION MONITORING GROUNDWATER  
ANALYTICAL RESULTS FOR APPENDIX III CONSTITUENTS  
NORTH OMAHA STATION

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)
MW19		u								
			3/22/2016	<0.2	103	6.5	29.5	494	6.85	<0.5
			6/14/2016	<0.2	110	7.2	29.9	508	6.8	<0.5
			9/2/2016	<0.2	82.8	<5	21.5	492	7.12	<0.5
			11/28/2016	<0.2	110	6.02	20.7	484	7.29	<0.5
			2/17/2017	<0.2	90.5	3.55	15.7	484	7.49	0.418
			5/2/2017	<0.2	107	3.7	10.6	566	7.39	0.804
			6/19/2017	<0.2	103	<5	10.2	518	7.05	<0.5
			7/31/2017	<0.2	105	<5	8.35	480	7.53	0.693
			11/7/2017	<0.2	93	<5	6.91	410	6.98	<0.5

mg/L = milligrams per liter

< = not detected above the reporting limit given

Well Type

u Upgradient/Background

d Downgradient

Laboratory Reported Qualifiers

(\*) LCS or LCSD is outside acceptance limits



SUMMARY OF GROUNDWATER ANALYTICAL RESULTS FOR APPENDIX IV CONSTITUENTS  
NORTH OMAHA STATION

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)	Antimony (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Lead (mg/L)	Lithium (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Selenium (mg/L)	Thallium (mg/L)	Ra-226 (pCi/L)	Ra-228 (pCi/L)	Ra 226+228 (pCi/L)
MW16		d	3/22/2016	0.367	180	64.7	345	948	6.86	1.84	<0.001	<0.002	0.0665	<0.001	<0.0005	<0.005	0.00083	<0.0005	<0.05	<0.0002	0.018	<0.005	<0.001	0.0926	0.121	0.214
			6/14/2016	0.409	180	65.5	340	968	6.67	<0.5	<0.001	<0.002	0.073	<0.001	<0.0005	<0.005	0.000634	<0.0005	0.0514	<0.0002	0.0125	<0.005	<0.001	0.114	0.392	0.392
			9/2/2016	0.333	143	57.3	277	1160	7.18	<0.5	<0.001	0.00233	0.0837	<0.001	<0.0005	<0.005	0.00126	<0.0005	<0.05	<0.0002	0.0262	<0.005	<0.001	0.19	0.03	0.22
	x		9/2/2016	0.31	145	61.8	266	1060	n/a	0.817	<0.001	0.00204	0.0825	<0.001	<0.0005	<0.005	0.00138	0.000606	0.051	<0.0002	0.0187	<0.005	<0.001	0.188	0.188	0.376
			11/28/2016	0.312	184	60.7	357	1040	7.11	<0.5	<0.001	<0.002	0.0794	<0.001	<0.0005	<0.005	0.000925	<0.0005	0.0501	<0.0002(*)	0.0193	<0.005	<0.001	0.113	0.323	0.436
			2/17/2017	0.433	181	59.2	374	1410	7.51	1.37	<0.001	<0.002	0.0857	<0.001	<0.0005	<0.005	0.00102	<0.0005	0.053	<0.0002	0.0164	<0.005	<0.001	0.213	0.149	0.362
			5/2/2017	0.32	184	60.7	381	1030	7.26	1.85	<0.001	<0.002	0.0818	<0.001	<0.0005	<0.005	0.000952	<0.0005	0.0503	<0.0002	0.00651	<0.005	<0.001	0.12	0.234	0.354
			6/19/2017	0.371	194	59.3	326	1460	6.97	<0.5	<0.001	<0.002	0.0752	<0.001	<0.0005	<0.005	0.000769	<0.0005	<0.05	<0.0002	0.0105	<0.005	<0.001	0.0686	0.394	0.463
			7/31/2017	0.423	200	57.9	352	1200	7.12	0.528	<0.001	<0.002	0.0722	<0.001	<0.0005	<0.005	0.000519	<0.0005	<0.05	<0.0002	0.0185	<0.005	<0.001	0.483	-0.13	0.353
MW17		d	3/23/2016	0.668	392	51.3	1010	3150	6.6	1.36	<0.001	0.00735	0.0276	<0.001	<0.0005	<0.005	0.00813	<0.0005	0.114	<0.0002	<0.002	<0.005	<0.001	0.106	0.26	0.366
			6/14/2016	0.706	376	50	990	2360	6.59	<0.5	<0.001	0.036	0.0396	<0.001	<0.0005	<0.005	0.0127	<0.0005	0.129	<0.0002	<0.002	<0.005	<0.001	0.123	0.469	0.469
			9/2/2016	0.637	320	43	807	2660	6.98	<0.5	<0.001	0.0152	0.0424	<0.001	<0.0005	<0.005	0.0134	<0.0005	0.116	<0.0002	<0.002	<0.005	<0.001	0.128	0.523	0.651
			11/29/2016	0.644	390	49.7	1080	2640	6.76	<0.5	<0.001	0.00691	0.0356	<0.001	<0.0005	<0.005	0.00829	<0.0005	0.116	<0.0002(*)	0.00219	<0.005	<0.001	0.141	0.338	0.479
			2/17/2017	0.7	380	62.6	1010	2250	7.31	2.91	<0.001	0.0219	0.0406	<0.001	<0.0005	<0.005	0.0112	0.0071	0.115	<0.0002	0.00214	<0.005	<0.001	0.134	0.0475	0.181
			5/2/2017	0.649	364	45.3	1090	3040	7.47	1.66	<0.001	0.03	0.0411	<0.001	<0.0005	<0.005	0.0113	<0.0005	0.116	<0.0002	<0.002	<0.005	<0.001	0.0863	-0.145	-0.059
			6/19/2017	0.679	373	42.3	944	2640	6.93	<0.5	<0.001	0.0163	0.0361	<0.001	<0.0005	<0.005	0.012	<0.0005	0.114	<0.0002	<0.002	<0.005	<0.001	0.113	0.664	0.777
			7/31/2017	0.753	365	44.4	913	2300	7.05	<0.5	<0.001	0.0159	0.0373	<0.001	<0.0005	<0.005	0.0123	<0.0005	0.109	<0.0002	<0.002	<0.005	<0.001	0.171	0.113	0.284
MW18		u	3/22/2016	<0.2	115	<5	24.8	504	6.86	<0.5	<0.001	0.00345	0.343	<0.001	<0.0005	<0.005	0.00152	0.00479	<0.05	<0.0002	<0.002	<0.005	<0.001	1.16	1.54	2.7
			6/14/2016	<0.2	96.1	<5	5	468	7.18	<0.5	<0.001	<0.002	0.319	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001	0.45	0.269	0.72
			9/2/2016	<0.2	73.4	<5	<5	460	7.2	<0.5	<0.001	<0.002	0.307	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001	0.466	0.348	0.814
			11/28/2016	<0.2	97.6	<5	<5	628	7.47	<0.5	<0.001	<0.002	0.306	<0.001	<0.0005	<0.005	<0.0005	0.000577	<0.05	<0.0002(*)	<0.002	<0.005	<0.001	0.764	0.797	1.56
			2/17/2017	<0.2	94.8	<5	<5	474	7.7	0.508	<0.001	<0.002	0.314	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001	0.47	0.437	0.907
			5/2/2017	<0.2	98.9	<5	<5	542	7.27	1.32	<0.001	<0.002	0.329	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001	n/a	n/a	n/a
			6/19/2017	<0.2	98.4	<5	<5	514	7.2	<0.5	<0.001	<0.002	0.304	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	0.000204	<0.002	<0.005	<0.001	0.264	0.201	0.465
			7/31/2017	<0.2	98.8	<5	<5	468	7.63	0.632	<0.001	<0.002	0.309	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001	0.588	0.311	0.899
MW19		u	3/22/2016	<0.2	103	6.5	29.5	494	6.85	<0.5	<0.001	<0.002	0.33	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001	0.683	1.25	1.93
			6/14/2016	<0.2	110	7.2	29.9	508	6.8	<0.5	<0.001	<0.002	0.324	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001	0.156	0.386	0.386
			9/2/2016	<0.2	82.8	<5	21.5	492	7.12	<0.5	<0.001	<0.002	0.325	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001	0.603	0.947	1.55
			11/28/2016	<0.2	110	6.02	20.7	484	7.29	<0.5	<0.001	<0.002	0.317	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002(*)	<0.002	<0.005	<0.001	0.445	0.7	1.14
			2/17/2017	<0.2	90.5	3.55	15.7	484	7.49	0.418	<0.001	<0.002	0.281	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001	0.423	0.396	0.82
			5/2/2017	<0.2	107	3.7	10.6	566	7.39	0.804	<0.001	<0.002	0.328	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001	n/a	n/a	n/a
			6/19/2017	<0.2	103	<5	10.2	518	7.05	<0.5	<0.001	<0.002	0.297	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001	0.48	0.264	0.744
			7/31/2017	<0.2	105	<5	8.35	480	7.53	0.693	<0.001	<0.002	0.296	<0.001	<0.0005	<0.005	<0.0005	<0.0005	<0.05	<0.0002	<0.002	<0.005	<0.001	0.742	0.262	1

mg/L = milligrams per liter

< = not detected above the reporting limit given

Well Type

- u Upgradient/Background
- d Downgradient

Laboratory Reported Qualifiers

- (\*) LCS or LCSD is outside acceptance limits
- (F1) MS and/or MSD Recovery is outside acceptance limits.



# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-2	Date:	3/22/2016
Sample Number: MW-2	Weather Conditions: Clear, Sunny, 65°F	
OVA Readings: N/A	Wellhead Inspection (Note Conditions)	Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	21.2	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)	28.35	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	21
5.) Casing Volume (L)	4.4149	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	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)
12:45 PM	3.50	14.33	1.17	20	6.85	1.692	21.62
12:47 PM	4.00	14.33	1.15	19	6.85	1.697	21.62
12:49 PM	4.50	14.32	1.14	19	6.85	1.697	21.62

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	12:49 PM	14.32	1.14	19	6.85	1.697	21.62

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	Clear	Instrument Calibration	B. Sojka
Clarity		Prior to sampling by:	
Color		Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		



# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-13		Date: 3/22/2016
Sample Number: MW-13		Weather Conditions: Clear, Sunny, 65°F
OVA Readings: N/A		Wellhead Inspection (Note Conditions) <span style="float: right;">Compliant</span>

### Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	17.4	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	12:56 PM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	23.98	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	23
5.) Casing Volume (L)	4.0629	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)
12:17 PM	4.00	13.40	0.77	29	6.89	1.111	17.51
12:19 PM	4.50	13.41	0.77	25	6.89	1.115	17.51
12:21 PM	5.00	13.39	0.74	20	6.89	1.123	17.51

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-13	12:21 PM	13.39	0.74	20	6.89	1.123	17.51

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		Instrument Calibration	B. Sojka
Clarity	Clear	Prior to sampling by:	
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		

# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-15		Date: <span style="float: right;">3/22/2016</span>
Sample Number: MW-15		Weather Conditions: Clear, Sunny, 65°F
OVA Readings: N/A		Wellhead Inspection (Note Conditions) <span style="float: right;">Compliant</span>

## 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	1:50 PM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	13.6	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	24
5.) Casing Volume (L)	1.6672	12.) Immiscible Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.5	13.) Thickness of immiscible Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	1:52 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)
2:12 PM	3.50	13.75	0.79	6	7.09	1.478	10.99
2:14 PM	4.00	13.76	0.79	5	7.07	1.477	11.01
2:16 PM	4.50	13.73	0.79	5	7.09	1.477	11.01

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-15	2:16 PM	13.73	0.79	5	7.09	1.477	11.01

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		Instrument Calibration	B. Sojka
Clarity	Clear	Prior to sampling by:	
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		





# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-17	Date: <div style="text-align: right;">3/23/2016</div>	
Sample Number: MW-17	Weather Conditions: Clear, Sunny, 65°F	
OVA Readings: N/A	Wellhead Inspection (Note Conditions)	Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	17.19	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	9:35 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	32.2	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	20
5.) Casing Volume (L)	9.2681	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	9:38 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)
9:54 AM	3.00	13.77	2.74	11	6.61	2.032	17.28
9:56 AM	3.50	13.76	2.71	10	6.60	2.032	17.28
9:58 AM	4.00	13.77	2.69	10	6.60	2.032	17.28

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-17	9:58 AM	13.77	2.69	10	6.60	2.032	17.28

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	Cloudy	Instrument Calibration	B. Sojka
Clarity		Prior to sampling by:	
Color		Light Orange	
4.) Odor	Odorless	Unusual Occurences	
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		

# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-18	Date: 3/22/2016	
Sample Number: MW-18	Weather Conditions: Clear, Sunny, 65°F	
OVA Readings: N/A	Wellhead Inspection (Note Conditions)	Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	34.75	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	9:35 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	70.9	10.) Purge Rate (mL/min)	100
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	21
5.) Casing Volume (L)	22.3213	12.) Immiscible Layers observed?	No
6.) Actual Volume of Water Purged (L)	2.5	13.) Thickness of immiscible 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)
10:02 AM	1.50	12.30	0.80	25	6.86	0.613	34.89
10:04 AM	2.00	12.32	0.78	20	6.86	0.612	34.89
10:06 AM	2.50	12.28	0.77	18	6.86	0.612	34.89

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-18	10:06 AM	12.28	0.77	18	6.86	0.612	34.89

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	Clear	Instrument Calibration	B. Sojka
Clarity		Prior to sampling by:	
Color	Colorless	Unusual Occurrences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		



# NORTH OMAHA STATION

## Water Levels Prior to Purging

MW-2	Date of Sampling	3/22/2016	Time of Sampling	8:49 AM	Static Water Level	21.2
MW-4	Date of Sampling	3/22/2016	Time of Sampling	8:52 AM	Static Water Level	11.85
MW-5	Date of Sampling	3/22/2016	Time of Sampling	9:22 AM	Static Water Level	20.3
MW-6	Date of Sampling	3/22/2016	Time of Sampling	8:58 AM	Static Water Level	12.74
MW-7	Date of Sampling	3/22/2016	Time of Sampling	9:03 AM	Static Water Level	16.57
MW-8	Date of Sampling	3/22/2016	Time of Sampling	9:08 AM	Static Water Level	17.54
MW-9	Date of Sampling	3/22/2016	Time of Sampling	8:40 AM	Static Water Level	22.41
MW-10	Date of Sampling	3/22/2016	Time of Sampling	9:02 AM	Static Water Level	15.5
MW-11	Date of Sampling	3/22/2016	Time of Sampling	9:00 AM	Static Water Level	10.83
MW-12	Date of Sampling	3/22/2016	Time of Sampling	9:10 AM	Static Water Level	16.35
MW-13	Date of Sampling	3/22/2016	Time of Sampling	8:51 AM	Static Water Level	17.4
MW-15	Date of Sampling	3/22/2016	Time of Sampling	8:54 AM	Static Water Level	10.9
MW-16	Date of Sampling	3/22/2016	Time of Sampling	8:45 AM	Static Water Level	11.69
MW-17	Date of Sampling	3/22/2016	Time of Sampling	9:20 AM	Static Water Level	17.18
MW-18	Date of Sampling	3/22/2016	Time of Sampling	8:25 AM	Static Water Level	34.75
MW-19	Date of Sampling	3/22/2016	Time of Sampling	8:30 AM	Static Water Level	33.85
MW-20	Date of Sampling	3/22/2016	Time of Sampling	9:14 AM	Static Water Level	8.17

# Equipment Calibration Sheet

Date: 3/22/2016

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	0.1	Ntu
1.0 Primary Standard	1.0	Ntu
10.0 Primary Standard	10.10	Ntu

Comments:

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# Equipment Calibration Sheet

Date: 3/22/2016

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	7.05 to 7.00	22.43°	N/A
pH 4	4.09 to 4.01	22.31°	N/A
pH 10	10.05 to 10.0	22.28°	N/A
Conductivity	0.972 to 1.00	22.11°	µS
DO (Start)	99.8% Saturation 8.15 mg/L	21.74°	mg/L
DO (Cal)	98.1% Saturation 8.42 mg/L	21.83°	mg/L

Comments: pH probe was replaced in January 2015. YSI received maintenance and recalibration in Nov 2015.

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# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-2	6/14/2016	
Sample Number: MW-2	Weather Conditions: Clear, Sunny, 95°F	
OVA Readings: N/A	Wellhead Inspection (Note Conditions)	Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	21.65	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:55 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	28.35	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	16
5.) Casing Volume (L)	4.1370	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	4	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	10:56 AM

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

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
11:08 AM	3.00	16.44	0.82	16	6.80	1.601	21.72
11:10 AM	3.50	16.37	0.75	15	6.80	1.599	21.72
11:12 AM	4.00	16.32	0.75	11	6.80	1.593	21.72

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	11:12 AM	16.32	0.75	11	6.80	1.593	21.72

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	Clear	Instrument Calibration	B. Sojka
Clarity		Prior to sampling by:	
Color	Colorless	Unusual Occurrences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		

# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-9		Date: 6/14/2016
Sample Number: MW-9		Weather Conditions: Clear, Sunny, 95°F
OVA Readings: N/A		Wellhead Inspection (Note Conditions) <span style="float:right">Compliant</span>

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	22.09	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)	57.65	10.) Purge Rate (mL/min)	150
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	23
5.) Casing Volume (L)	21.9570	12.) Immiscible Layers observed?	No
6.) Actual Volume of Water Purged (L)	3	13.) Thickness of immiscible Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	9:59 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)
10:20 AM	2.00	14.26	0.23	22	6.79	1.070	22.05
10:22 AM	2.50	14.24	0.24	20	6.78	1.072	22.05
10:24 AM	3.00	14.22	0.24	18	6.78	1.073	22.05

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-9	10:24 AM	14.22	0.24	18	6.78	1.073	22.05

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 Clarity	Clear	Instrument Calibration Prior to sampling by:	B. Sojka
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		



# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-13	Date: <span style="float: right;">6/14/2016</span>	
Sample Number: MW-13	Weather Conditions: Clear, Sunny, 95°F	
OVA Readings: N/A	Wellhead Inspection (Note Conditions)	Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	17.4	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	11:16 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	23.98	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	17
5.) Casing Volume (L)	4.0629	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	4	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	11:18 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)
11:29 AM	2.50	15.04	0.35	25	6.72	0.925	17.44
11:31 AM	3.00	15.11	0.33	21	6.73	0.924	17.45
11:33 AM	3.50	15.17	0.34	19	6.72	0.923	17.46
11:35 AM	4.00	15.19	0.29	17	6.70	0.923	17.46

Well Evacuated to Dryness? No Time to recharge? \_\_\_\_\_

## Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-13	11:35 AM	15.19	0.29	17	6.70	0.923	17.46

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	Clear	Instrument Calibration	B. Sojka
Clarity		Prior to sampling by:	
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		



# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)	
Monitoring Well Identification Number: MW-16	Date: <p style="text-align: right;">6/14/2016</p>		
Sample Number: MW-16	Weather Conditions: Clear, Sunny, 95°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	10:34 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	24.51	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	15
5.) Casing Volume (L)	8.4037	12.) Immiscible Layers observed?	No
6.) Actual Volume of Water Purged (L)	4	13.) Thickness of immiscible Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	10:35 AM

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

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
10:46 AM	3.00	14.09	0.47	4	6.67	0.995	10.95
10:48 AM	3.50	14.25	0.44	4	6.69	0.997	10.95
10:50 AM	4.00	14.31	0.42	4	6.67	0.949	10.95

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-16	10:50 AM	14.31	0.42	4	6.67	0.949	10.95

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	Clear	Instrument Calibration	B. Sojka
Clarity		Prior to sampling by:	
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		







# NORTH OMAHA STATION

## Water Levels Prior to Purging

MW-2	Date of Sampling	6/14/2016	Time of Sampling	8:21 AM	Static Water Level	21.65
MW-4	Date of Sampling	6/14/2016	Time of Sampling	8:27 AM	Static Water Level	11.19
MW-5	Date of Sampling	6/14/2016	Time of Sampling	8:50 AM	Static Water Level	19.15
MW-6	Date of Sampling	6/14/2016	Time of Sampling	8:30 AM	Static Water Level	12.05
MW-7	Date of Sampling	6/14/2016	Time of Sampling	8:33 AM	Static Water Level	15.7
MW-8	Date of Sampling	6/14/2016	Time of Sampling	8:38 AM	Static Water Level	16
MW-9	Date of Sampling	6/14/2016	Time of Sampling	8:15 AM	Static Water Level	22.10
MW-10	Date of Sampling	6/14/2016	Time of Sampling	8:34 AM	Static Water Level	14.5
MW-11	Date of Sampling	6/14/2016	Time of Sampling	8:31 AM	Static Water Level	10.05
MW-12	Date of Sampling	6/14/2016	Time of Sampling	8:36 AM	Static Water Level	14.55
MW-13	Date of Sampling	6/14/2016	Time of Sampling	8:23 AM	Static Water Level	17.4
MW-15	Date of Sampling	6/14/2016	Time of Sampling	8:26 AM	Static Water Level	10.4
MW-16	Date of Sampling	6/14/2016	Time of Sampling	8:20 AM	Static Water Level	10.9
MW-17	Date of Sampling	6/14/2016	Time of Sampling	8:45 AM	Static Water Level	16.10
MW-18	Date of Sampling	6/14/2016	Time of Sampling	8:05 AM	Static Water Level	33.92
MW-19	Date of Sampling	6/14/2016	Time of Sampling	8:08 AM	Static Water Level	33.40
MW-20	Date of Sampling	6/14/2016	Time of Sampling	8:40 AM	Static Water Level	7.60

# Equipment Calibration Sheet

Date: 6/14/2016

Time: 7:30 AM

Person Calibrating Instrument: Brad Sojka

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

Parameter:	Reading	Units
<0.1 Primary Standard	0.2	Ntu
1.0 Primary Standard	1.1	Ntu
10.0 Primary Standard	10.08	Ntu

Comments:

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# Equipment Calibration Sheet

Date: 6/14/2016

Time: 7:20 AM

Person Calibrating Instrument: Brad Sojka

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

Parameter:	Reading	Temp	Units
pH 7	7.10 to 7.00	22.40°	N/A
pH 4	4.20 to 4.01	22.18°	N/A
pH 10	9.89 to 10.0	22.11°	N/A
Conductivity	0.952 to 1.00	22.04°	µS
DO (Start)	99.8% Saturation 8.21 mg/L	21.89°	mg/L
DO (Cal)	98.1% Saturation 8.50 mg/L	21.75°	mg/L

Comments: pH probe was replaced in January 2015. YSI received maintenance and recalibration in Nov 2015.

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# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-2	Date: <div style="text-align: right;">9/2/2016</div>	
Sample Number: MW-2	Weather Conditions: Clear, Sunny, 70°F	
OVA Readings: N/A	Wellhead Inspection (Note Conditions)	Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	22.9	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:59 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	28.35	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:15
5.) Casing Volume (L)	3.3652	12.) Immiscible Layers observed?	No
6.) Actual Volume of Water Purged (L)	3.00	13.) Thickness of immiscible Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	11:01 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)
11:12 AM	2.00	17.80	1.32	9	7.01	1.579	23.00
11:14 AM	2.50	17.86	1.30	9	7.04	1.570	23.00
11:16 AM	3.00	17.89	1.29	8	7.04	1.570	23.00

Well Evacuated to Dryness?                                 No                                 Time to recharge?                                                                                         

## Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-2	11:16 AM	17.89	1.29	8.00	7.04	1.570	23.00

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

# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-9	Date:	9/2/2016
Sample Number: MW-9	Weather Conditions: Clear, Sunny, 70°F	
OVA Readings: N/A	Wellhead Inspection (Note Conditions)	Compliant

### Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	24.7	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	9:55 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	57.65	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:15
5.) Casing Volume (L)	20.3454	12.) Immiscible Layers observed?	No
6.) Actual Volume of Water Purged (L)	3.00	13.) Thickness of immiscible Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	9:57 AM

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

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
10:08 AM	2.00	13.25	0.30	8	7.30	1.139	24.74
10:10 AM	2.50	13.23	0.30	8	7.26	1.135	24.76
10:12 AM	3.00	13.20	0.28	6	7.27	1.130	24.76

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-9	10:12 AM	13.20	0.28	6.00	7.27	1.130	24.76

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	Clear	Instrument Calibration	B. Sojka
Clarity		Prior to sampling by:	
Color	Colorless	Unusual Occurrences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		



# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-15	Date:	9/2/2016
Sample Number: MW-15	Weather Conditions: Clear, Sunny, 70°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	12:02 PM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	13.6	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:15
5.) Casing Volume (L)	1.6672	12.) Immiscible Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.00	13.) Thickness of immiscible Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	12:03 PM

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

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
12:14 PM	3.00	17.21	0.90	5	6.99	1.304	10.93
12:16 PM	3.50	17.18	0.89	5	6.97	1.304	10.93
12:18 PM	4.00	17.20	0.91	5	6.97	1.304	10.93

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-15	12:18 PM	17.20	0.91	5.00	6.97	1.304	10.93

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	Clear	Instrument Calibration	B. Sojka
Clarity		Prior to sampling by:	
Color		Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		

# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-16	Date: <p style="text-align: right;">9/2/2016</p>	
Sample Number: MW-16	Weather Conditions: Clear, Sunny, 70°F	
OVA Readings: N/A	Wellhead Inspection (Note Conditions)	Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	12.3	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:26 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	24.51	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:16
5.) Casing Volume (L)	7.5392	12.) Immiscible Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.00	13.) Thickness of immiscible Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	10:27 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)
10:37 AM	2.50	14.75	0.82	14	7.21	1.046	12.35
10:39 AM	3.00	14.79	0.80	12	7.20	1.044	12.35
10:41 AM	3.50	14.82	0.79	9	7.19	1.043	12.35
10:43 AM	4.00	14.84	0.78	9	7.18	1.043	12.35

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-16	10:43 AM	14.84	0.78	9.00	7.18	1.043	12.35
DUP	10:45 AM	14.84	0.78	9.00	7.18	1.04	12.35

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	Clear	Instrument Calibration	B. Sojka
Clarity		Prior to sampling by:	
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		

# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)	
Monitoring Well Identification Number: MW-17	Date:		9/2/2016
Sample Number: MW-17	Weather Conditions: Clear, Sunny, 70°F		
OVA Readings: N/A	Wellhead Inspection (Note Conditions)		Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	17.5	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	12:36 PM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	32.2	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:18
5.) Casing Volume (L)	9.0767	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.00	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	12:37 PM

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

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
12:51 PM	3.00	17.62	1.35	12	7.04	0.052	17.57
12:53 PM	3.50	17.57	1.30	7	7.00	0.048	17.57
12:55 PM	4.00	17.50	1.27	5	6.98	0.047	17.57

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-17	12:55 PM	17.50	1.27	5.00	6.98	0.047	17.57

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

# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)	
Monitoring Well Identification Number: MW-18	Date:		9/2/2016
Sample Number: MW-18	Weather Conditions: Clear, Sunny, 70°F		
OVA Readings: N/A	Wellhead Inspection (Note Conditions)		Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	35.5	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	8:39 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	70.9	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:15
5.) Casing Volume (L)	21.8582	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	3.00	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	8:40 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)
8:51 AM	2.00	13.52	0.65	7	7.27	0.547	35.72
8:53 AM	2.50	13.49	0.60	7	7.21	0.546	35.72
8:55 AM	3.00	13.40	0.59	7	7.20	0.544	35.72

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-18	8:55 AM	13.40	0.59	7.00	7.20	0.544	35.72

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	Clear	Instrument Calibration	B. Sojka
Clarity		Prior to sampling by:	
Color		Unusual Occurences	
4.) Odor	Odorless	Well Cap Missing / Damage to one connection port.	
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		



# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-19	Date:	9/2/2016
Sample Number: MW-19	Weather Conditions:	Clear, Sunny, 70°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions)	Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	34.95	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	9:16 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	76.7	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:16
5.) Casing Volume (L)	25.7791	12.) Immiscolable Layers observed?	No
6.) Actual Volume of Water Purged (L)	3.50	13.) Thickness of immiscolable Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	9:18 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)
9:28 AM	2.00	13.91	0.56	10	7.19	0.547	35.00
9:30 AM	2.50	13.88	0.55	8	7.15	0.547	35.01
9:32 AM	3.00	13.85	0.55	5	7.12	0.546	35.00
9:34 AM	3.50	13.87	0.53	5	7.12	0.546	35.00

Well Evacuated to Dryness? No Time to recharge?

## Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-19	9:34 AM	13.87	0.53	5.00	7.12	0.546	35.00

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

# NORTH OMAHA STATION

## Water Levels Prior to Purging

MW-2	Date of Sampling	9/2/2016	Time of Sampling	8:08 AM	Static Water Level	22.9
MW-4	Date of Sampling	9/2/2016	Time of Sampling	8:16 AM	Static Water Level	12.2
MW-5	Date of Sampling	9/2/2016	Time of Sampling	8:32 AM	Static Water Level	20.5
MW-6	Date of Sampling	9/2/2016	Time of Sampling	8:20 AM	Static Water Level	13.3
MW-7	Date of Sampling	9/2/2016	Time of Sampling	8:13 AM	Static Water Level	17.21
MW-8	Date of Sampling	9/2/2016	Time of Sampling	8:28 AM	Static Water Level	17.48
MW-9	Date of Sampling	9/2/2016	Time of Sampling	8:06 AM	Static Water Level	24.70
MW-10	Date of Sampling	9/2/2016	Time of Sampling	8:22 AM	Static Water Level	16.04
MW-11	Date of Sampling	9/2/2016	Time of Sampling	8:24 AM	Static Water Level	11.3
MW-12	Date of Sampling	9/2/2016	Time of Sampling	8:26 AM	Static Water Level	15.6
MW-13	Date of Sampling	9/2/2016	Time of Sampling	8:10 AM	Static Water Level	22.5
MW-15	Date of Sampling	9/2/2016	Time of Sampling	8:15 AM	Static Water Level	10.9
MW-16	Date of Sampling	9/2/2016	Time of Sampling	8:07 AM	Static Water Level	12.3
MW-17	Date of Sampling	9/2/2016	Time of Sampling	8:30 AM	Static Water Level	17.50
MW-18	Date of Sampling	9/2/2016	Time of Sampling	8:04 AM	Static Water Level	35.50
MW-19	Date of Sampling	9/2/2016	Time of Sampling	8:02 AM	Static Water Level	34.95
MW-20	Date of Sampling	9/2/2016	Time of Sampling	8:18 AM	Static Water Level	8.35

# Equipment Calibration Sheet

Date: 9/2/2016

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	0.12	Ntu
1.0 Primary Standard	1.03	Ntu
<10.0 Primary Standard	10.04	Ntu

Comments:

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# Equipment Calibration Sheet

Date: 9/2/2016

Time: 7:20 AM

Person Calibrating Instrument: Brad Sojka

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

Parameter:	Reading		Temp	Units
pH 7	7.05	to 7.01	22.50°C	N/A
pH 4	4.03	to 4.01	22.36°C	N/A
pH 10	10.06	to 10.02	22.40°C	N/A
Conductivity	0.98	to 1.001	22.30°C	µS
DO (Start)	99.8% Saturation	9.38mg/L	21.47°C	mg/L
DO (Cal)	99.4% Saturation	9.08mg/L	21.50°C	mg/L

Comments:

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# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-13	Date: <div style="text-align: right;">11/28/2016</div>	
Sample Number: MW-13	Weather Conditions: Clear, Sunny, 40°F	
OVA Readings: N/A	Wellhead Inspection (Note Conditions)	Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	18.2	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	12:23 PM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	23.98	10.) Purge Rate (mL/min)	300
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	15
5.) Casing Volume (L)	3.5689	12.) Immiscible Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.5	13.) Thickness of immiscible Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	12:24 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)
12:35 PM	3.50	14.16	0.43	12	7.26	1.088	18.30
12:37 PM	4.00	14.11	0.46	10	7.23	1.088	18.30
12:39 PM	4.50	14.08	0.49	10	7.25	1.088	18.30

Well Evacuated to Dryness?                         No                             Time to recharge?                         

## Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-13	12:39 PM	14.08	0.49	10	7.25	1.088	18.30

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	Clear	Instrument Calibration	B. Sojka
Clarity		Prior to sampling by:	
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		





# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-16	Date:	11/28/2016
Sample Number: MW-16	Weather Conditions: Clear, Sunny, 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	10:55 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	24.51	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	16
5.) Casing Volume (L)	7.6627	12.) Immiscible Layers observed?	No
6.) Actual Volume of Water Purged (L)	4	13.) Thickness of immiscible Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	10:56 AM

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

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
11:08 AM	3.00	13.62	0.33	5	7.11	1.007	12.25
11:10 AM	3.50	13.68	0.32	5	7.12	1.007	12.25
11:12 AM	4.00	13.72	0.30	4	7.11	1.007	12.25

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-16	11:12 AM	13.72	0.30	4	7.11	1.007	12.25

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	Clear	Instrument Calibration	B. Sojka
Clarity		Prior to sampling by:	
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		

# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-17	Date: 11/29/2016	
Sample Number: MW-17	Weather Conditions: Clear, Sunny, 40°F	
OVA Readings: N/A	Wellhead Inspection (Note Conditions)	Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	17.5	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	8:56 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	32.2	10.) Purge Rate (mL/min)	150
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	21
5.) Casing Volume (L)	9.0767	12.) Immiscible Layers observed?	No
6.) Actual Volume of Water Purged (L)	3.5	13.) Thickness of immiscible Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	8:58 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)
9:15 AM	2.50	12.73	0.96	10	6.78	1.813	17.70
9:17 AM	3.00	12.75	0.94	10	6.78	1.812	17.70
9:19 AM	3.50	12.79	0.90	9	6.76	1.812	17.70

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-17	9:19 AM	12.79	0.90	9	6.76	1.812	17.70

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		Instrument Calibration	B. Sojka
Clarity	Cloudy	Prior to sampling by:	
Color	Light Orange	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		

# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)	
Monitoring Well Identification Number: MW-18	Date:	11/28/2016	
Sample Number: MW-18	Weather Conditions: Clear, Sunny, 40°F		
OVA Readings: N/A	Wellhead Inspection (Note Conditions)		Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	35.35	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)	70.9	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	15
5.) Casing Volume (L)	21.9508	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	8:42 AM

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

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
8:53 AM	2.50	11.39	0.94	12	7.48	0.518	35.62
8:55 AM	3.00	11.37	0.93	11	7.47	0.518	35.61
8:57 AM	3.50	11.35	0.94	9	7.47	0.518	35.61

Well Evacuated to Dryness?                                 No                                 Time to recharge?                                 

## Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-18	8:57 AM	11.35	0.94	9	7.47	0.518	35.61

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	Clear	Instrument Calibration	B. Sojka
Clarity		Prior to sampling by:	
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		

# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)	
Monitoring Well Identification Number: MW-19	Date:	11/28/2016	
Sample Number: MW-19	Weather Conditions: Clear, Sunny, 40°F		
OVA Readings: N/A	Wellhead Inspection (Note Conditions)		Compliant

### Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	34.9	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	9:20 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	76.7	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	16
5.) Casing Volume (L)	25.8100	12.) Immiscolable Layers observed?	No
6.) Actual Volume of Water Purged (L)	3	13.) Thickness of immiscolable Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	9:21 AM

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

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
9:33 AM	2.00	11.55	0.50	7	7.29	0.517	35.00
9:35 AM	2.50	11.56	0.48	7	7.29	0.517	35.00
9:37 AM	3.00	11.58	0.47	7	7.29	0.517	35.00

Well Evacuated to Dryness? No Time to recharge?

### Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-19	9:37 AM	11.58	0.47	7	7.29	0.517	35.00

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

# NORTH OMAHA STATION

## Water Levels Prior to Purging

MW-2	Date of Sampling	11/28/2016	Time of Sampling	8:12 AM	Static Water Level	22.06
MW-4	Date of Sampling	11/28/2016	Time of Sampling	8:08 AM	Static Water Level	12.3
MW-5	Date of Sampling	11/28/2016	Time of Sampling	8:28 AM	Static Water Level	20.55
MW-6	Date of Sampling	11/28/2016	Time of Sampling	8:16 AM	Static Water Level	13.48
MW-7	Date of Sampling	11/28/2016	Time of Sampling	8:20 AM	Static Water Level	17.8
MW-8	Date of Sampling	11/28/2016	Time of Sampling	8:22 AM	Static Water Level	18.18
MW-9	Date of Sampling	11/28/2016	Time of Sampling	8:04 AM	Static Water Level	24.65
MW-10	Date of Sampling	11/28/2016	Time of Sampling	8:19 AM	Static Water Level	16.8
MW-11	Date of Sampling	11/28/2016	Time of Sampling	8:17 AM	Static Water Level	12.2
MW-12	Date of Sampling	11/28/2016	Time of Sampling	8:24 AM	Static Water Level	17.25
MW-13	Date of Sampling	11/28/2016	Time of Sampling	8:14 AM	Static Water Level	18.2
MW-15	Date of Sampling	11/28/2016	Time of Sampling	8:07 AM	Static Water Level	11.3
MW-16	Date of Sampling	11/28/2016	Time of Sampling	8:10 AM	Static Water Level	12.1
MW-17	Date of Sampling	11/28/2016	Time of Sampling	8:26 AM	Static Water Level	17.51
MW-18	Date of Sampling	11/28/2016	Time of Sampling	8:02 AM	Static Water Level	35.35
MW-19	Date of Sampling	11/28/2016	Time of Sampling	8:00 AM	Static Water Level	34.91
MW-20	Date of Sampling	11/28/2016	Time of Sampling	8:30 AM	Static Water Level	9.00

# Equipment Calibration Sheet

Date: 11/28/2016

Time: 7:30 AM

Person Calibrating Instrument: Brad Sojka

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

Parameter:	Reading	Units
<0.1 Primary Standard	0.12	Ntu
1.0 Primary Standard	1.0	Ntu
10.0 Primary Standard	10.01	Ntu

Comments:

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# Equipment Calibration Sheet

Date: 11/28/2016

Time: 7:40 AM

Person Calibrating Instrument: Brad Sojka

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

Parameter:	Reading	Temp	Units
pH 7	7.08 to 7.00	21.70°	N/A
pH 4	4.08 to 4.01	21.54°	N/A
pH 10	10.05 to 10.0	21.62°	N/A
Conductivity	0.987 to 1.00	20.97°	µS
DO (Start)	98.9% Saturation 9.76 mg/L	21.20°	mg/L
DO (Cal)	96.7% Saturation 8.61 mg/L	21.16°	mg/L

Comments: pH probe was replaced in August 2016.

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# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)	
Monitoring Well Identification Number: MW-2	Date: <div style="text-align: right;">2/17/2017</div>		
Sample Number: MW-2	Weather Conditions: Cloudy, Cold, 35°F		
OVA Readings: N/A	Wellhead Inspection (Note Conditions)		Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	22.45	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:15 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	28.35	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:18
5.) Casing Volume (L)	3.6430	12.) Immiscible Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.00	13.) Thickness of immiscible Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	10:16 AM

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

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
10:30 AM	3.00	14.46	0.65	11	7.82	1.717	22.61
10:32 AM	3.50	14.35	0.63	8	7.79	1.718	22.63
10:34 AM	4.00	14.40	0.60	8	7.79	1.719	22.65

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-2	10:34 AM	14.40	0.60	8.00	7.79	1.719	22.65

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	Clear	Instrument Calibration	B. Sojka
Clarity		Prior to sampling by:	
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		





# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)	
Monitoring Well Identification Number: MW-13	Date: <p style="text-align: right;">2/17/2017</p>		
Sample Number: MW-13	Weather Conditions: Cloudy, Cold, 35°F		
OVA Readings: N/A	Wellhead Inspection (Note Conditions)		Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	18.8	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:45 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	23.98	10.) Purge Rate (mL/min)	350
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:16
5.) Casing Volume (L)	3.1985	12.) Immiscible Layers observed?	No
6.) Actual Volume of Water Purged (L)	5.50	13.) Thickness of immiscible Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	10:46 AM

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

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
10:58 AM	4.00	14.09	0.30	9	7.42	1.108	18.96
11:00 AM	4.50	14.02	0.28	9	7.42	1.107	18.97
11:02 AM	5.50	13.97	0.27	9	7.44	1.107	18.99

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-13	11:02 AM	13.97	0.27	9.00	7.44	1.107	18.99
DUP	11:04 AM	13.97	0.27	9.00	7.44	1.11	18.99

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	Clear	Instrument Calibration	B. Sojka
Clarity		Prior to sampling by:	
Color	Colorless	Unusual Occurrences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		

# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)	
Monitoring Well Identification Number: MW-15	Date: 2/17/2017		
Sample Number: MW-15	Weather Conditions: Cloudy, Cold, 35°F		
OVA Readings: N/A	Wellhead Inspection (Note Conditions)		Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	11.65	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	11:27 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	13.6	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:17
5.) Casing Volume (L)	1.2041	12.) Immiscible Layers observed?	No
6.) Actual Volume of Water Purged (L)	3.50	13.) Thickness of immiscible Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	11:29 AM

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

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
11:42 AM	2.50	14.28	1.51	5	7.68	1.279	11.83
11:44 AM	3.00	14.30	1.45	5	7.69	1.272	11.80
11:46 AM	3.50	14.33	1.39	5	7.65	1.280	11.79

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-15	11:46 AM	14.33	1.39	5.00	7.65	1.280	11.79

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	Clear	Instrument Calibration	B. Sojka
Clarity		Prior to sampling by:	
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		

# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-16	Date: <div style="text-align: right;">2/17/2017</div>	
Sample Number: MW-16	Weather Conditions: Cloudy, Cold, 35°F	
OVA Readings: N/A	Wellhead Inspection (Note Conditions)	Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	13.1	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	9:48 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	24.51	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:16
5.) Casing Volume (L)	7.0453	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	9:50 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)
10:02 AM	3.00	13.28	0.77	7	7.50	1.003	13.22
10:04 AM	3.50	13.29	0.79	7	7.48	1.003	13.25
10:06 AM	4.00	13.31	0.81	5	7.51	1.003	13.26

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-16	10:06 AM	13.31	0.81	5.00	7.51	1.003	13.26

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	Clear	Instrument Calibration	B. Sojka
Clarity		Prior to sampling by:	
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		

# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-17	Date: 2/17/2017	
Sample Number: MW-17	Weather Conditions: Cloudy, Cold, 35°F	
OVA Readings: N/A	Wellhead Inspection (Note Conditions)	Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	18.25	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	12:04 PM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	32.2	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:17
5.) Casing Volume (L)	8.6136	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	12:05 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)
12:18 PM	3.00	15.82	1.41	11	7.35	1.925	18.50
12:20 PM	3.50	15.55	1.35	10	7.30	1.924	18.48
12:22 PM	4.00	15.71	1.32	8	7.31	1.924	18.48

Well Evacuated to Dryness? No      Time to recharge? \_\_\_\_\_

## Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-17	12:22 PM	15.71	1.32	8.00	7.31	1.924	18.48

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	Cloudy	Instrument Calibration	B. Sojka
Clarity		Prior to sampling by:	
Color	Light Orange	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		

# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-18	Date:	2/17/2017
Sample Number: MW-18	Weather Conditions: Cloudy, Cold, 35°F	
OVA Readings: N/A	Wellhead Inspection (Note Conditions)	Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	35.95	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)	70.9	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:16
5.) Casing Volume (L)	21.5804	12.) Immiscible Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.00	13.) Thickness of immiscible Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	8:18 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)
8:30 AM	3.00	10.50	0.78	12	7.70	0.505	36.10
8:32 AM	3.50	10.52	0.78	12	7.70	0.506	36.08
8:34 AM	4.00	10.56	0.77	12	7.70	0.505	36.08

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-18	8:34 AM	10.56	0.77	12.00	7.70	0.505	36.08

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	Clear	Instrument Calibration	B. Sojka
Clarity		Prior to sampling by:	
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		

# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)	
Monitoring Well Identification Number: MW-19	Date: <span style="float: right;">2/17/2017</span>		
Sample Number: MW-19	Weather Conditions: Cloudy, Cold, 35°F		
OVA Readings: N/A	Wellhead Inspection (Note Conditions)		Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	35.3	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	8:45 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	76.7	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:18
5.) Casing Volume (L)	25.5630	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	8:46 AM

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

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
9:00 AM	3.00	11.14	0.70	8	7.48	0.504	35.41
9:02 AM	3.50	11.10	0.68	7	7.49	0.504	35.43
9:04 AM	4.00	11.08	0.65	7	7.49	0.504	35.43

Well Evacuated to Dryness?                         No                         Time to recharge?                         

## Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-19	9:04 AM	11.08	0.65	7.00	7.49	0.504	35.43

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

# NORTH OMAHA STATION

## Water Levels Prior to Purging

MW-2	Date of Sampling	2/17/2017	Time of Sampling	7:44 AM	Static Water Level	22.45
MW-4	Date of Sampling	2/17/2017	Time of Sampling	7:32 AM	Static Water Level	12.9
MW-5	Date of Sampling	2/17/2017	Time of Sampling	7:51 AM	Static Water Level	20.73
MW-6	Date of Sampling	2/17/2017	Time of Sampling	7:34 AM	Static Water Level	13.89
MW-7	Date of Sampling	2/17/2017	Time of Sampling	7:42 AM	Static Water Level	18.3
MW-8	Date of Sampling	2/17/2017	Time of Sampling	7:29 AM	Static Water Level	18.67
MW-9	Date of Sampling	2/17/2017	Time of Sampling	7:24 AM	Static Water Level	24.70
MW-10	Date of Sampling	2/17/2017	Time of Sampling	7:37 AM	Static Water Level	16.99
MW-11	Date of Sampling	2/17/2017	Time of Sampling	7:35 AM	Static Water Level	12.54
MW-12	Date of Sampling	2/17/2017	Time of Sampling	7:38 AM	Static Water Level	17.71
MW-13	Date of Sampling	2/17/2017	Time of Sampling	7:46 AM	Static Water Level	18.8
MW-15	Date of Sampling	2/17/2017	Time of Sampling	7:31 AM	Static Water Level	11.65
MW-16	Date of Sampling	2/17/2017	Time of Sampling	7:40 AM	Static Water Level	13.1
MW-17	Date of Sampling	2/17/2017	Time of Sampling	7:48 AM	Static Water Level	18.25
MW-18	Date of Sampling	2/17/2017	Time of Sampling	7:20 AM	Static Water Level	35.95
MW-19	Date of Sampling	2/17/2017	Time of Sampling	7:22 AM	Static Water Level	35.30
MW-20	Date of Sampling	2/17/2017	Time of Sampling	7:27 AM	Static Water Level	9.41



# Equipment Calibration Sheet

Date: 2/17/2017

Time: 7:20 AM

Person Calibrating Instrument: Brad Sojka

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

Parameter:	Reading	Units
<0.1 Primary Standard	0.11	Ntu
1.0 Primary Standard	1.02	Ntu
<10.0 Primary Standard	10.03	Ntu

Comments:

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# Equipment Calibration Sheet

Date: 2/17/2017

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 7.01	22.28°C	N/A
pH 4	4.04	to 4.01	22.22°C	N/A
pH 10	10.08	to 10.02	22.30°C	N/A
Conductivity	0.98	to 1.001	22.32°C	µS
DO (Start)	99.6% Saturation	9.25mg/L	21.52°C	mg/L
DO (Cal)	99.2% Saturation	9.10mg/L	21.60°C	mg/L

Comments:

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# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-9	Date:	5/2/2017
Sample Number: MW-9	Weather Conditions:	Clear, Sunny, 75°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions)	Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	23.7	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)	57.65	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	16
5.) Casing Volume (L)	20.9629	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	3	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	9:43 AM

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

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
9:55 AM	2.00	12.36	0.80	20	7.21	0.833	23.98
9:57 AM	2.50	12.30	0.78	18	7.30	0.835	23.97
9:59 AM	3.00	12.35	0.75	16	7.35	0.836	23.98

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-9	9:59 AM	12.35	0.75	16	7.35	0.836	23.98

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	Clear	Instrument Calibration	B. Sojka
Clarity	Colorless	Prior to sampling by:	
4.) Odor	Odorless	Unusual Occurences	
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		

# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-13	Date: 5/2/2017	
Sample Number: MW-13	Weather Conditions: Clear, Sunny, 75°F	
OVA Readings: N/A	Wellhead Inspection (Note Conditions)	Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	18.4	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	11:10 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	23.98	10.) Purge Rate (mL/min)	400
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	12
5.) Casing Volume (L)	3.4454	12.) Immiscible Layers observed?	No
6.) Actual Volume of Water Purged (L)	5	13.) Thickness of immiscible Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	11:12 AM

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

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
11:20 AM	4.00	13.30	0.23	20	7.33	0.850	18.62
11:22 AM	4.50	13.33	0.23	18	7.30	0.850	18.62
11:24 AM	5.00	13.39	0.23	18	7.30	0.854	18.62

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	11:24 AM	13.39	0.23	18	7.30	0.854	18.62
DUP	11:30 AM	13.39	0.23	18	7.30	0.854	18.62

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	Clear	Instrument Calibration	B. Sojka
Clarity		Prior to sampling by:	
Color	Colorless	Unusual Occurrences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		

# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-15	Date: 5/2/2017	
Sample Number: MW-15	Weather Conditions: Clear, Sunny, 75°F	
OVA Readings: N/A	Wellhead Inspection (Note Conditions)	Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	10.45	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	12:22 PM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	13.6	10.) Purge Rate (mL/min)	350
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	15
5.) Casing Volume (L)	1.9450	12.) Immiscible Layers observed?	No
6.) Actual Volume of Water Purged (L)	5	13.) Thickness of immiscible Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	12:23 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)
12:34 PM	4.00	13.12	1.14	5	7.01	1.121	10.66
12:36 PM	4.50	13.16	1.12	5	6.99	1.129	10.67
12:38 PM	5.00	13.18	1.09	5	7.02	1.132	10.67

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-15	12:38 PM	13.18	1.09	5	7.02	1.132	10.67

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	Clear	Instrument Calibration	B. Sojka
Clarity		Prior to sampling by:	
Color	Colorless	Unusual Occurrences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		

# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)	
Monitoring Well Identification Number: MW-16	Date:		5/2/2017
Sample Number: MW-16	Weather Conditions: Clear, Sunny, 75°F		
OVA Readings: N/A	Wellhead Inspection (Note Conditions)		Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	12.25	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)	24.51	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	15
5.) Casing Volume (L)	7.5701	12.) Immiscible Layers observed?	No
6.) Actual Volume of Water Purged (L)	3	13.) Thickness of immiscible Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	10:21 AM

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

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
10:32 AM	2.00	13.79	1.10	8	7.31	1.017	12.42
10:34 AM	2.50	13.80	1.02	7	7.27	1.019	12.45
10:36 AM	3.00	13.82	0.99	5	7.26	1.021	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-16	10:36 AM	13.82	0.99	5	7.26	1.021	12.45

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	Clear	Instrument Calibration	B. Sojka
Clarity		Prior to sampling by:	
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		

# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-17	Date:	5/2/2017
Sample Number: MW-17	Weather Conditions: Clear, Sunny, 75°F	
OVA Readings: N/A	Wellhead Inspection (Note Conditions)	Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	17.1	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	2:14 PM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	32.2	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	24
5.) Casing Volume (L)	9.3237	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	2:15 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)
2:35 PM	5.00	15.25	0.33	20	7.51	1.903	17.30
2:37 PM	5.50	15.29	0.32	14	7.48	1.908	17.30
2:39 PM	6.00	15.33	0.32	10	7.47	1.907	17.30

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-17	2:39 PM	15.33	0.32	10	7.47	1.907	17.30

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



# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-18	Date: <span style="float: right;">5/2/2017</span>	
Sample Number: MW-18	Weather Conditions: Clear, Sunny, 75°F	
OVA Readings: N/A	Wellhead Inspection (Note Conditions)	Compliant

### Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	34.8	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	8:35 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	70.9	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	16
5.) Casing Volume (L)	22.2904	12.) Immiscible Layers observed?	No
6.) Actual Volume of Water Purged (L)	3.5	13.) Thickness of immiscible Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	8:36 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)
8:48 AM	2.50	11.41	0.66	7	7.30	0.517	35.02
8:50 AM	3.00	11.38	0.64	5	7.28	0.521	35.05
8:52 AM	3.50	11.40	0.64	5	7.27	0.529	35.05

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-18	8:52 AM	11.40	0.64	5	7.27	0.529	35.05

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	Clear	Instrument Calibration	B. Sojka
Clarity		Prior to sampling by:	
Color		Colorless	
4.) Odor	Odorless	Unusual Occurences	
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		



# NORTH OMAHA STATION

## Water Levels Prior to Purging

MW-2	Date of Sampling	5/2/2017	Time of Sampling	7:51 AM	Static Water Level	22
MW-4	Date of Sampling	5/2/2017	Time of Sampling	7:56 AM	Static Water Level	12.35
MW-5	Date of Sampling	5/2/2017	Time of Sampling	8:12 AM	Static Water Level	20.25
MW-6	Date of Sampling	5/2/2017	Time of Sampling	8:00 AM	Static Water Level	13.4
MW-7	Date of Sampling	5/2/2017	Time of Sampling	8:07 AM	Static Water Level	16.69
MW-8	Date of Sampling	5/2/2017	Time of Sampling	8:06 AM	Static Water Level	11.32
MW-9	Date of Sampling	5/2/2017	Time of Sampling	7:44 AM	Static Water Level	23.71
MW-10	Date of Sampling	5/2/2017	Time of Sampling	8:03 AM	Static Water Level	15.55
MW-11	Date of Sampling	5/2/2017	Time of Sampling	8:01 AM	Static Water Level	12.45
MW-12	Date of Sampling	5/2/2017	Time of Sampling	8:04 AM	Static Water Level	9.39
MW-13	Date of Sampling	5/2/2017	Time of Sampling	7:53 AM	Static Water Level	18.41
MW-15	Date of Sampling	5/2/2017	Time of Sampling	7:55 AM	Static Water Level	10.45
MW-16	Date of Sampling	5/2/2017	Time of Sampling	7:49 AM	Static Water Level	12.25
MW-17	Date of Sampling	5/2/2017	Time of Sampling	8:10 AM	Static Water Level	17.12
MW-18	Date of Sampling	5/2/2017	Time of Sampling	7:40 AM	Static Water Level	34.80
MW-19	Date of Sampling	5/2/2017	Time of Sampling	7:42 AM	Static Water Level	34.22
MW-20	Date of Sampling	5/2/2017	Time of Sampling	7:47 AM	Static Water Level	8.20

# Equipment Calibration Sheet

Date: 5/2/2017

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	0.12	Ntu
1.0 Primary Standard	1.0	Ntu
10.0 Primary Standard	10.01	Ntu

Comments:

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# Equipment Calibration Sheet

Date: 5/2/2017

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	7.08 to 7.00	21.70°	N/A
pH 4	4.08 to 4.01	21.54°	N/A
pH 10	10.05 to 10.0	21.62°	N/A
Conductivity	0.987 to 1.00	20.97°	µS
DO (Start)	98.9% Saturation 9.76 mg/L	21.20°	mg/L
DO (Cal)	96.7% Saturation 8.61 mg/L	21.16°	mg/L

Comments: pH probe was replaced in August 2016.

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# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-2	Date:	6/19/2017
Sample Number: MW-2	Weather Conditions: Clear, Sunny, 85°F	
OVA Readings: N/A	Wellhead Inspection (Note Conditions)	Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	22	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:08 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	28.35	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:16
5.) Casing Volume (L)	3.9209	12.) Immiscible Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.00	13.) Thickness of immiscible Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	10:10 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)
10:22 AM	3.00	17.02	1.08	14	7.09	1.577	22.25
10:24 AM	3.50	17.10	1.02	10	7.09	1.576	22.25
10:26 AM	4.00	17.15	0.99	10	7.09	1.576	22.25

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-2	10:26 AM	17.15	0.99	10.00	7.09	1.576	22.25

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	Clear	Instrument Calibration	B. Sojka
Clarity		Prior to sampling by:	
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		

# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-9	Date: <div style="text-align: right;">6/19/2017</div>	
Sample Number: MW-9	Weather Conditions: Clear, Sunny, 85°F	
OVA Readings: N/A	Wellhead Inspection (Note Conditions)	Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	23.9	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	9:11 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	57.65	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:15
5.) Casing Volume (L)	20.8394	12.) Immiscible Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.00	13.) Thickness of immiscible Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	9:12 AM

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

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
9:23 AM	3.00	14.71	0.37	20	7.02	1.041	24.05
9:25 AM	3.50	14.79	0.34	17	6.99	1.040	24.05
9:27 AM	4.00	14.85	0.30	14	6.99	1.040	24.05

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-9	9:27 AM	14.85	0.30	14.00	6.99	1.040	24.05

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	Clarity Clear Color Colorless	Instrument Calibration	B. Sojka
4.) Odor		Prior to sampling by:	
5.) Method or Sample Preservation		Cool/HNO <sub>3</sub>	Unusual Occurences

# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-13	Date:	6/19/2017
Sample Number: MW-13	Weather Conditions: Clear, Sunny, 85°F	
OVA Readings: N/A	Wellhead Inspection (Note Conditions)	Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	18.3	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:43 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	23.98	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:16
5.) Casing Volume (L)	3.5072	12.) Immiscible Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.00	13.) Thickness of immiscible Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	10:44 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)
10:56 AM	3.00	16.95	0.48	21	7.10	0.970	18.62
10:58 AM	3.50	17.00	0.45	18	7.07	0.963	18.61
11:00 AM	4.00	17.04	0.43	16	7.07	0.960	18.60

Well Evacuated to Dryness? No Time to recharge? \_\_\_\_\_

## Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-13	11:00 AM	17.04	0.43	16.00	7.07	0.960	18.60
DUP	11:02 AM	17.04	0.43	16.00	7.07	0.960	18.60

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





# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-16	Date:	6/19/2017
Sample Number: MW-16	Weather Conditions: Clear, Sunny, 85°F	
OVA Readings: N/A	Wellhead Inspection (Note Conditions)	Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	11.45	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)	24.51	10.) Purge Rate (mL/min)	300
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:16
5.) Casing Volume (L)	8.0641	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	9:42 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)
9:54 AM	3.50	16.57	0.79	5	7.00	1.021	11.70
9:56 AM	4.00	16.68	0.67	4	6.98	1.018	11.70
9:58 AM	4.50	16.74	0.64	4	6.97	1.017	11.70

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-16	9:58 AM	16.74	0.64	4.00	6.97	1.017	11.70

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	Clear	Instrument Calibration	B. Sojka
Clarity		Prior to sampling by:	
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		

# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-17	Date: <div style="text-align: right;">6/19/2017</div>	
Sample Number: MW-17	Weather Conditions: Clear, Sunny, 85°F	
OVA Readings: N/A	Wellhead Inspection (Note Conditions)	Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	16.55	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)	32.2	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:26
5.) Casing Volume (L)	9.6633	12.) Immiscible Layers observed?	No
6.) Actual Volume of Water Purged (L)	6.50	13.) Thickness of immiscible Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	11:48 AM

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

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
12:08 PM	5.00	15.90	0.41	32	7.00	1.930	16.78
12:10 PM	5.50	15.87	0.37	23	6.97	1.930	16.78
12:12 PM	6.00	15.94	0.33	20	6.95	1.927	16.78
12:14 PM	6.50	15.99	0.31	17	6.93	1.925	16.78

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-17	12:14 PM	15.99	0.31	17.00	6.93	1.925	16.78

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	Cloudy	Instrument Calibration	B. Sojka
Clarity		Prior to sampling by:	
Color	Light Orange	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		



# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-19	Date: <p style="text-align: right;">6/19/2017</p>	
Sample Number: MW-19	Weather Conditions: Clear, Sunny, 85°F	
OVA Readings: N/A	Wellhead Inspection (Note Conditions)	Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	34.2	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	8:35 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	76.7	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:16
5.) Casing Volume (L)	26.2422	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	8:38 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)
8:50 AM	3.00	14.70	0.39	7	7.07	0.621	34.55
8:52 AM	3.50	14.78	0.37	5	7.05	0.618	34.55
8:54 AM	4.00	14.79	0.36	5	7.05	0.613	34.55

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-19	8:54 AM	14.79	0.36	5.00	7.05	0.613	34.55

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	Clear	Instrument Calibration	B. Sojka
Clarity		Prior to sampling by:	
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		

# NORTH OMAHA STATION

## Water Levels Prior to Purging

MW-2	Date of Sampling	6/19/2017	Time of Sampling	8:00 AM	Static Water Level	22
MW-4	Date of Sampling	6/19/2017	Time of Sampling	7:59 AM	Static Water Level	11.85
MW-5	Date of Sampling	6/19/2017	Time of Sampling	8:09 AM	Static Water Level	19.6
MW-6	Date of Sampling	6/19/2017	Time of Sampling	7:55 AM	Static Water Level	12.5
MW-7	Date of Sampling	6/19/2017	Time of Sampling	7:56 AM	Static Water Level	16.15
MW-8	Date of Sampling	6/19/2017	Time of Sampling	7:57 AM	Static Water Level	16.45
MW-9	Date of Sampling	6/19/2017	Time of Sampling	7:48 AM	Static Water Level	23.90
MW-10	Date of Sampling	6/19/2017	Time of Sampling	7:52 AM	Static Water Level	14.95
MW-11	Date of Sampling	6/19/2017	Time of Sampling	7:53 AM	Static Water Level	10.5
MW-12	Date of Sampling	6/19/2017	Time of Sampling	7:57 AM	Static Water Level	15
MW-13	Date of Sampling	6/19/2017	Time of Sampling	8:04 AM	Static Water Level	18.3
MW-15	Date of Sampling	6/19/2017	Time of Sampling	8:03 AM	Static Water Level	10.6
MW-16	Date of Sampling	6/19/2017	Time of Sampling	8:02 AM	Static Water Level	11.45
MW-17	Date of Sampling	6/19/2017	Time of Sampling	8:06 AM	Static Water Level	16.55
MW-18	Date of Sampling	6/19/2017	Time of Sampling	7:46 AM	Static Water Level	34.70
MW-19	Date of Sampling	6/19/2017	Time of Sampling	7:45 AM	Static Water Level	34.20
MW-20	Date of Sampling	6/19/2017	Time of Sampling	7:50 AM	Static Water Level	8.05

# Equipment Calibration Sheet

Date: 6/19/2017

Time: 7:30 AM

Person Calibrating Instrument: Brad Sojka

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

Parameter:	Reading	Units
<0.1 Primary Standard	0.08	Ntu
1.0 Primary Standard	0.99	Ntu
<10.0 Primary Standard	10.01	Ntu

Comments:

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# Equipment Calibration Sheet

Date: 6/19/2017

Time: 7:40 AM

Person Calibrating Instrument: Brad Sojka

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

Parameter:	Reading		Temp	Units
pH 7	6.98	to 7.01	22.32°C	N/A
pH 4	4.05	to 4.01	22.27°C	N/A
pH 10	10.07	to 10.02	22.32°C	N/A
Conductivity	0.96	to 1.005	22.19°C	µS
DO (Start)	99.7% Saturation	9.25mg/L	21.32°C	mg/L
DO (Cal)	88.9% Saturation	8.97mg/L	21.40°C	mg/L

Comments:

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# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-2	Date:	7/31/2017
Sample Number: MW-2	Weather Conditions: Clear, Sunny, 85°F	
OVA Readings: N/A	Wellhead Inspection (Note Conditions)	Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	23.1	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:36 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	28.35	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:18
5.) Casing Volume (L)	3.2417	12.) Immiscible Layers observed?	No
6.) Actual Volume of Water Purged (L)	3.50	13.) Thickness of immiscible Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	10:40 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	2.50	17.46	0.32	14	7.39	1.816	23.32
10:56 AM	3.00	17.50	0.30	12	7.37	1.810	23.32
10:58 AM	3.50	17.57	0.28	10	7.37	1.812	23.32

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-2	10:58 AM	17.57	0.28	10.00	7.37	1.812	23.32

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	Clear	Instrument Calibration	B. Sojka
Clarity		Prior to sampling by:	
Color	Colorless	Unusual Occurrences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		

# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-9	Date: <span style="float: right;">7/31/2017</span>	
Sample Number: MW-9	Weather Conditions: Clear, Sunny, 85°F	
OVA Readings: N/A	Wellhead Inspection (Note Conditions)	Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	26.65	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	9:27 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	57.65	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:17
5.) Casing Volume (L)	19.1414	12.) Immiscible Layers observed?	No
6.) Actual Volume of Water Purged (L)	3.50	13.) Thickness of immiscible Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	9:28 AM

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

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
9:41 AM	2.50	16.09	0.37	23	7.87	1.022	26.80
9:43 AM	3.00	16.14	0.33	20	7.87	1.020	26.80
9:45 AM	3.50	16.21	0.29	18	7.87	1.020	26.80

Well Evacuated to Dryness?                                 No                                 Time to recharge?                                 

## Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-9	9:45 AM	16.21	0.29	18.00	7.87	1.020	26.80

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	Clear	Instrument Calibration	B. Sojka
Clarity		Prior to sampling by:	
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		



# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-15	Date:	7/31/2017
Sample Number: MW-15	Weather Conditions:	Clear, Sunny, 85°F
OVA Readings: N/A	Wellhead Inspection (Note Conditions)	Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	12.15	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	12:12 PM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	13.6	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:21
5.) Casing Volume (L)	0.8953	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	12:14 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)
12:31 PM	4.00	18.74	0.17	7	7.02	1.194	12.33
12:33 PM	4.50	18.80	0.19	6	7.02	1.194	12.32
12:35 PM	5.00	18.85	0.17	6	7.02	1.190	12.32

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-15	12:35 PM	18.85	0.17	6.00	7.02	1.190	12.32
DUP	8:00 AM	18.85	0.17	6	7.02	1.190	12.32

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	Clear	Instrument Calibration	B. Sojka
Clarity		Prior to sampling by:	
Color		Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		

# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-16	Date:	7/31/2017
Sample Number: MW-16	Weather Conditions: Clear, Sunny, 85°F	
OVA Readings: N/A	Wellhead Inspection (Note Conditions)	Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	12.9	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:14 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	24.51	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:15
5.) Casing Volume (L)	7.1688	12.) Immiscible Layers observed?	No
6.) Actual Volume of Water Purged (L)	3.50	13.) Thickness of immiscible Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	10:15 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)
10:26 AM	2.50	18.00	1.02	12	7.12	1.040	13.10
10:28 AM	3.00	17.97	0.99	11	7.12	1.038	13.10
10:30 AM	3.50	18.02	0.97	10	7.12	1.038	13.10

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-16	10:30 AM	18.02	0.97	10.00	7.12	1.038	13.10

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	Clear	Instrument Calibration	B. Sojka
Clarity		Prior to sampling by:	
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		

# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-17		Date: 7/31/2017
Sample Number: MW-17		Weather Conditions: Clear, Sunny, 85°F
OVA Readings: N/A		Wellhead Inspection (Note Conditions) <span style="float:right">Compliant</span>

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	17.1	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	1:03 PM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	32.2	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:25
5.) Casing Volume (L)	9.3237	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	6.00	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	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)
1:26 PM	5.00	21.25	0.58	12	7.03	2.151	17.32
1:28 PM	5.50	21.30	0.55	10	7.05	2.148	17.32
1:30 PM	6.00	21.38	0.52	8	7.05	2.150	17.32

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-17	1:30 PM	21.38	0.52	8.00	7.05	2.150	17.32

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		Instrument Calibration	B. Sojka
Clarity	Cloudy	Prior to sampling by:	
Color	Light Orange	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		



# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)	
Monitoring Well Identification Number: MW-19	Date:	7/31/2017	
Sample Number: MW-19	Weather Conditions: Clear, Sunny, 85°F		
OVA Readings: N/A	Wellhead Inspection (Note Conditions)		Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	35.85	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	8:50 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	76.7	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:17
5.) Casing Volume (L)	25.2234	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	3.50	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	8:55 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)
9:08 AM	2.50	15.14	0.46	6	7.60	0.493	36.00
9:10 AM	3.00	15.24	0.43	5	7.53	0.495	36.00
9:12 AM	3.50	15.30	0.43	5	7.53	0.495	36.00

Well Evacuated to Dryness?                                 No                                 Time to recharge?                                 

## Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-19	9:12 AM	15.30	0.43	5.00	7.53	0.495	36.00

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



# NORTH OMAHA STATION

## Water Levels Prior to Purging

MW-2	Date of Sampling	7/31/2017	Time of Sampling	7:51 AM	Static Water Level	23.1
MW-4	Date of Sampling	7/31/2017	Time of Sampling	7:56 AM	Static Water Level	12.45
MW-5	Date of Sampling	7/31/2017	Time of Sampling	8:12 AM	Static Water Level	20.21
MW-6	Date of Sampling	7/31/2017	Time of Sampling	8:00 AM	Static Water Level	13.37
MW-7	Date of Sampling	7/31/2017	Time of Sampling	8:07 AM	Static Water Level	16.72
MW-8	Date of Sampling	7/31/2017	Time of Sampling	8:06 AM	Static Water Level	11.38
MW-9	Date of Sampling	7/31/2017	Time of Sampling	7:44 AM	Static Water Level	26.65
MW-10	Date of Sampling	7/31/2017	Time of Sampling	8:03 AM	Static Water Level	16
MW-11	Date of Sampling	7/31/2017	Time of Sampling	8:01 AM	Static Water Level	13.02
MW-12	Date of Sampling	7/31/2017	Time of Sampling	8:04 AM	Static Water Level	10.2
MW-13	Date of Sampling	7/31/2017	Time of Sampling	7:53 AM	Static Water Level	19.25
MW-15	Date of Sampling	7/31/2017	Time of Sampling	7:55 AM	Static Water Level	12.15
MW-16	Date of Sampling	7/31/2017	Time of Sampling	7:49 AM	Static Water Level	12.5
MW-17	Date of Sampling	7/31/2017	Time of Sampling	8:10 AM	Static Water Level	17.10
MW-18	Date of Sampling	7/31/2017	Time of Sampling	7:40 AM	Static Water Level	36.40
MW-19	Date of Sampling	7/31/2017	Time of Sampling	7:42 AM	Static Water Level	35.85
MW-20	Date of Sampling	7/31/2017	Time of Sampling	7:47 AM	Static Water Level	8.70

# Equipment Calibration Sheet

Date: 7/31/2017

Time: 7:20 AM

Person Calibrating Instrument: Brad Sojka

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

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

Comments:

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# Equipment Calibration Sheet

Date: 7/31/2017

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	7.05	to 7.01	22.38°C	N/A
pH 4	4.04	to 4.01	22.33°C	N/A
pH 10	10.10	to 10.02	22.37°C	N/A
Conductivity	0.99	to 1.001	22.30°C	µS
DO (Start)	99.7% Saturation	9.30mg/L	21.42°C	mg/L
DO (Cal)	99.0% Saturation	9.02mg/L	21.40°C	mg/L

Comments:

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# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-2	Date: 11/7/2017	
Sample Number: MW-2	Weather Conditions: Cloudy, 38°F	
OVA Readings: N/A	Wellhead Inspection (Note Conditions)	Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	22.95	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	11:55 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	28.35	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:14
5.) Casing Volume (L)	3.3343	12.) Immiscole Layers observed?	No
6.) Actual Volume of Water Purged (L)	3.50	13.) Thickness of immiscole Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	11:56 AM

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

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
12:06 PM	2.50	13.19	0.98	14	7.25	1.463	23.40
12:08 PM	3.00	13.29	0.95	14	7.28	1.469	23.40
12:10 PM	3.50	13.30	0.92	14	7.29	1.471	23.40

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-2	12:10 PM	13.30	0.92	14.00	7.29	1.471	23.40

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		Instrument Calibration	B. Sojka
Clarity	Clear	Prior to sampling by:	
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		

# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-9	Date: 11/7/2017	
Sample Number: MW-9	Weather Conditions: Cloudy, 38°F	
OVA Readings: N/A	Wellhead Inspection (Note Conditions)	Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	21.3	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	10:52 AM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	57.65	10.) Purge Rate (mL/min)	200
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:15
5.) Casing Volume (L)	22.4448	12.) Immiscible Layers observed?	No
6.) Actual Volume of Water Purged (L)	3.00	13.) Thickness of immiscible Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	10:53 AM

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

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
11:04 AM	2.00	11.04	1.00	12	7.46	1.095	21.62
11:06 AM	2.50	10.99	0.95	10	7.46	1.096	21.62
11:08 AM	3.00	11.02	0.92	10	7.46	1.099	21.62

Well Evacuated to Dryness? No Time to recharge? \_\_\_\_\_

## Ground Sample Information

Well #	Time	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
MW-9	11:08 AM	11.02	0.92	10.00	7.46	1.099	21.62

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	Clear	Instrument Calibration	B. Sojka
Clarity		Prior to sampling by:	
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		

# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)
Monitoring Well Identification Number: MW-13	Date:	11/7/2017
Sample Number: MW-13	Weather Conditions: Cloudy, 38°F	
OVA Readings: N/A	Wellhead Inspection (Note Conditions)	Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	19.4	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)	23.98	10.) Purge Rate (mL/min)	250
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:15
5.) Casing Volume (L)	2.8280	12.) Immiscolate Layers observed?	No
6.) Actual Volume of Water Purged (L)	4.00	13.) Thickness of immiscolate Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	11:19 AM

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

Time	Volume Purged (L)	Temperature C°	DO (mg/l)	Turb (Ntu)	pH	Conductivity (mS/cm)	Water Level (ft)
11:30 AM	3.00	12.60	0.67	14	6.75	1.078	19.68
11:32 AM	3.50	12.70	0.61	12	6.74	1.080	19.68
11:34 AM	4.00	12.78	0.58	12	6.79	1.080	19.68

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	11:34 AM	12.78	0.58	12.00	6.79	1.080	19.68

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		Instrument Calibration	B. Sojka
Clarity	Clear	Prior to sampling by:	
Color	Colorless	Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		



# Field Notes For Monitoring Well Sampling

Facility Name: Omaha Station	North	Sampler Name(s): Brad Sojka (#79647)	
Monitoring Well Identification Number: MW-17	Date: <span style="float: right;">11/7/2017</span>		
Sample Number: MW-17	Weather Conditions: Cloudy, 38°F		
OVA Readings: N/A	Wellhead Inspection (Note Conditions)		Compliant

## Groundwater Measurements and Purge Data

1.) Static Water Level (+/- 0.01ft) (ft)	17.5	8.) Purge Equipment Used	Pump
2.) Time of Water Level Measurement	2:30 PM	9.) Dedicated?	Yes
3.) Bottom of Casing (+/- 0.01 ft) (ft)	32.2	10.) Purge Rate (mL/min)	350
4.) Casing Diameter (in)	2	11.) Time to purge Well (min)	0:15
5.) Casing Volume (L)	9.0767	12.) Immiscible Layers observed?	No
6.) Actual Volume of Water Purged (L)	5.00	13.) Thickness of immiscible Layer (if present)	N/A
7.) Water Level Measuring Equipment	Electronic	14.) Pump Start	2:31 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)
2:42 PM	4.00	15.03	1.10	16	7.10	1.843	17.70
2:44 PM	4.50	15.09	1.08	14	7.12	1.850	17.70
2:46 PM	5.00	15.14	1.04	12	7.14	1.852	17.70

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-17	2:46 PM	15.14	1.04	12.00	7.14	1.852	17.70

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	Cloudy Light Orange Odorless	Instrument Calibration	B. Sojka
Clarity		Prior to sampling by:	
Color		Unusual Occurences	
4.) Odor	Odorless		
5.) Method or Sample Preservation	Cool/HNO <sub>3</sub>		







# NORTH OMAHA STATION

## Water Levels Prior to Purging

MW-2	Date of Sampling	11/7/2017	Time of Sampling	8:51 AM	Static Water Level	22.95
MW-4	Date of Sampling	11/7/2017	Time of Sampling	8:56 AM	Static Water Level	12.8
MW-5	Date of Sampling	11/7/2017	Time of Sampling	9:12 AM	Static Water Level	23.45
MW-6	Date of Sampling	11/7/2017	Time of Sampling	12:09 AM	Static Water Level	12.2
MW-7	Date of Sampling	11/7/2017	Time of Sampling	9:07 AM	Static Water Level	15.65
MW-8	Date of Sampling	11/7/2017	Time of Sampling	9:06 AM	Static Water Level	15.8
MW-9	Date of Sampling	11/7/2017	Time of Sampling	8:44 AM	Static Water Level	21.30
MW-10	Date of Sampling	11/7/2017	Time of Sampling	9:03 AM	Static Water Level	14.25
MW-11	Date of Sampling	11/7/2017	Time of Sampling	9:01 AM	Static Water Level	12
MW-12	Date of Sampling	11/7/2017	Time of Sampling	9:04 AM	Static Water Level	14.42
MW-13	Date of Sampling	11/7/2017	Time of Sampling	8:53 AM	Static Water Level	19.4
MW-15	Date of Sampling	11/7/2017	Time of Sampling	8:55 AM	Static Water Level	12.75
MW-16	Date of Sampling		Time of Sampling		Static Water Level	
MW-17	Date of Sampling	11/7/2017	Time of Sampling	9:10 AM	Static Water Level	17.50
MW-18	Date of Sampling	11/7/2017	Time of Sampling	8:40 AM	Static Water Level	36.39
MW-19	Date of Sampling	11/7/2017	Time of Sampling	8:42 AM	Static Water Level	35.86
MW-20	Date of Sampling	11/7/2017	Time of Sampling	8:47 AM	Static Water Level	9.03

# Equipment Calibration Sheet

Date: 11/7/2017

Time: 7:30 AM

Person Calibrating Instrument: Brad Sojka

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

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

Comments:

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# Equipment Calibration Sheet

Date: 11/7/2017

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 7.01	22.31°C	N/A
pH 4	4.06	to 4.01	22.29°C	N/A
pH 10	10.08	to 10.02	22.34°C	N/A
Conductivity	0.99	to 1.001	22.40°C	µS
DO (Start)	99.7% Saturation	9.28mg/L	21.80°C	mg/L
DO (Cal)	99.0% Saturation	9.00mg/L	21.65°C	mg/L

Comments:

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## **APPENDIX B**

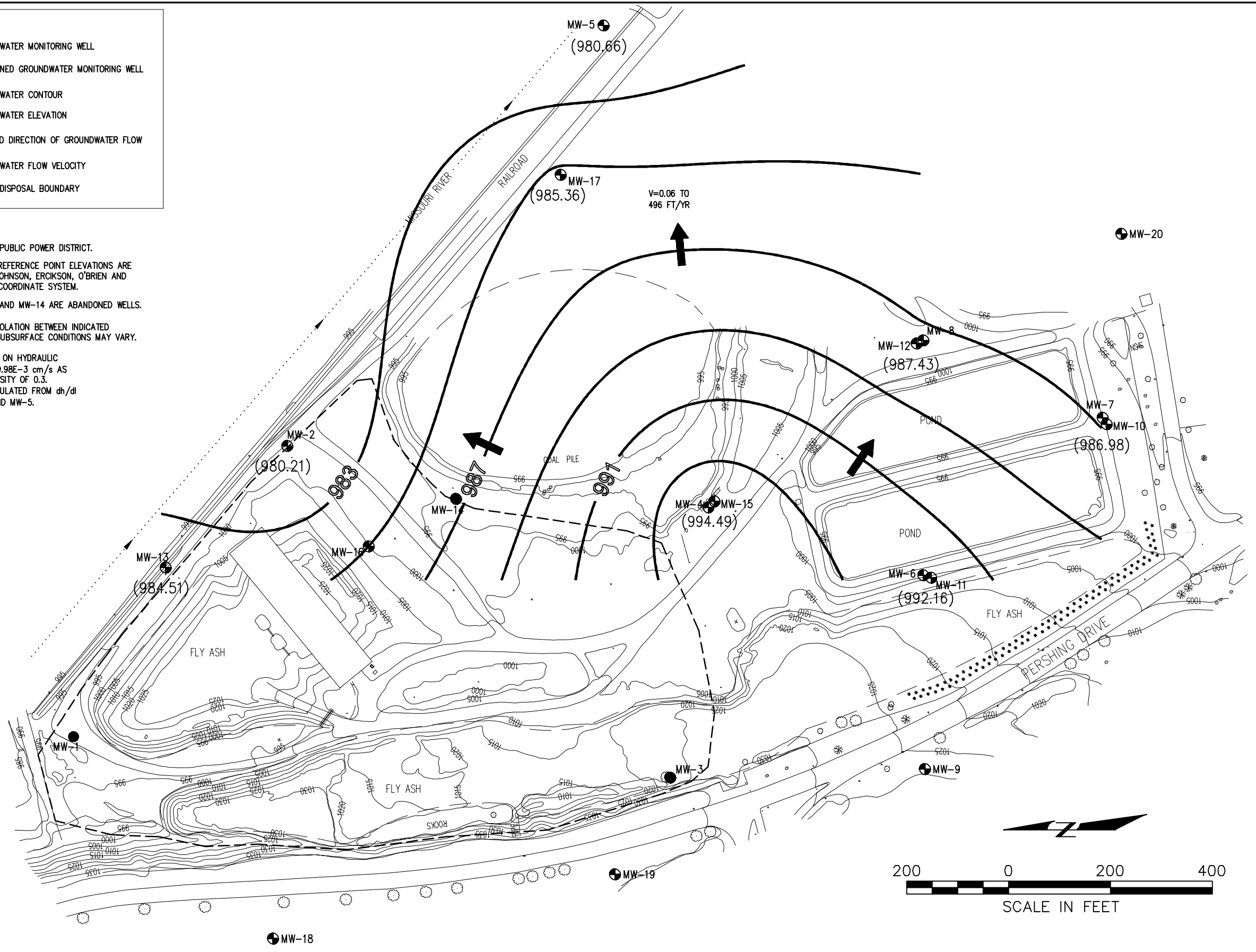
**LEGEND**

- MW-2  GROUNDWATER MONITORING WELL
- MW-1  ABANDONED GROUNDWATER MONITORING WELL
- 984 — GROUNDWATER CONTOUR
- (990.40) GROUNDWATER ELEVATION
-  INFERRED DIRECTION OF GROUNDWATER FLOW
- V=X FT/YR GROUNDWATER FLOW VELOCITY
- - - - PERMIT DISPOSAL BOUNDARY

**NOTES:**

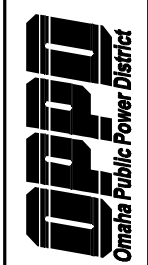
- 1.) BASE MAP FURNISHED BY OMAHA PUBLIC POWER DISTRICT.
- 2.) MONITORING WELL LOCATION AND REFERENCE POINT ELEVATIONS ARE BASED ON MARCH 1995 SURVEY BY JOHNSON, ERICKSON, O'BRIEN AND ASSOCIATES, INC. USING PLANT GRID COORDINATE SYSTEM.
- 3.) MONITORING WELLS MW-1, MW-3, AND MW-14 ARE ABANDONED WELLS.
- 4.) CONTOURS ARE BASED ON INTERPOLATION BETWEEN INDICATED GROUNDWATER ELEVATIONS. ACTUAL SUBSURFACE CONDITIONS MAY VARY.

GROUNDWATER FLOW VELOCITY BASED ON HYDRAULIC CONDUCTIVITY RANGE OF  $1.3E-6$  TO  $9.98E-3$  cm/s AS REPORTED BY SCS 1995 AND A POROSITY OF 0.3. VELOCITY AS SHOWN ON FIGURE CALCULATED FROM  $dh/dl$  OF 0.0144 FT/FT BETWEEN MW-15 AND MW-5.






**FIGURE 1**  
GROUNDWATER CONTOUR MAP – SHALLOW ZONE  
MARCH 22, 2016

OMAHA PUBLIC POWER DISTRICT  
NORTH OMAHA STATION  
OMAHA, NEBRASKA



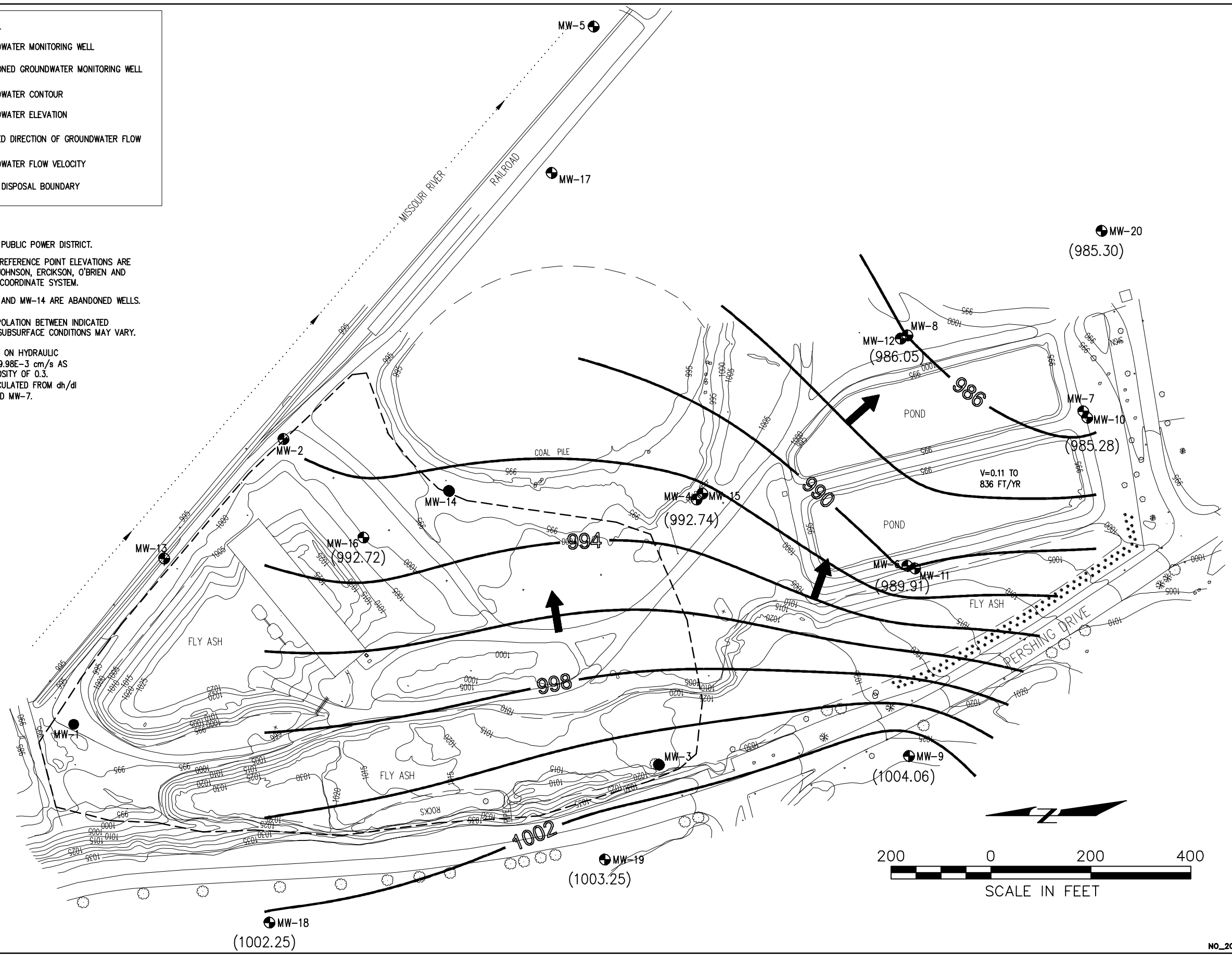
**LEGEND**

- MW-2  GROUNDWATER MONITORING WELL
- MW-1  ABANDONED GROUNDWATER MONITORING WELL
- 984 — GROUNDWATER CONTOUR
- (990.40) GROUNDWATER ELEVATION
-  INFERRED DIRECTION OF GROUNDWATER FLOW
- V=X FT/YR GROUNDWATER FLOW VELOCITY
- - - PERMIT DISPOSAL BOUNDARY

**NOTES:**

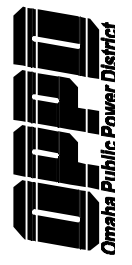
- 1.) BASE MAP FURNISHED BY OMAHA PUBLIC POWER DISTRICT.
- 2.) MONITORING WELL LOCATION AND REFERENCE POINT ELEVATIONS ARE BASED ON MARCH 1995 SURVEY BY JOHNSON, ERICKSON, O'BRIEN AND ASSOCIATES, INC. USING PLANT GRID COORDINATE SYSTEM.
- 3.) MONITORING WELLS MW-1, MW-3, AND MW-14 ARE ABANDONED WELLS.
- 4.) CONTOURS ARE BASED ON INTERPOLATION BETWEEN INDICATED GROUNDWATER ELEVATIONS. ACTUAL SUBSURFACE CONDITIONS MAY VARY.

GROUNDWATER FLOW VELOCITY BASED ON HYDRAULIC CONDUCTIVITY RANGE OF  $1.3E-6$  TO  $9.98E-3$  cm/s AS REPORTED BY SCS 1995 AND A POROSITY OF 0.3. VELOCITY AS SHOWN ON FIGURE CALCULATED FROM  $dh/dl$  OF 0.0243 FT/FT BETWEEN MW-9 AND MW-7.






**FIGURE 2**  
GROUNDWATER CONTOUR MAP - DEEP ZONE  
MARCH 22, 2016

OMAHA PUBLIC POWER DISTRICT  
NORTH OMAHA STATION  
OMAHA, NEBRASKA





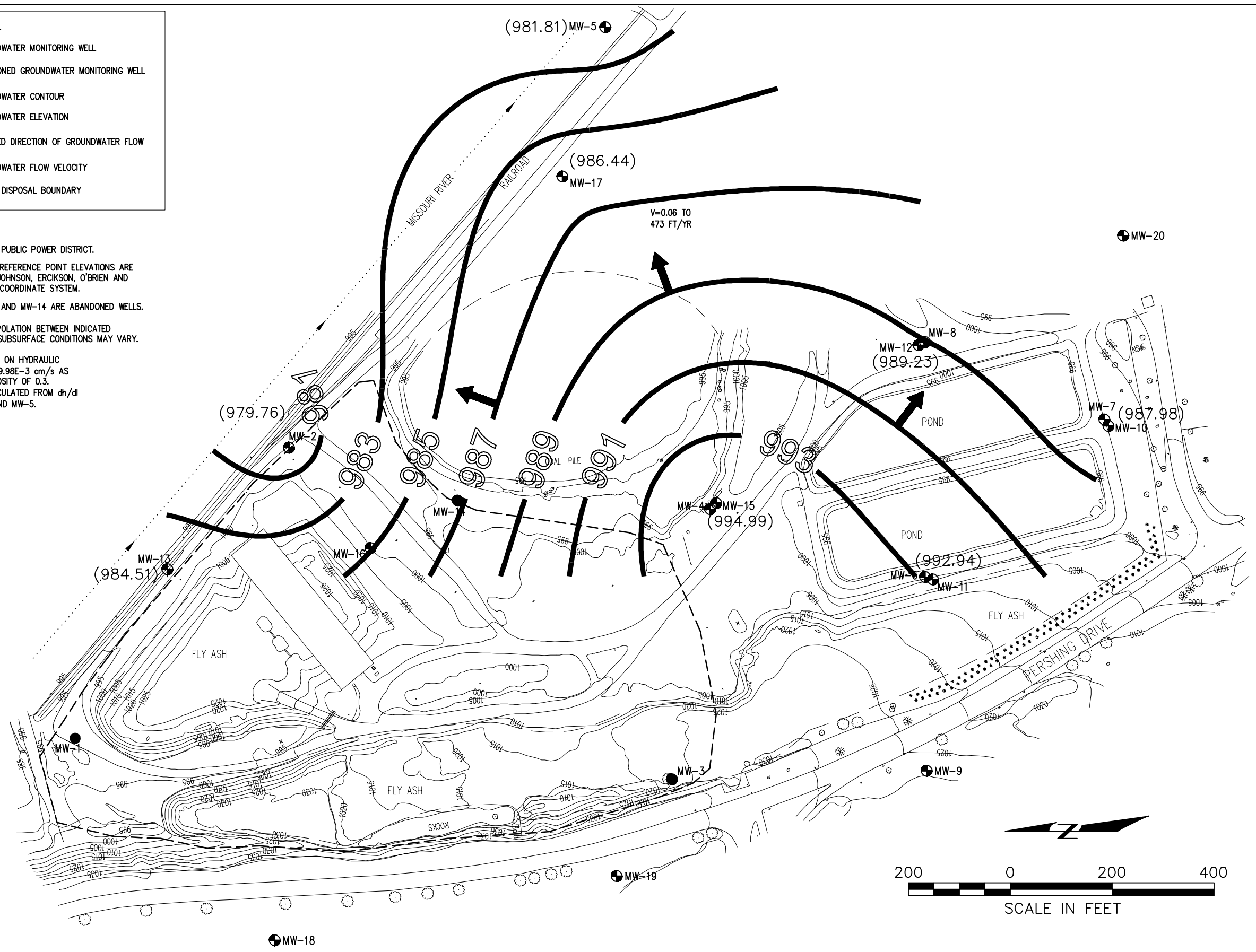
**LEGEND**

- MW-2  GROUNDWATER MONITORING WELL
- MW-1  ABANDONED GROUNDWATER MONITORING WELL
- 984 — GROUNDWATER CONTOUR
- (990.40) GROUNDWATER ELEVATION
-  INFERRED DIRECTION OF GROUNDWATER FLOW
- V=X FT/YR GROUNDWATER FLOW VELOCITY
- - - - PERMIT DISPOSAL BOUNDARY

**NOTES:**

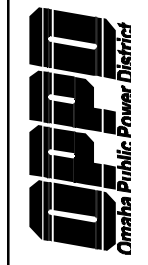
- 1.) BASE MAP FURNISHED BY OMAHA PUBLIC POWER DISTRICT.
- 2.) MONITORING WELL LOCATION AND REFERENCE POINT ELEVATIONS ARE BASED ON MARCH 1995 SURVEY BY JOHNSON, ERICKSON, O'BRIEN AND ASSOCIATES, INC. USING PLANT GRID COORDINATE SYSTEM.
- 3.) MONITORING WELLS MW-1, MW-3, AND MW-14 ARE ABANDONED WELLS.
- 4.) CONTOURS ARE BASED ON INTERPOLATION BETWEEN INDICATED GROUNDWATER ELEVATIONS. ACTUAL SUBSURFACE CONDITIONS MAY VARY.

GROUNDWATER FLOW VELOCITY BASED ON HYDRAULIC CONDUCTIVITY RANGE OF  $1.3E-6$  TO  $9.98E-3$  cm/s AS REPORTED BY SCS 1995 AND A POROSITY OF 0.3. VELOCITY AS SHOWN ON FIGURE CALCULATED FROM  $dh/dl$  OF 0.0137 FT/FT BETWEEN MW-15 AND MW-5.






**FIGURE 3**  
GROUNDWATER CONTOUR MAP - SHALLOW ZONE  
JUNE 14, 2016

OMAHA PUBLIC POWER DISTRICT  
NORTH OMAHA STATION  
OMAHA, NEBRASKA



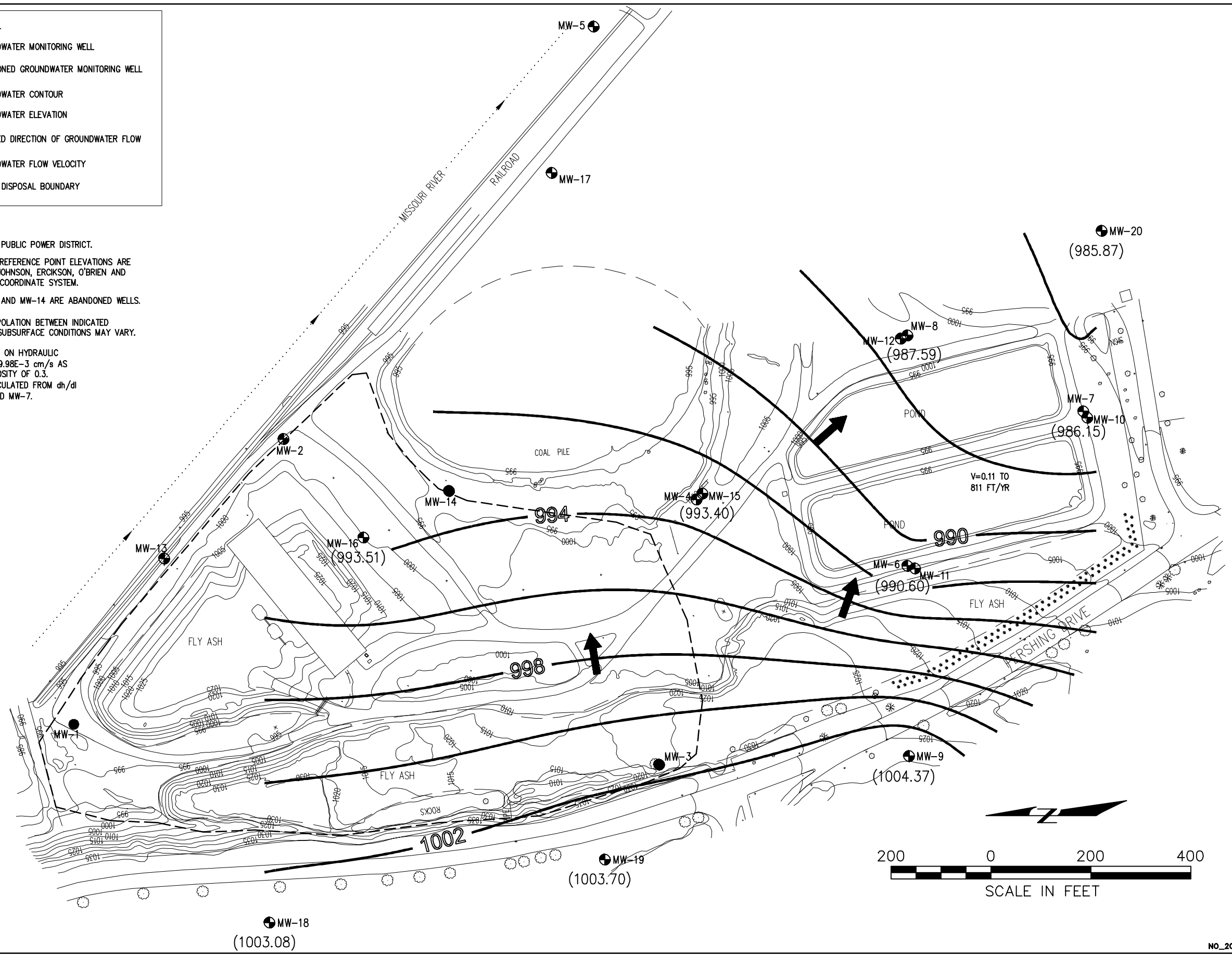
**LEGEND**

- MW-2  GROUNDWATER MONITORING WELL
- MW-1  ABANDONED GROUNDWATER MONITORING WELL
- 984 — GROUNDWATER CONTOUR
- (990.40) GROUNDWATER ELEVATION
-  INFERRED DIRECTION OF GROUNDWATER FLOW
- V=X FT/YR GROUNDWATER FLOW VELOCITY
- - - - PERMIT DISPOSAL BOUNDARY

**NOTES:**

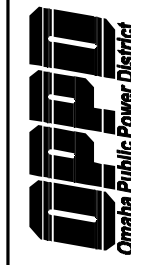
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- 3.) MONITORING WELLS MW-1, MW-3, AND MW-14 ARE ABANDONED WELLS.
- 4.) CONTOURS ARE BASED ON INTERPOLATION BETWEEN INDICATED GROUNDWATER ELEVATIONS. ACTUAL SUBSURFACE CONDITIONS MAY VARY.

GROUNDWATER FLOW VELOCITY BASED ON HYDRAULIC CONDUCTIVITY RANGE OF  $1.3E-6$  TO  $9.98E-3$  cm/s AS REPORTED BY SCS 1995 AND A POROSITY OF 0.3. VELOCITY AS SHOWN ON FIGURE CALCULATED FROM  $dh/dl$  OF 0.0236 FT/FT BETWEEN MW-9 AND MW-7.



**FIGURE 4**  
GROUNDWATER CONTOUR MAP - DEEP ZONE  
JUNE 14, 2016

OMAHA PUBLIC POWER DISTRICT  
NORTH OMAHA STATION  
OMAHA, NEBRASKA



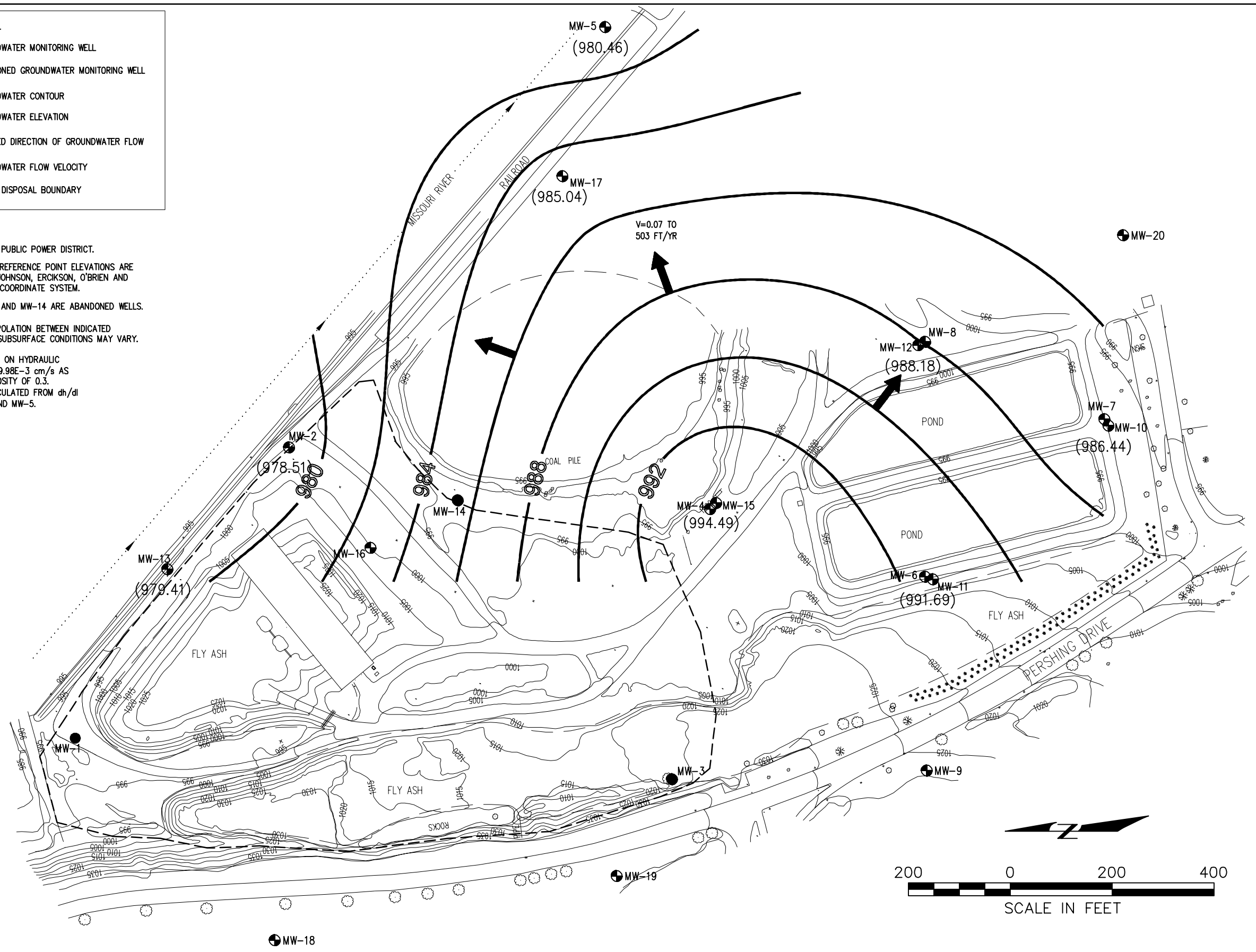
**LEGEND**

- MW-2 GROUNDWATER MONITORING WELL
- MW-1 ABANDONED GROUNDWATER MONITORING WELL
- 984 — GROUNDWATER CONTOUR
- (990.40) GROUNDWATER ELEVATION
- INFERRED DIRECTION OF GROUNDWATER FLOW
- V=X FT/YR GROUNDWATER FLOW VELOCITY
- - - - PERMIT DISPOSAL BOUNDARY

**NOTES:**

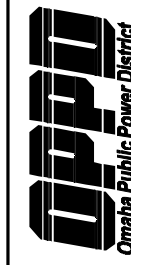
- 1.) BASE MAP FURNISHED BY OMAHA PUBLIC POWER DISTRICT.
- 2.) MONITORING WELL LOCATION AND REFERENCE POINT ELEVATIONS ARE BASED ON MARCH 1995 SURVEY BY JOHNSON, ERICKSON, O'BRIEN AND ASSOCIATES, INC. USING PLANT GRID COORDINATE SYSTEM.
- 3.) MONITORING WELLS MW-1, MW-3, AND MW-14 ARE ABANDONED WELLS.
- 4.) CONTOURS ARE BASED ON INTERPOLATION BETWEEN INDICATED GROUNDWATER ELEVATIONS. ACTUAL SUBSURFACE CONDITIONS MAY VARY.

GROUNDWATER FLOW VELOCITY BASED ON HYDRAULIC CONDUCTIVITY RANGE OF  $1.3E-6$  TO  $9.9E-3$  cm/s AS REPORTED BY SCS 1995 AND A POROSITY OF 0.3. VELOCITY AS SHOWN ON FIGURE CALCULATED FROM  $dh/dl$  OF 0.0146 FT/FT BETWEEN MW-15 AND MW-5.



**FIGURE 5**  
GROUNDWATER CONTOUR MAP - SHALLOW ZONE  
SEPTEMBER 2, 2016

OMAHA PUBLIC POWER DISTRICT  
NORTH OMAHA STATION  
OMAHA, NEBRASKA



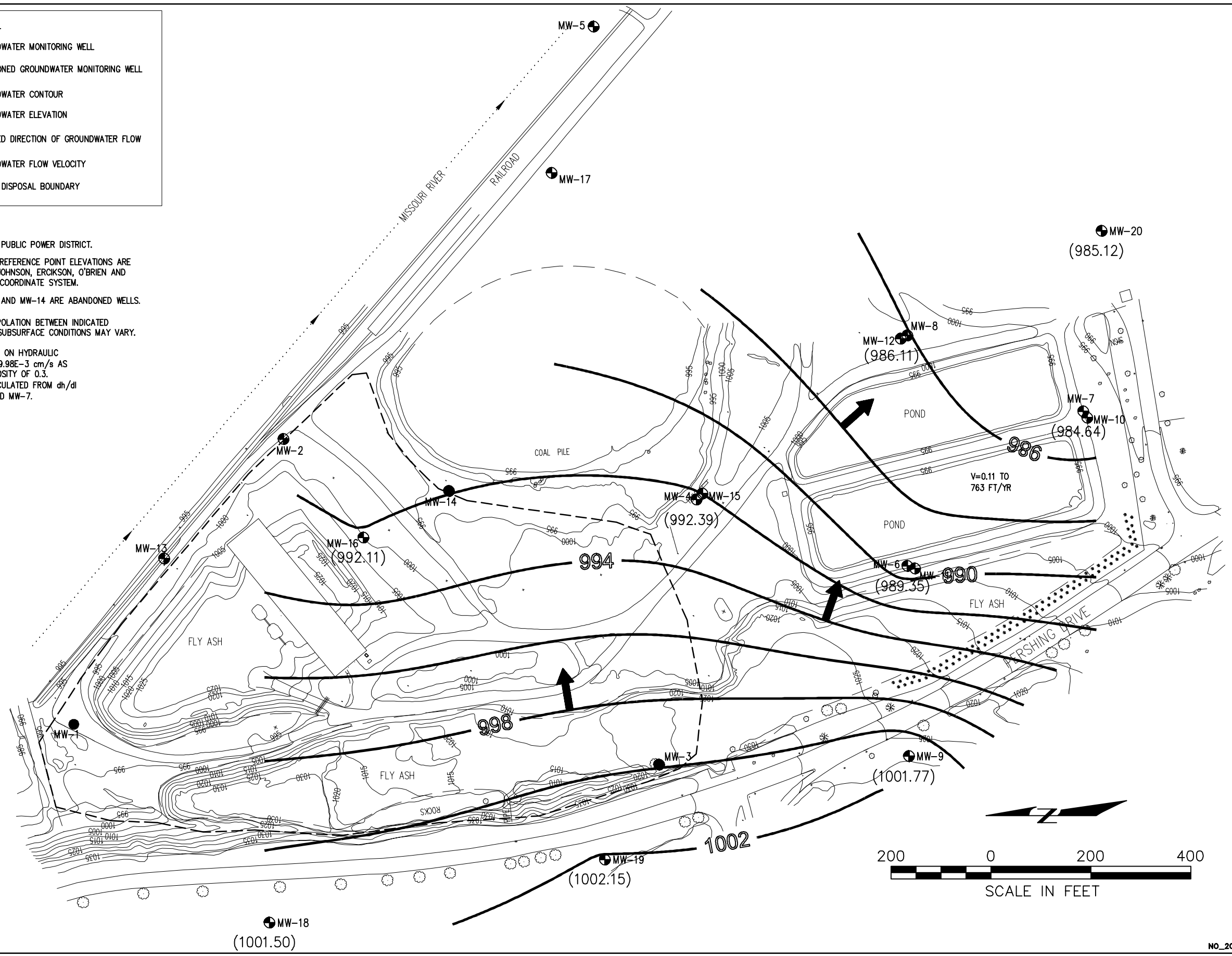
**LEGEND**

- MW-2 GROUNDWATER MONITORING WELL
- MW-1 ABANDONED GROUNDWATER MONITORING WELL
- 984 — GROUNDWATER CONTOUR
- (990.40) GROUNDWATER ELEVATION
- INFERRED DIRECTION OF GROUNDWATER FLOW
- V=X FT/YR GROUNDWATER FLOW VELOCITY
- - - - PERMIT DISPOSAL BOUNDARY

**NOTES:**

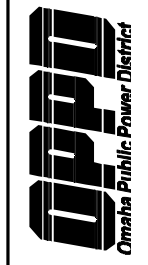
- 1.) BASE MAP FURNISHED BY OMAHA PUBLIC POWER DISTRICT.
- 2.) MONITORING WELL LOCATION AND REFERENCE POINT ELEVATIONS ARE BASED ON MARCH 1995 SURVEY BY JOHNSON, ERICKSON, O'BRIEN AND ASSOCIATES, INC. USING PLANT GRID COORDINATE SYSTEM.
- 3.) MONITORING WELLS MW-1, MW-3, AND MW-14 ARE ABANDONED WELLS.
- 4.) CONTOURS ARE BASED ON INTERPOLATION BETWEEN INDICATED GROUNDWATER ELEVATIONS. ACTUAL SUBSURFACE CONDITIONS MAY VARY.

GROUNDWATER FLOW VELOCITY BASED ON HYDRAULIC CONDUCTIVITY RANGE OF  $1.3E-6$  TO  $9.98E-3$  cm/s AS REPORTED BY SCS 1995 AND A POROSITY OF 0.3. VELOCITY AS SHOWN ON FIGURE CALCULATED FROM  $dh/dl$  OF 0.0222 FT/FT BETWEEN MW-9 AND MW-7.






**FIGURE 6**  
GROUNDWATER CONTOUR MAP - DEEP ZONE  
SEPTEMBER 2, 2016

OMAHA PUBLIC POWER DISTRICT  
NORTH OMAHA STATION  
OMAHA, NEBRASKA



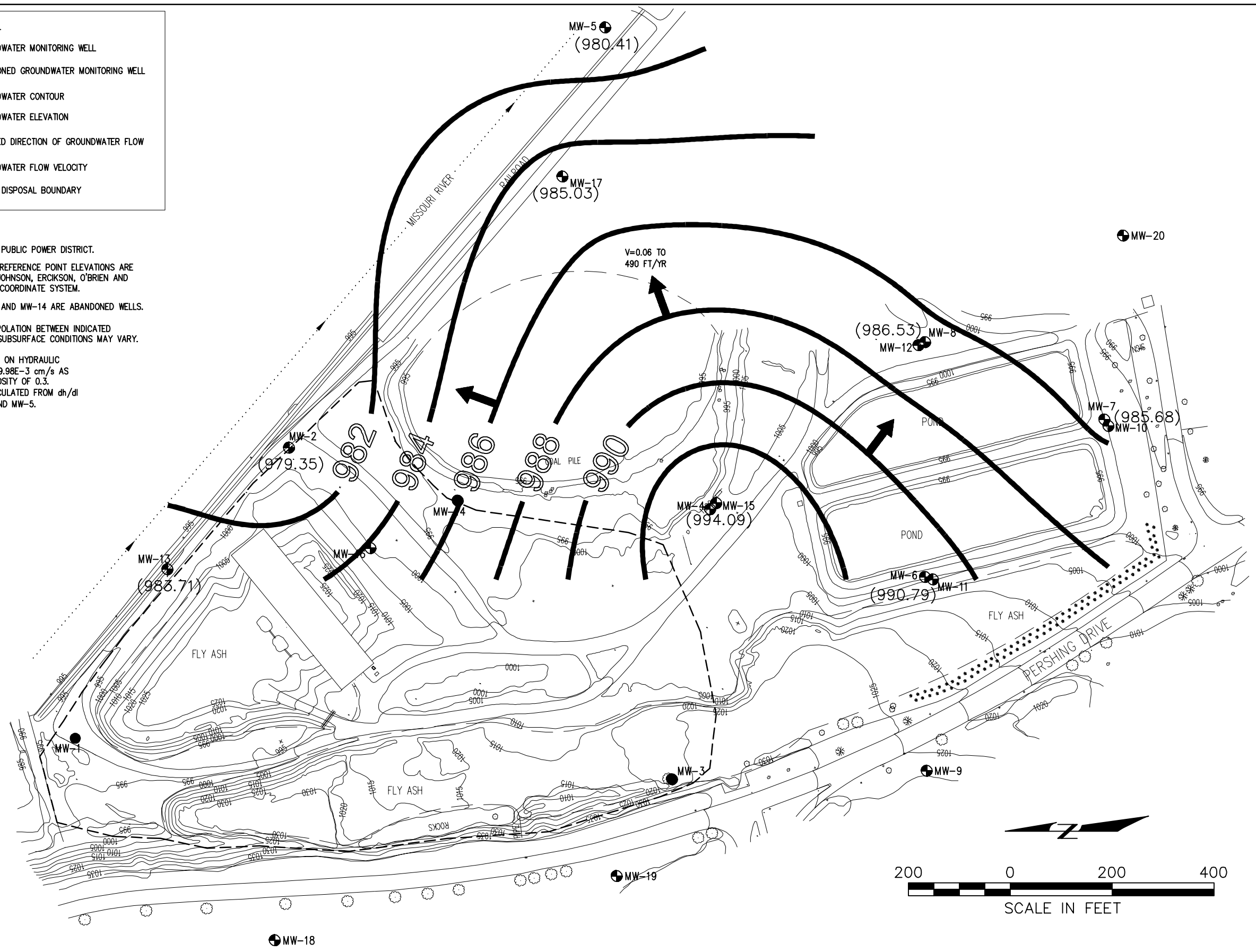
**LEGEND**

- MW-2  GROUNDWATER MONITORING WELL
- MW-1  ABANDONED GROUNDWATER MONITORING WELL
- 984 — GROUNDWATER CONTOUR
- (990.40) GROUNDWATER ELEVATION
-  INFERRED DIRECTION OF GROUNDWATER FLOW
- V=X FT/YR GROUNDWATER FLOW VELOCITY
- - - - PERMIT DISPOSAL BOUNDARY

**NOTES:**

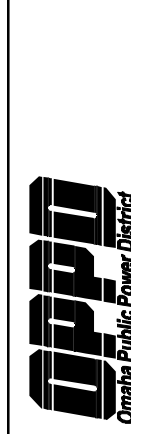
- 1.) BASE MAP FURNISHED BY OMAHA PUBLIC POWER DISTRICT.
- 2.) MONITORING WELL LOCATION AND REFERENCE POINT ELEVATIONS ARE BASED ON MARCH 1995 SURVEY BY JOHNSON, ERICKSON, O'BRIEN AND ASSOCIATES, INC. USING PLANT GRID COORDINATE SYSTEM.
- 3.) MONITORING WELLS MW-1, MW-3, AND MW-14 ARE ABANDONED WELLS.
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GROUNDWATER FLOW VELOCITY BASED ON HYDRAULIC CONDUCTIVITY RANGE OF  $1.3E-6$  TO  $9.9E-3$  cm/s AS REPORTED BY SCS 1995 AND A POROSITY OF 0.3. VELOCITY AS SHOWN ON FIGURE CALCULATED FROM dh/dl OF 0.0142 FT/FT BETWEEN MW-15 AND MW-5.






**FIGURE 7**  
GROUNDWATER CONTOUR MAP - SHALLOW ZONE  
NOVEMBER 28, 2016

OMAHA PUBLIC POWER DISTRICT  
NORTH OMAHA STATION  
OMAHA, NEBRASKA



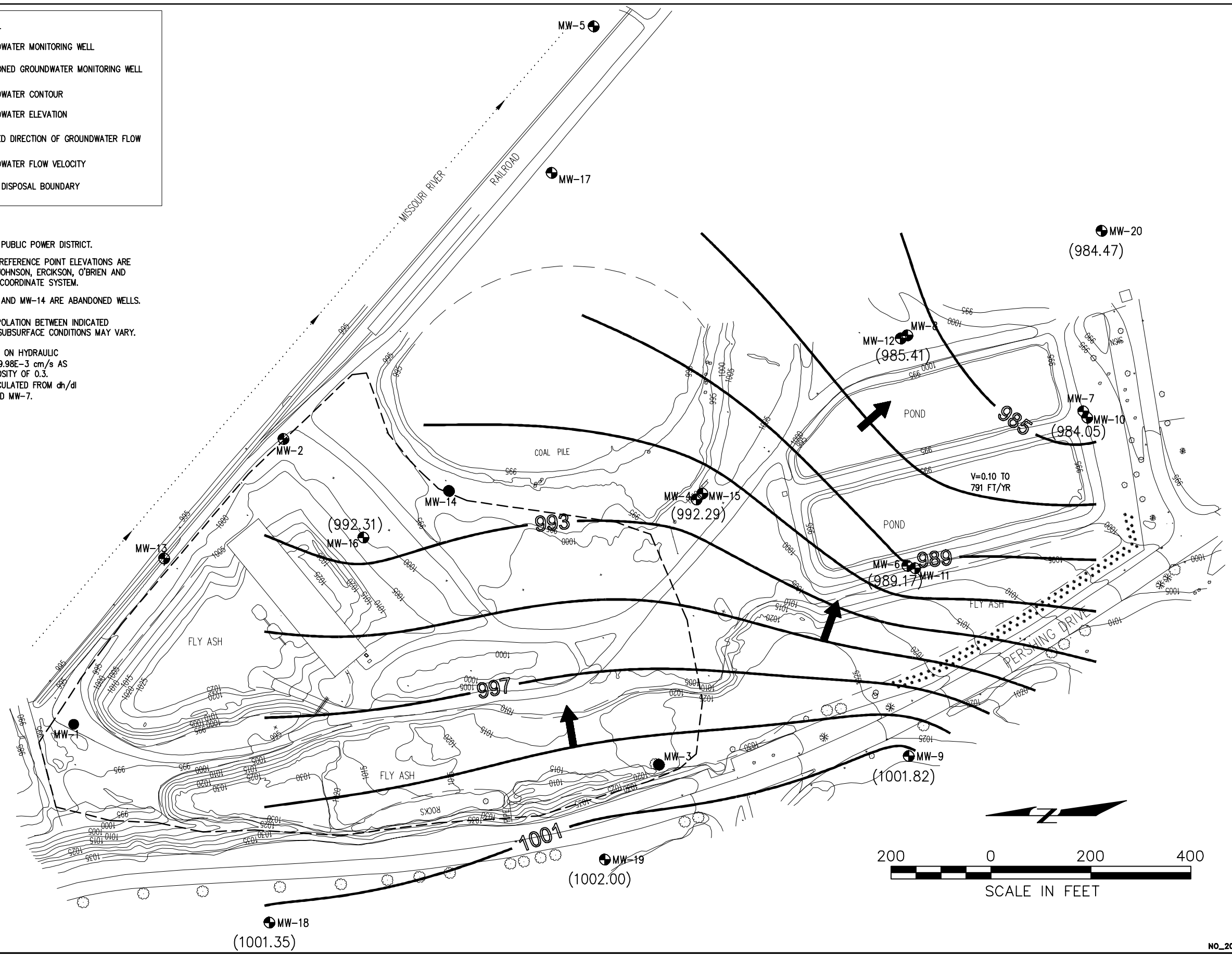
**LEGEND**

- MW-2  GROUNDWATER MONITORING WELL
- MW-1  ABANDONED GROUNDWATER MONITORING WELL
- 984 — GROUNDWATER CONTOUR
- (990.40) GROUNDWATER ELEVATION
-  INFERRED DIRECTION OF GROUNDWATER FLOW
- V=X FT/YR GROUNDWATER FLOW VELOCITY
- - - - PERMIT DISPOSAL BOUNDARY

**NOTES:**

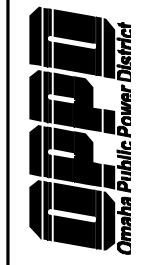
- 1.) BASE MAP FURNISHED BY OMAHA PUBLIC POWER DISTRICT.
- 2.) MONITORING WELL LOCATION AND REFERENCE POINT ELEVATIONS ARE BASED ON MARCH 1995 SURVEY BY JOHNSON, ERICKSON, O'BRIEN AND ASSOCIATES, INC. USING PLANT GRID COORDINATE SYSTEM.
- 3.) MONITORING WELLS MW-1, MW-3, AND MW-14 ARE ABANDONED WELLS.
- 4.) CONTOURS ARE BASED ON INTERPOLATION BETWEEN INDICATED GROUNDWATER ELEVATIONS. ACTUAL SUBSURFACE CONDITIONS MAY VARY.

GROUNDWATER FLOW VELOCITY BASED ON HYDRAULIC CONDUCTIVITY RANGE OF  $1.3E-6$  TO  $9.98E-3$  cm/s AS REPORTED BY SCS 1995 AND A POROSITY OF 0.3. VELOCITY AS SHOWN ON FIGURE CALCULATED FROM  $dh/dl$  OF 0.0230 FT/FT BETWEEN MW-9 AND MW-7.






**FIGURE 8**  
GROUNDWATER CONTOUR MAP - DEEP ZONE  
NOVEMBER 28, 2016

OMAHA PUBLIC POWER DISTRICT  
NORTH OMAHA STATION  
OMAHA, NEBRASKA



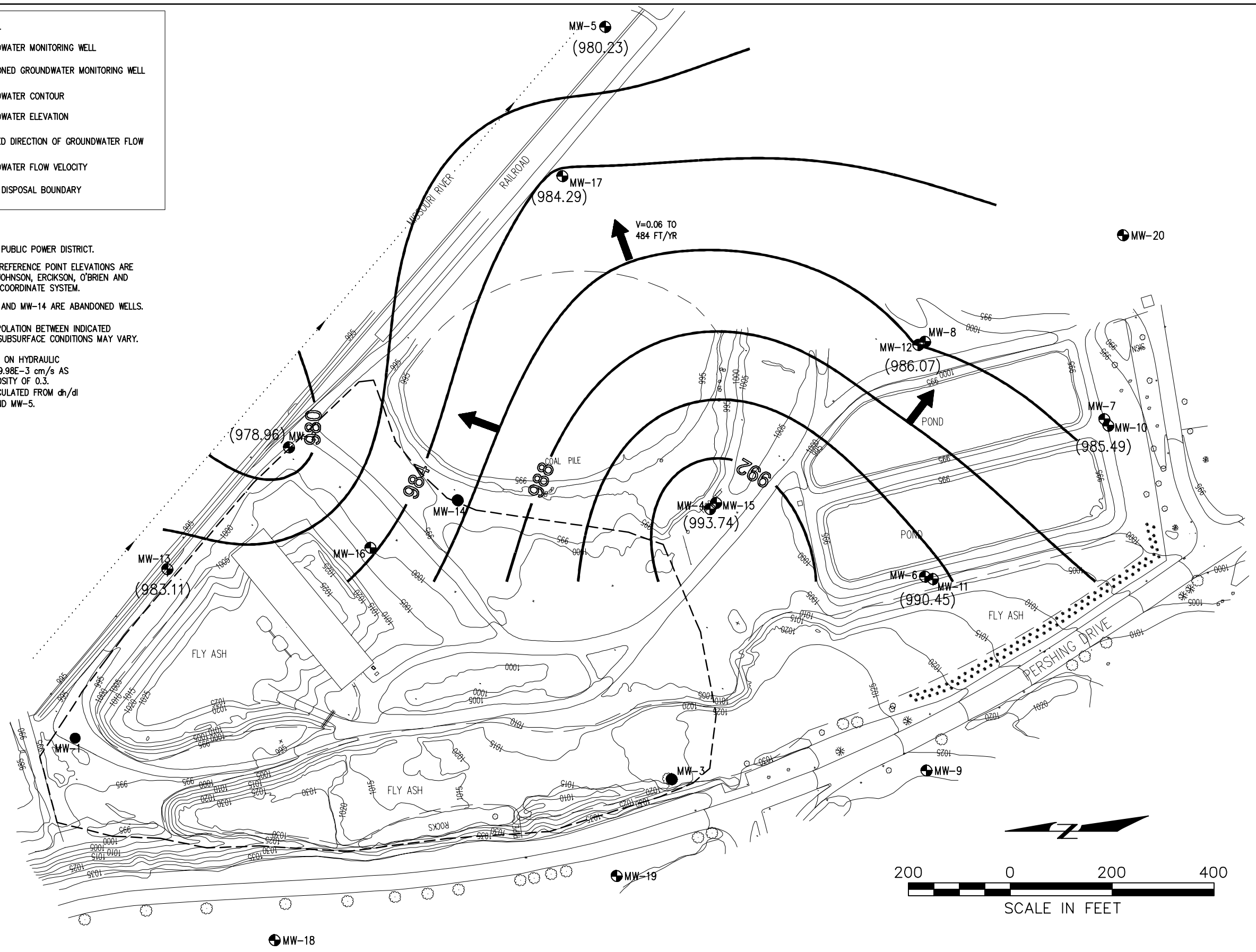
**LEGEND**

- MW-2  GROUNDWATER MONITORING WELL
- MW-1  ABANDONED GROUNDWATER MONITORING WELL
- 984 — GROUNDWATER CONTOUR
- (990.40) GROUNDWATER ELEVATION
-  INFERRED DIRECTION OF GROUNDWATER FLOW
- V=X FT/YR GROUNDWATER FLOW VELOCITY
- - - - PERMIT DISPOSAL BOUNDARY

**NOTES:**

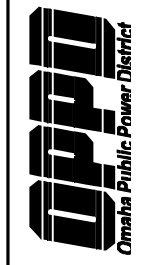
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- 4.) CONTOURS ARE BASED ON INTERPOLATION BETWEEN INDICATED GROUNDWATER ELEVATIONS. ACTUAL SUBSURFACE CONDITIONS MAY VARY.

GROUNDWATER FLOW VELOCITY BASED ON HYDRAULIC CONDUCTIVITY RANGE OF  $1.3E-6$  TO  $9.98E-3$  cm/s AS REPORTED BY SCS 1995 AND A POROSITY OF 0.3. VELOCITY AS SHOWN ON FIGURE CALCULATED FROM  $dh/dl$  OF 0.0141 FT/FT BETWEEN MW-15 AND MW-5.






**FIGURE 9**  
GROUNDWATER CONTOUR MAP - SHALLOW ZONE  
FEBRUARY 17, 2017

OMAHA PUBLIC POWER DISTRICT  
NORTH OMAHA STATION  
OMAHA, NEBRASKA





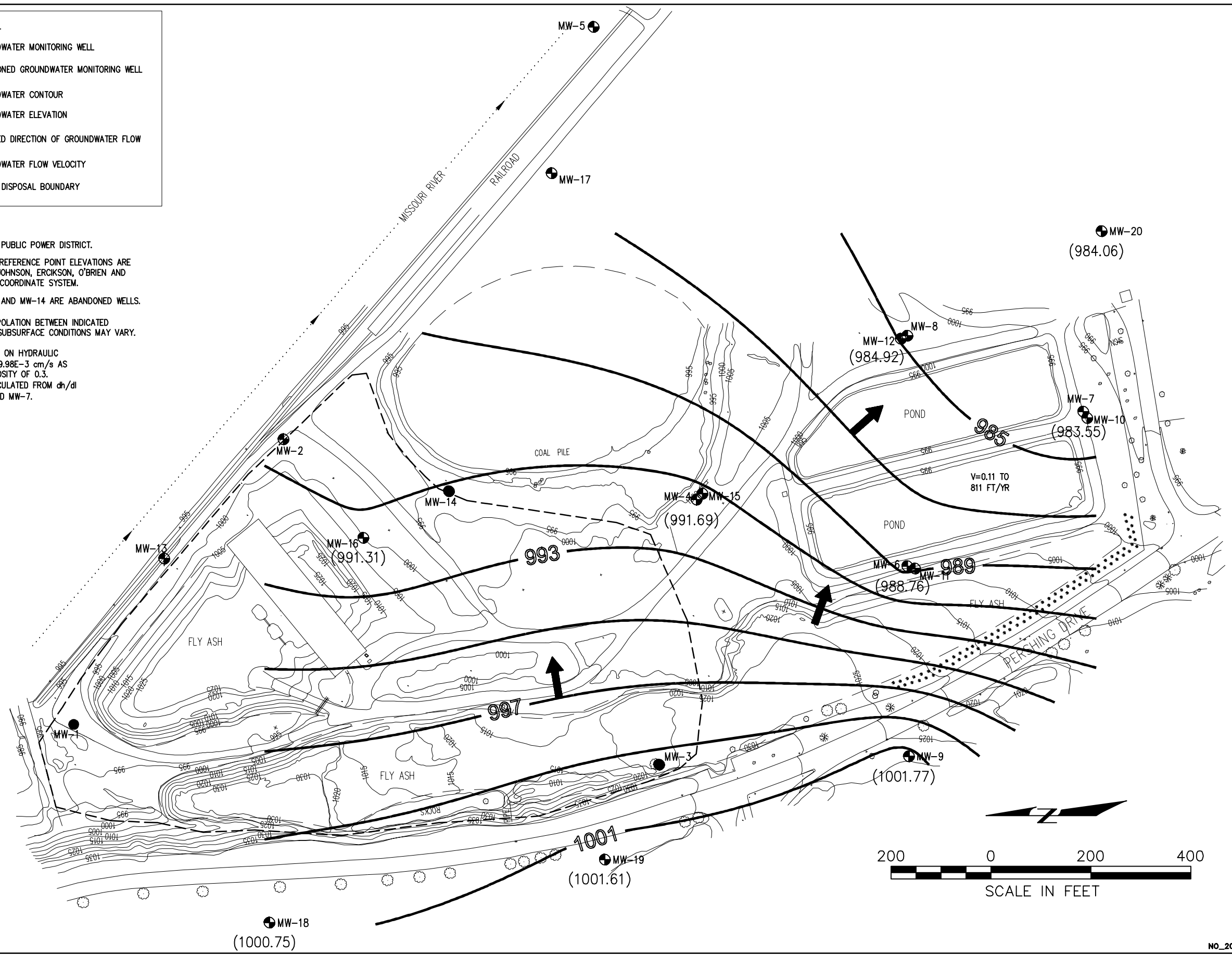
**LEGEND**

- MW-2  GROUNDWATER MONITORING WELL
- MW-1  ABANDONED GROUNDWATER MONITORING WELL
- 984 — GROUNDWATER CONTOUR
- (990.40) GROUNDWATER ELEVATION
-  INFERRED DIRECTION OF GROUNDWATER FLOW
- V=X FT/YR GROUNDWATER FLOW VELOCITY
- - - - PERMIT DISPOSAL BOUNDARY

**NOTES:**

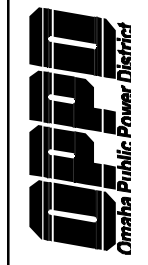
- 1.) BASE MAP FURNISHED BY OMAHA PUBLIC POWER DISTRICT.
- 2.) MONITORING WELL LOCATION AND REFERENCE POINT ELEVATIONS ARE BASED ON MARCH 1995 SURVEY BY JOHNSON, ERICKSON, O'BRIEN AND ASSOCIATES, INC. USING PLANT GRID COORDINATE SYSTEM.
- 3.) MONITORING WELLS MW-1, MW-3, AND MW-14 ARE ABANDONED WELLS.
- 4.) CONTOURS ARE BASED ON INTERPOLATION BETWEEN INDICATED GROUNDWATER ELEVATIONS. ACTUAL SUBSURFACE CONDITIONS MAY VARY.

GROUNDWATER FLOW VELOCITY BASED ON HYDRAULIC CONDUCTIVITY RANGE OF  $1.3E-6$  TO  $9.98E-3$  cm/s AS REPORTED BY SCS 1995 AND A POROSITY OF 0.3. VELOCITY AS SHOWN ON FIGURE CALCULATED FROM  $dh/dl$  OF 0.0236 FT/FT BETWEEN MW-9 AND MW-7.



**FIGURE 10**  
GROUNDWATER CONTOUR MAP - DEEP ZONE  
FEBRUARY 17, 2017

OMAHA PUBLIC POWER DISTRICT  
NORTH OMAHA STATION  
OMAHA, NEBRASKA





LEGEND	
MW-2	GROUNDWATER MONITORING WELL
MW-1	ABANDONED GROUNDWATER MONITORING WELL
— 984 —	GROUNDWATER CONTOUR
(990.40)	GROUNDWATER ELEVATION
	INFERRED DIRECTION OF GROUNDWATER FLOW
V=X FT/YR	GROUNDWATER FLOW VELOCITY
- - - - -	PERMIT DISPOSAL BOUNDARY

**NOTES:**

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- 2.) MONITORING WELL LOCATION AND REFERENCE POINT ELEVATIONS ARE BASED ON MARCH 1995 SURVEY BY JOHNSON, ERICKSON, O'BRIEN AND ASSOCIATES, INC. USING PLANT GRID COORDINATE SYSTEM.
- 3.) MONITORING WELLS MW-1, MW-3, AND MW-14 ARE ABANDONED WELLS.
- 4.) CONTOURS ARE BASED ON INTERPOLATION BETWEEN INDICATED GROUNDWATER ELEVATIONS. ACTUAL SUBSURFACE CONDITIONS MAY VARY.

GROUNDWATER FLOW VELOCITY BASED ON HYDRAULIC CONDUCTIVITY RANGE OF 1.3E-6 TO 9.98E-3 cm/s AS REPORTED BY SCS 1995 AND A POROSITY OF 0.3. VELOCITY AS SHOWN ON FIGURE CALCULATED FROM dh/dl OF 0.0148 FT/FT BETWEEN MW-15 AND MW-5.

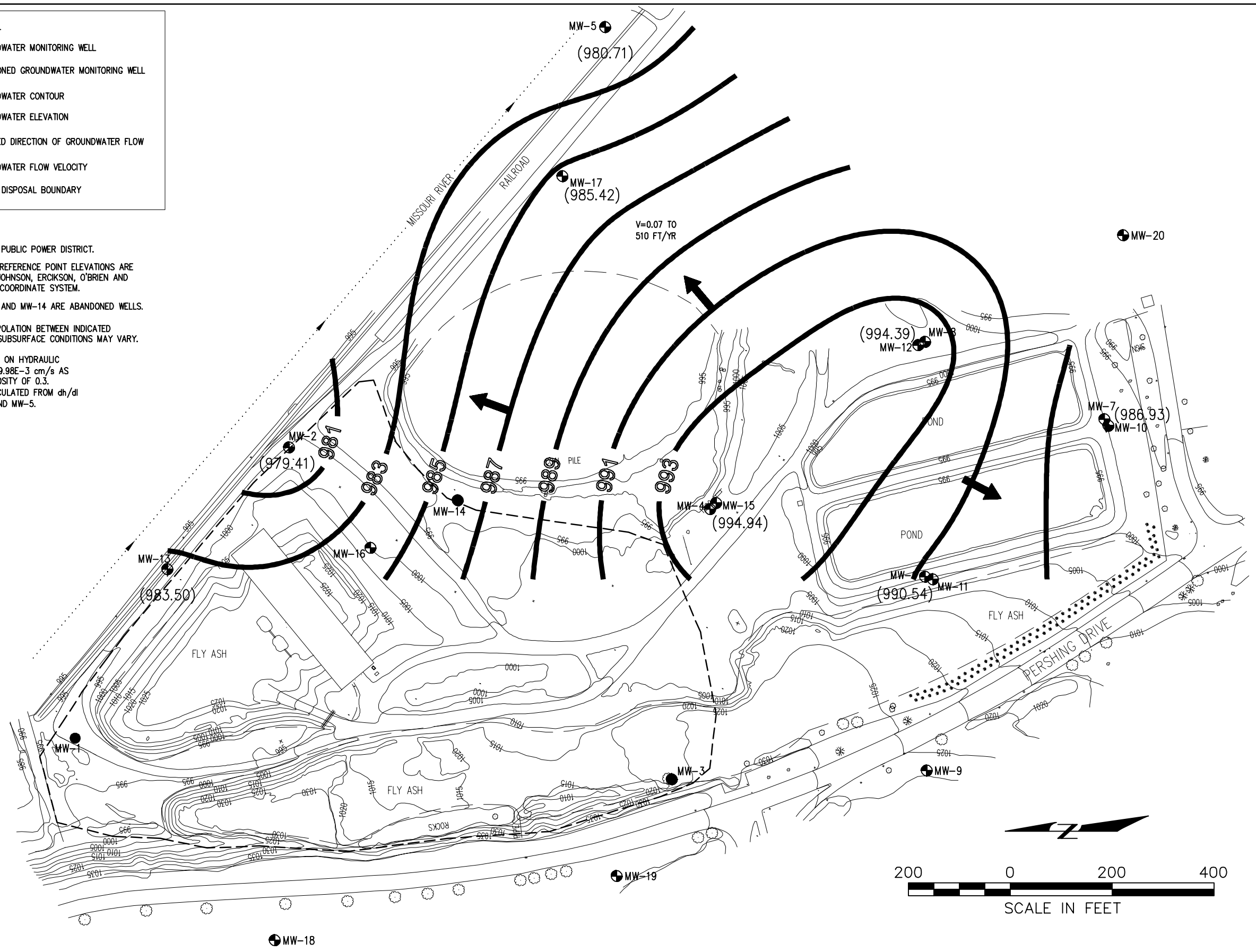
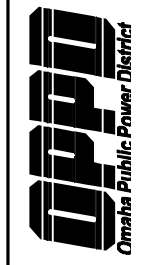





FIGURE 11  
GROUNDWATER CONTOUR MAP – SHALLOW ZONE  
MAY 2, 2017

OMAHA PUBLIC POWER DISTRICT  
NORTH OMAHA STATION  
OMAHA, NEBRASKA



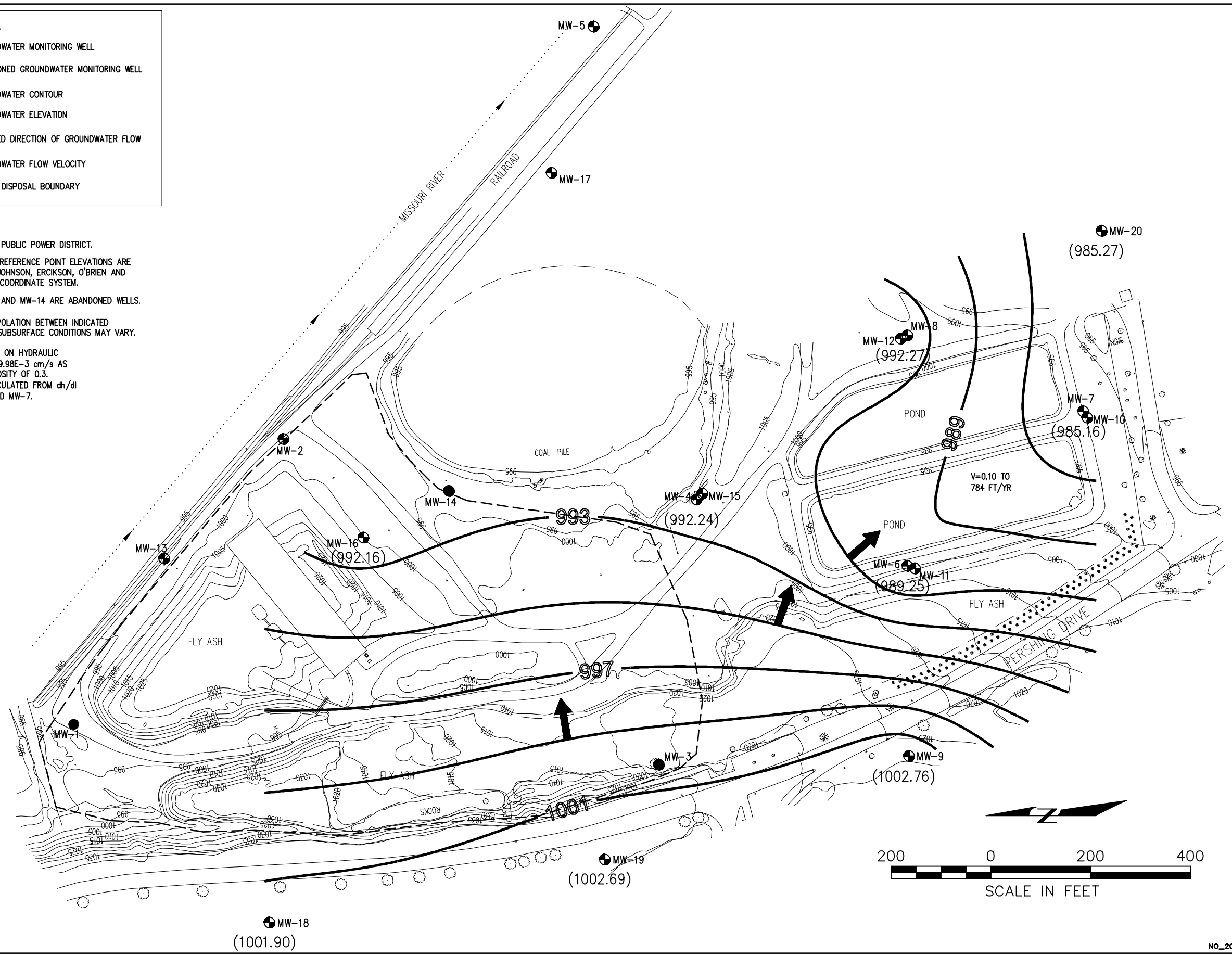
**LEGEND**

- MW-2  GROUNDWATER MONITORING WELL
- MW-1  ABANDONED GROUNDWATER MONITORING WELL
- 984 — GROUNDWATER CONTOUR
- (990.40) GROUNDWATER ELEVATION
-  INFERRED DIRECTION OF GROUNDWATER FLOW
- V=X FT/YR GROUNDWATER FLOW VELOCITY
- - - - PERMIT DISPOSAL BOUNDARY

**NOTES:**

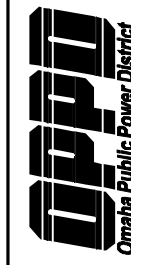
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- 2.) MONITORING WELL LOCATION AND REFERENCE POINT ELEVATIONS ARE BASED ON MARCH 1995 SURVEY BY JOHNSON, ERICKSON, O'BRIEN AND ASSOCIATES, INC. USING PLANT GRID COORDINATE SYSTEM.
- 3.) MONITORING WELLS MW-1, MW-3, AND MW-14 ARE ABANDONED WELLS.
- 4.) CONTOURS ARE BASED ON INTERPOLATION BETWEEN INDICATED GROUNDWATER ELEVATIONS. ACTUAL SUBSURFACE CONDITIONS MAY VARY.

GROUNDWATER FLOW VELOCITY BASED ON HYDRAULIC CONDUCTIVITY RANGE OF  $1.3E-6$  TO  $9.98E-3$  cm/s AS REPORTED BY SCS 1995 AND A POROSITY OF 0.3. VELOCITY AS SHOWN ON FIGURE CALCULATED FROM dh/dl OF 0.0228 FT/FT BETWEEN MW-9 AND MW-7.






**FIGURE 12**  
GROUNDWATER CONTOUR MAP - DEEP ZONE  
MAY 2, 2017

OMAHA PUBLIC POWER DISTRICT  
NORTH OMAHA STATION  
OMAHA, NEBRASKA



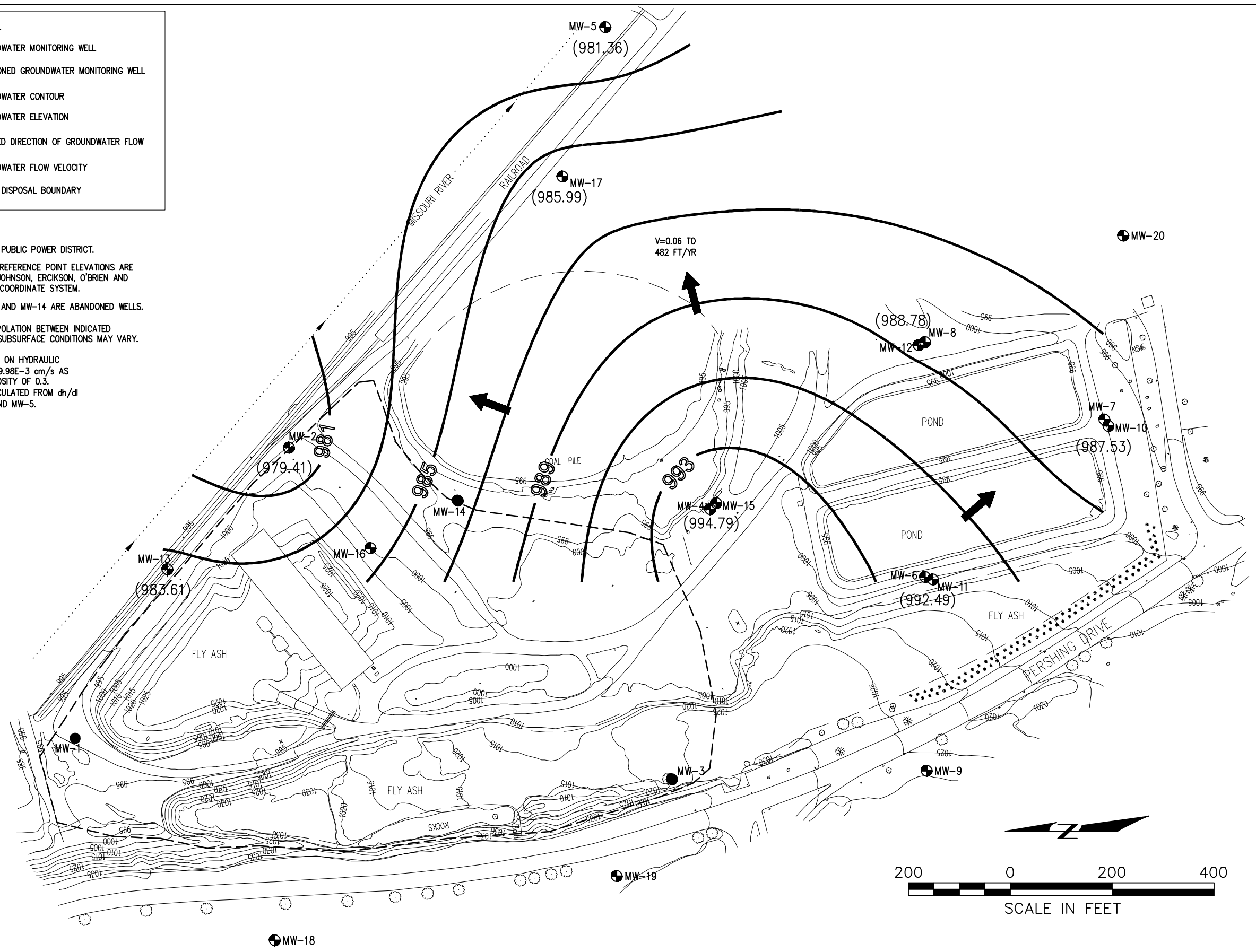
**LEGEND**

- MW-2  GROUNDWATER MONITORING WELL
- MW-1  ABANDONED GROUNDWATER MONITORING WELL
- 984 — GROUNDWATER CONTOUR
- (990.40) GROUNDWATER ELEVATION
-  INFERRED DIRECTION OF GROUNDWATER FLOW
- V=X FT/YR GROUNDWATER FLOW VELOCITY
- - - - PERMIT DISPOSAL BOUNDARY

**NOTES:**

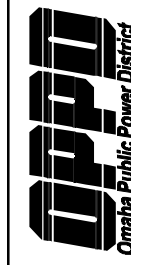
- 1.) BASE MAP FURNISHED BY OMAHA PUBLIC POWER DISTRICT.
- 2.) MONITORING WELL LOCATION AND REFERENCE POINT ELEVATIONS ARE BASED ON MARCH 1995 SURVEY BY JOHNSON, ERICKSON, O'BRIEN AND ASSOCIATES, INC. USING PLANT GRID COORDINATE SYSTEM.
- 3.) MONITORING WELLS MW-1, MW-3, AND MW-14 ARE ABANDONED WELLS.
- 4.) CONTOURS ARE BASED ON INTERPOLATION BETWEEN INDICATED GROUNDWATER ELEVATIONS. ACTUAL SUBSURFACE CONDITIONS MAY VARY.

GROUNDWATER FLOW VELOCITY BASED ON HYDRAULIC CONDUCTIVITY RANGE OF  $1.3E-6$  TO  $9.98E-3$  cm/s AS REPORTED BY SCS 1995 AND A POROSITY OF 0.3. VELOCITY AS SHOWN ON FIGURE CALCULATED FROM  $dh/dl$  OF 0.0140 FT/FT BETWEEN MW-15 AND MW-5.



**FIGURE 13**  
GROUNDWATER CONTOUR MAP - SHALLOW ZONE  
JUNE 19, 2017

OMAHA PUBLIC POWER DISTRICT  
NORTH OMAHA STATION  
OMAHA, NEBRASKA



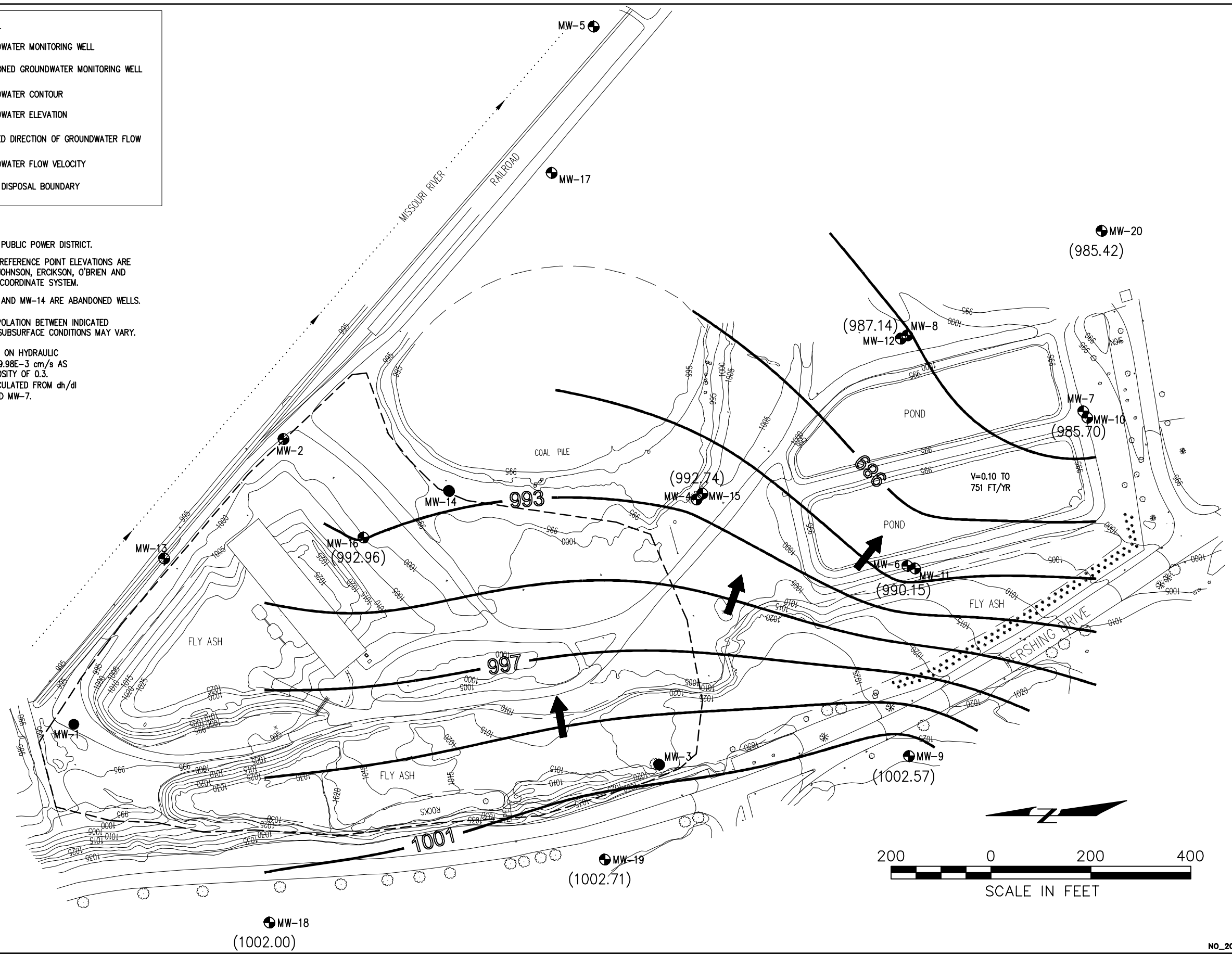
**LEGEND**

- MW-2 GROUNDWATER MONITORING WELL
- MW-1 ABANDONED GROUNDWATER MONITORING WELL
- 984 — GROUNDWATER CONTOUR
- (990.40) GROUNDWATER ELEVATION
- INFERRED DIRECTION OF GROUNDWATER FLOW
- V=X FT/YR GROUNDWATER FLOW VELOCITY
- - - - PERMIT DISPOSAL BOUNDARY

**NOTES:**

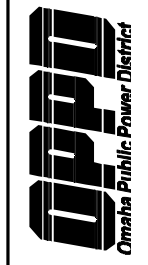
- 1.) BASE MAP FURNISHED BY OMAHA PUBLIC POWER DISTRICT.
- 2.) MONITORING WELL LOCATION AND REFERENCE POINT ELEVATIONS ARE BASED ON MARCH 1995 SURVEY BY JOHNSON, ERICKSON, O'BRIEN AND ASSOCIATES, INC. USING PLANT GRID COORDINATE SYSTEM.
- 3.) MONITORING WELLS MW-1, MW-3, AND MW-14 ARE ABANDONED WELLS.
- 4.) CONTOURS ARE BASED ON INTERPOLATION BETWEEN INDICATED GROUNDWATER ELEVATIONS. ACTUAL SUBSURFACE CONDITIONS MAY VARY.

GROUNDWATER FLOW VELOCITY BASED ON HYDRAULIC CONDUCTIVITY RANGE OF  $1.3E-6$  TO  $9.98E-3$  cm/s AS REPORTED BY SCS 1995 AND A POROSITY OF 0.3. VELOCITY AS SHOWN ON FIGURE CALCULATED FROM  $dh/dl$  OF 0.0218 FT/FT BETWEEN MW-9 AND MW-7.



**FIGURE 14**  
GROUNDWATER CONTOUR MAP - DEEP ZONE  
JUNE 19, 2017

OMAHA PUBLIC POWER DISTRICT  
NORTH OMAHA STATION  
OMAHA, NEBRASKA



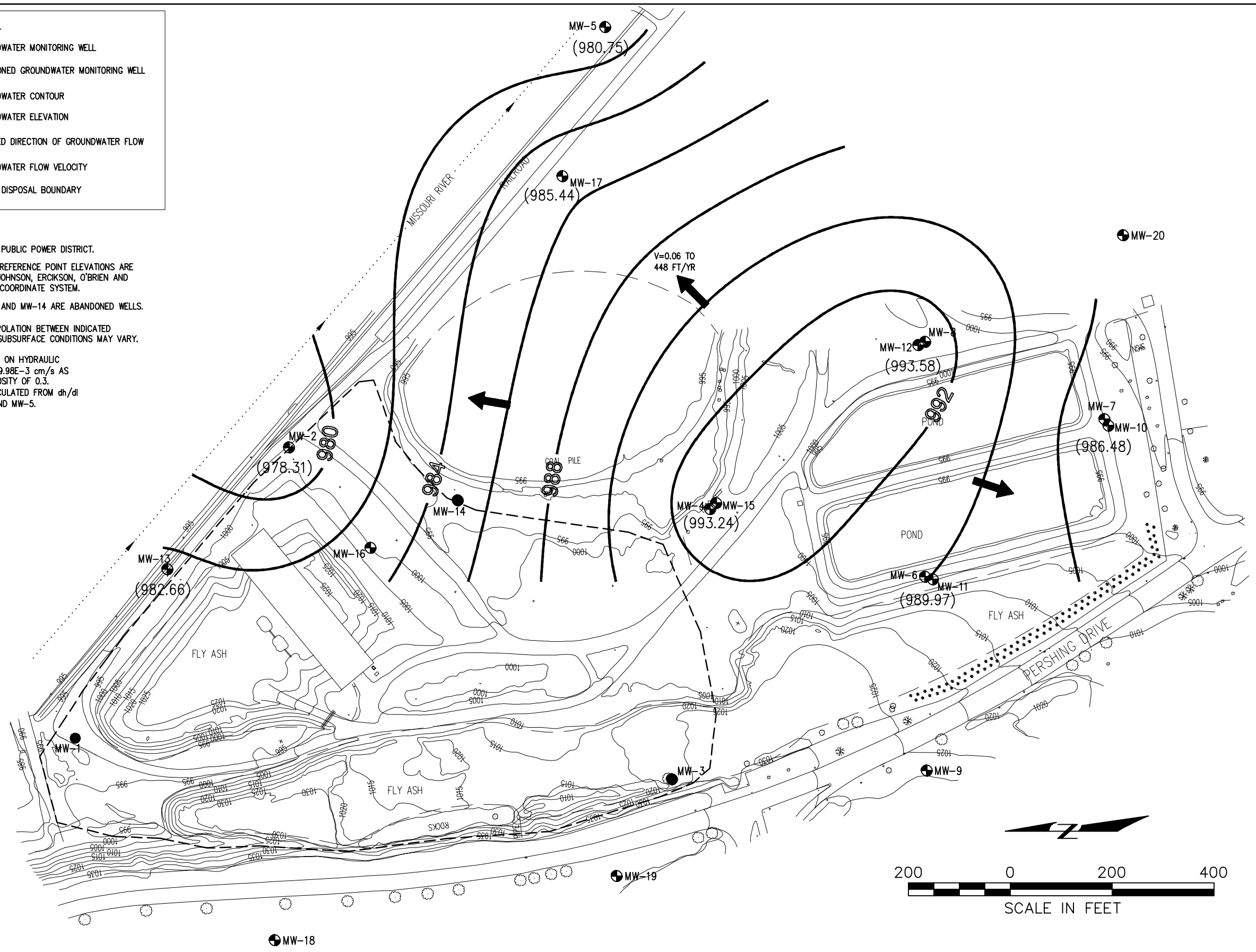
**LEGEND**

- MW-2 GROUNDWATER MONITORING WELL
- MW-1 ABANDONED GROUNDWATER MONITORING WELL
- 984 — GROUNDWATER CONTOUR
- (990.40) GROUNDWATER ELEVATION
- INFERRED DIRECTION OF GROUNDWATER FLOW
- V=X FT/YR GROUNDWATER FLOW VELOCITY
- - - - PERMIT DISPOSAL BOUNDARY

**NOTES:**

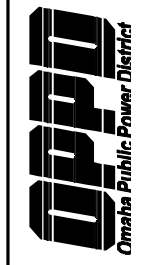
- 1.) BASE MAP FURNISHED BY OMAHA PUBLIC POWER DISTRICT.
- 2.) MONITORING WELL LOCATION AND REFERENCE POINT ELEVATIONS ARE BASED ON MARCH 1995 SURVEY BY JOHNSON, ERICKSON, O'BRIEN AND ASSOCIATES, INC. USING PLANT GRID COORDINATE SYSTEM.
- 3.) MONITORING WELLS MW-1, MW-3, AND MW-14 ARE ABANDONED WELLS.
- 4.) CONTOURS ARE BASED ON INTERPOLATION BETWEEN INDICATED GROUNDWATER ELEVATIONS. ACTUAL SUBSURFACE CONDITIONS MAY VARY.

GROUNDWATER FLOW VELOCITY BASED ON HYDRAULIC CONDUCTIVITY RANGE OF  $1.3E-6$  TO  $9.98E-3$  cm/s AS REPORTED BY SCS 1995 AND A POROSITY OF 0.3. VELOCITY AS SHOWN ON FIGURE CALCULATED FROM dh/dl OF 0.0130 FT/FT BETWEEN MW-15 AND MW-5.






**FIGURE 15**  
GROUNDWATER CONTOUR MAP - SHALLOW ZONE  
JULY 31, 2017

OMAHA PUBLIC POWER DISTRICT  
NORTH OMAHA STATION  
OMAHA, NEBRASKA



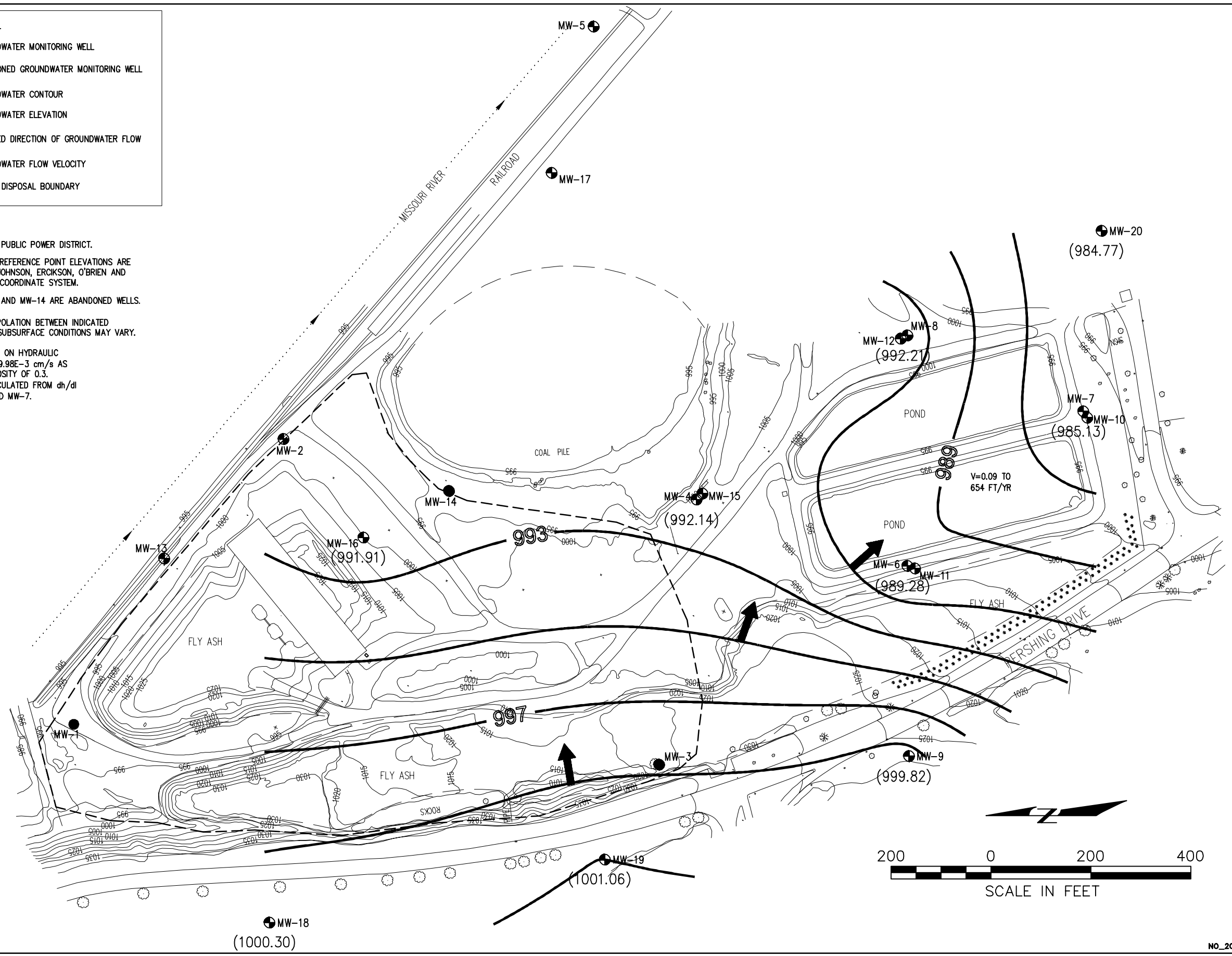
**LEGEND**

- MW-2  GROUNDWATER MONITORING WELL
- MW-1  ABANDONED GROUNDWATER MONITORING WELL
- 984 — GROUNDWATER CONTOUR
- (990.40) GROUNDWATER ELEVATION
-  INFERRED DIRECTION OF GROUNDWATER FLOW
- V=X FT/YR GROUNDWATER FLOW VELOCITY
- - - - PERMIT DISPOSAL BOUNDARY

**NOTES:**

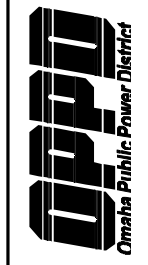
- 1.) BASE MAP FURNISHED BY OMAHA PUBLIC POWER DISTRICT.
- 2.) MONITORING WELL LOCATION AND REFERENCE POINT ELEVATIONS ARE BASED ON MARCH 1995 SURVEY BY JOHNSON, ERICKSON, O'BRIEN AND ASSOCIATES, INC. USING PLANT GRID COORDINATE SYSTEM.
- 3.) MONITORING WELLS MW-1, MW-3, AND MW-14 ARE ABANDONED WELLS.
- 4.) CONTOURS ARE BASED ON INTERPOLATION BETWEEN INDICATED GROUNDWATER ELEVATIONS. ACTUAL SUBSURFACE CONDITIONS MAY VARY.

GROUNDWATER FLOW VELOCITY BASED ON HYDRAULIC CONDUCTIVITY RANGE OF  $1.3E-6$  TO  $9.98E-3$  cm/s AS REPORTED BY SCS 1995 AND A POROSITY OF 0.3. VELOCITY AS SHOWN ON FIGURE CALCULATED FROM  $dh/dl$  OF 0.0190 FT/FT BETWEEN MW-9 AND MW-7.






**FIGURE 16**  
GROUNDWATER CONTOUR MAP - DEEP ZONE  
JULY 31, 2017

OMAHA PUBLIC POWER DISTRICT  
NORTH OMAHA STATION  
OMAHA, NEBRASKA



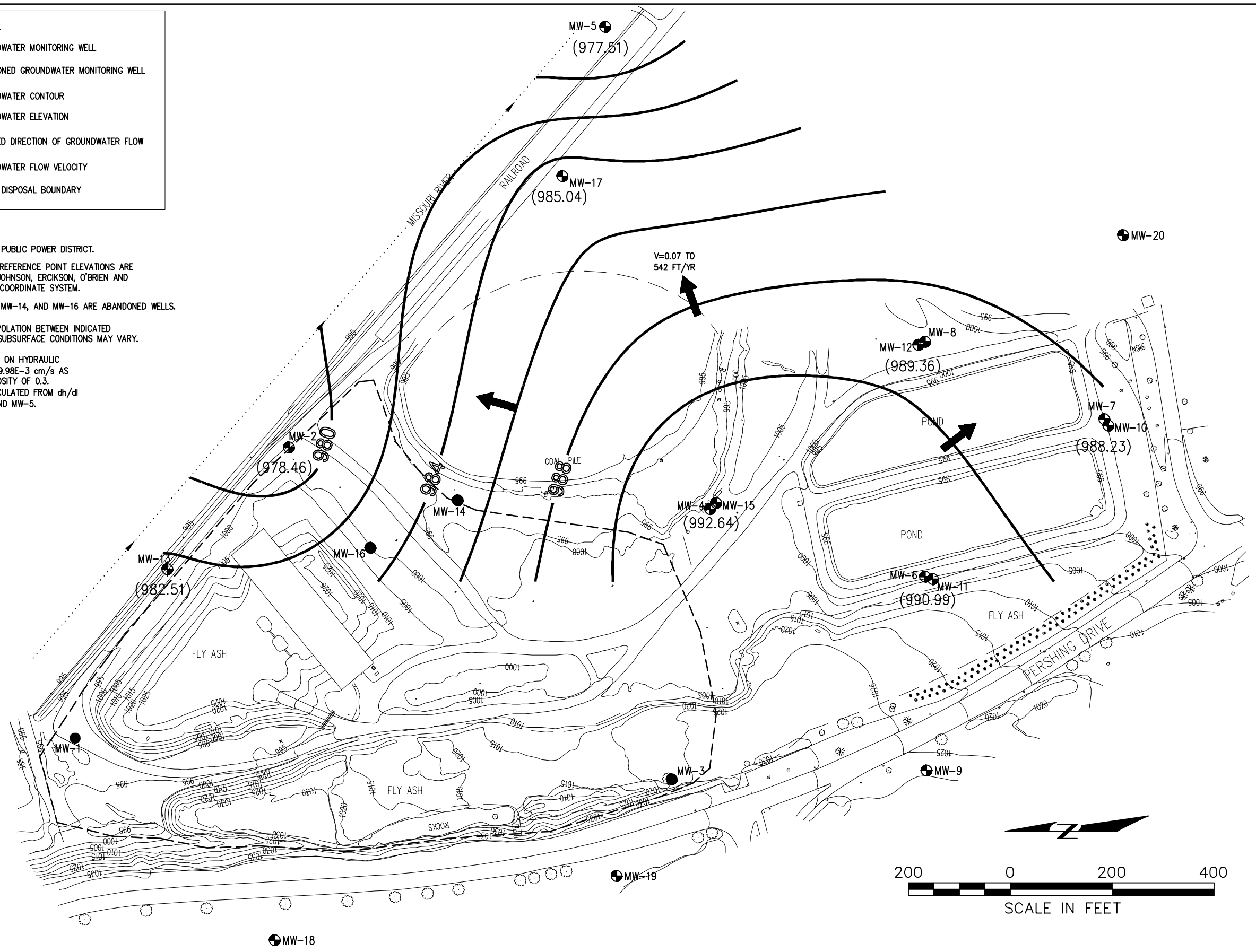
**LEGEND**

- MW-2  GROUNDWATER MONITORING WELL
- MW-1  ABANDONED GROUNDWATER MONITORING WELL
- 984 — GROUNDWATER CONTOUR
- (990.40) GROUNDWATER ELEVATION
-  INFERRED DIRECTION OF GROUNDWATER FLOW
- V=X FT/YR GROUNDWATER FLOW VELOCITY
- - - - PERMIT DISPOSAL BOUNDARY

**NOTES:**

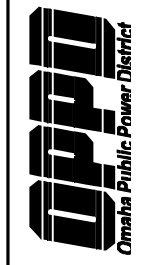
- 1.) BASE MAP FURNISHED BY OMAHA PUBLIC POWER DISTRICT.
- 2.) MONITORING WELL LOCATION AND REFERENCE POINT ELEVATIONS ARE BASED ON MARCH 1995 SURVEY BY JOHNSON, ERICKSON, O'BRIEN AND ASSOCIATES, INC. USING PLANT GRID COORDINATE SYSTEM.
- 3.) MONITORING WELLS MW-1, MW-3, MW-14, AND MW-16 ARE ABANDONED WELLS.
- 4.) CONTOURS ARE BASED ON INTERPOLATION BETWEEN INDICATED GROUNDWATER ELEVATIONS. ACTUAL SUBSURFACE CONDITIONS MAY VARY.

GROUNDWATER FLOW VELOCITY BASED ON HYDRAULIC CONDUCTIVITY RANGE OF  $1.3E-6$  TO  $9.98E-3$  cm/s AS REPORTED BY SCS 1995 AND A POROSITY OF 0.3. VELOCITY AS SHOWN ON FIGURE CALCULATED FROM  $dh/dl$  OF 0.0158 FT/FT BETWEEN MW-15 AND MW-5.






**FIGURE 17**  
GROUNDWATER CONTOUR MAP - SHALLOW ZONE  
NOVEMBER 7, 2017

OMAHA PUBLIC POWER DISTRICT  
NORTH OMAHA STATION  
OMAHA, NEBRASKA





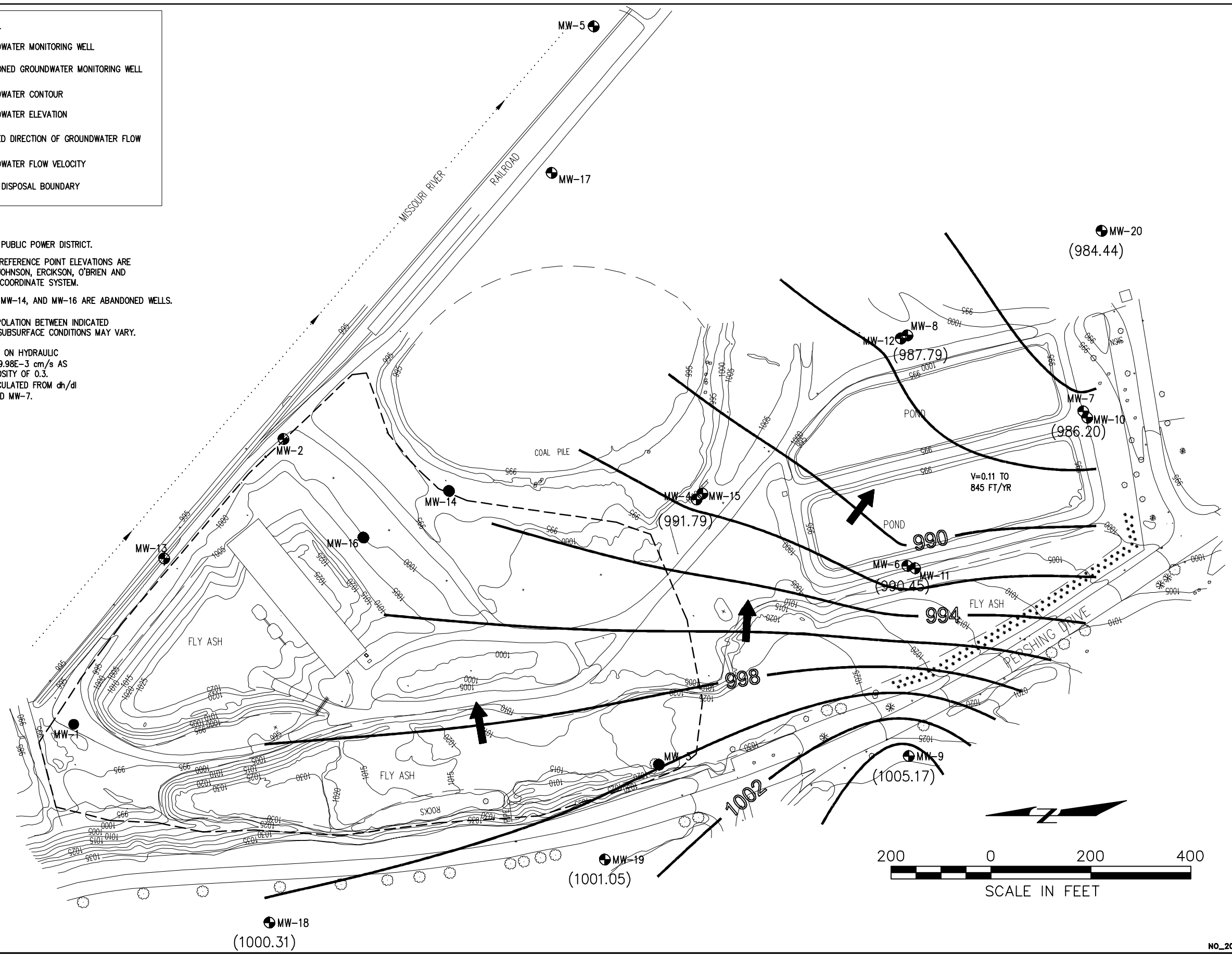
**LEGEND**

- MW-2  GROUNDWATER MONITORING WELL
- MW-1  ABANDONED GROUNDWATER MONITORING WELL
- 984 — GROUNDWATER CONTOUR
- (990.40) GROUNDWATER ELEVATION
-  INFERRED DIRECTION OF GROUNDWATER FLOW
- V=X FT/YR GROUNDWATER FLOW VELOCITY
- - - - PERMIT DISPOSAL BOUNDARY

**NOTES:**

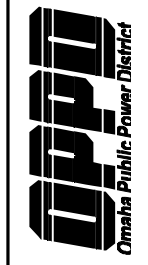
- 1.) BASE MAP FURNISHED BY OMAHA PUBLIC POWER DISTRICT.
- 2.) MONITORING WELL LOCATION AND REFERENCE POINT ELEVATIONS ARE BASED ON MARCH 1995 SURVEY BY JOHNSON, ERICKSON, O'BRIEN AND ASSOCIATES, INC. USING PLANT GRID COORDINATE SYSTEM.
- 3.) MONITORING WELLS MW-1, MW-3, MW-14, AND MW-16 ARE ABANDONED WELLS.
- 4.) CONTOURS ARE BASED ON INTERPOLATION BETWEEN INDICATED GROUNDWATER ELEVATIONS. ACTUAL SUBSURFACE CONDITIONS MAY VARY.

GROUNDWATER FLOW VELOCITY BASED ON HYDRAULIC CONDUCTIVITY RANGE OF  $1.3E-6$  TO  $9.98E-3$  cm/s AS REPORTED BY SCS 1995 AND A POROSITY OF 0.3. VELOCITY AS SHOWN ON FIGURE CALCULATED FROM  $dh/dl$  OF 0.0245 FT/FT BETWEEN MW-9 AND MW-7.



**FIGURE 18**  
GROUNDWATER CONTOUR MAP - DEEP ZONE  
NOVEMBER 7, 2017

OMAHA PUBLIC POWER DISTRICT  
NORTH OMAHA STATION  
OMAHA, 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: 310-77024-1

Client Project/Site: North Omaha Station CCR Q1 2016

For:

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

Attn: Brad Sojka



Authorized for release by:  
4/6/2016 4:14:11 PM

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

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.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: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

**Job ID: 310-77024-1**

**Laboratory: TestAmerica Cedar Falls**

## Narrative

**Job Narrative**  
**310-77024-1**

## Comments

No additional comments.

## Receipt

The samples were received on 3/25/2016 9:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 0.6° C, 1.9° C and 2.2° 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 samples were diluted due to the nature of the sample matrix: MW2 (310-77024-1), MW5 (310-77024-2), MW6 (310-77024-3), MW8 (310-77024-4), MW15 (310-77024-7), MW18 (310-77024-10), MW19 (310-77024-11), MW20 (310-77024-12), and DUP-2 (310-77024-14). Elevated reporting limits (RLs) are provided.

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

# Sample Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-77024-1	MW2	Ground Water	03/22/16 12:49	03/25/16 09:40
310-77024-2	MW5	Ground Water	03/23/16 10:37	03/25/16 09:40
310-77024-3	MW6	Ground Water	03/22/16 14:49	03/25/16 09:40
310-77024-4	MW8	Ground Water	03/23/16 08:35	03/25/16 09:40
310-77024-5	MW9	Ground Water	03/22/16 11:40	03/25/16 09:40
310-77024-6	MW13	Ground Water	03/22/16 12:21	03/25/16 09:40
310-77024-7	MW15	Ground Water	03/22/16 14:16	03/25/16 09:40
310-77024-8	MW16	Ground Water	03/22/16 12:19	03/25/16 09:40
310-77024-9	MW17	Ground Water	03/23/16 09:58	03/25/16 09:40
310-77024-10	MW18	Ground Water	03/22/16 10:06	03/25/16 09:40
310-77024-11	MW19	Ground Water	03/22/16 12:02	03/25/16 09:40
310-77024-12	MW20	Ground Water	03/23/16 09:17	03/25/16 09:40
310-77024-13	DUP-1	Ground Water	03/22/16 12:23	03/25/16 09:40
310-77024-14	DUP-2	Ground Water	03/23/16 08:37	03/25/16 09:40

# Detection Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

## Client Sample ID: MW2

## Lab Sample ID: 310-77024-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	23.1		5.00		mg/L	5		9056A	Total/NA
Sulfate	1320		100		mg/L	100		9056A	Total/NA
Arsenic	0.245		0.00200		mg/L	1		6020A	Total/NA
Barium	0.115		0.00200		mg/L	1		6020A	Total/NA
Boron	1.60		0.200		mg/L	1		6020A	Total/NA
Calcium	267		2.00		mg/L	10		6020A	Total/NA
Cobalt	0.000514		0.000500		mg/L	1		6020A	Total/NA
Lead	0.000601		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1920		300		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW5

## Lab Sample ID: 310-77024-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	47.7		5.00		mg/L	5		9056A	Total/NA
Sulfate	1230		100		mg/L	100		9056A	Total/NA
Lithium	0.0799		0.0500		mg/L	1		6010C	Total/NA
Arsenic	0.0432		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0437		0.00200		mg/L	1		6020A	Total/NA
Boron	0.545		0.200		mg/L	1		6020A	Total/NA
Calcium	458		2.00		mg/L	10		6020A	Total/NA
Total Dissolved Solids	3150		750		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW6

## Lab Sample ID: 310-77024-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	217		5.00		mg/L	5		9056A	Total/NA
Sulfate	219		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.0365		0.00200		mg/L	1		6020A	Total/NA
Barium	0.183		0.00200		mg/L	1		6020A	Total/NA
Boron	0.376		0.200		mg/L	1		6020A	Total/NA
Cadmium	0.00213		0.000500		mg/L	1		6020A	Total/NA
Calcium	263		2.00		mg/L	10		6020A	Total/NA
Cobalt	0.00592		0.000500		mg/L	1		6020A	Total/NA
Lead	0.00596		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.0435		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1200		60.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW8

## Lab Sample ID: 310-77024-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	10.6		5.00		mg/L	5		9056A	Total/NA
Sulfate	618		100		mg/L	100		9056A	Total/NA
Arsenic	0.0163		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0880		0.00200		mg/L	1		6020A	Total/NA
Boron	1.01		0.200		mg/L	1		6020A	Total/NA
Calcium	133		2.00		mg/L	10		6020A	Total/NA
Lead	0.00168		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.107		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	964		30.0		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Cedar Falls

# Detection Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

## Client Sample ID: MW9

## Lab Sample ID: 310-77024-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	121		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.35		0.500		mg/L	5		9056A	Total/NA
Sulfate	23.0		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.00454		0.00200		mg/L	1		6020A	Total/NA
Barium	0.442		0.00200		mg/L	1		6020A	Total/NA
Calcium	147		2.00		mg/L	10		6020A	Total/NA
Cobalt	0.00146		0.000500		mg/L	1		6020A	Total/NA
Lead	0.00366		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	708		30.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW13

## Lab Sample ID: 310-77024-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.97		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.796		0.500		mg/L	5		9056A	Total/NA
Sulfate	486		20.0		mg/L	20		9056A	Total/NA
Arsenic	0.0923		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0652		0.00200		mg/L	1		6020A	Total/NA
Boron	2.05		0.200		mg/L	1		6020A	Total/NA
Calcium	127		2.00		mg/L	10		6020A	Total/NA
Molybdenum	0.704		0.00200		mg/L	1		6020A	Total/NA
Selenium	0.0205		0.00500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1050		60.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW15

## Lab Sample ID: 310-77024-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	24.3		5.00		mg/L	5		9056A	Total/NA
Sulfate	262		100		mg/L	100		9056A	Total/NA
Antimony	0.00145		0.00100		mg/L	1		6020A	Total/NA
Barium	0.0314		0.00200		mg/L	1		6020A	Total/NA
Boron	3.11		0.200		mg/L	1		6020A	Total/NA
Calcium	311		2.00		mg/L	10		6020A	Total/NA
Chromium	0.0194		0.00500		mg/L	1		6020A	Total/NA
Molybdenum	0.389		0.00200		mg/L	1		6020A	Total/NA
Selenium	0.104		0.00500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1510		60.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW16

## Lab Sample ID: 310-77024-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	64.7		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.84		0.500		mg/L	5		9056A	Total/NA
Sulfate	345		20.0		mg/L	20		9056A	Total/NA
Barium	0.0665		0.00200		mg/L	1		6020A	Total/NA
Boron	0.367		0.200		mg/L	1		6020A	Total/NA
Calcium	180		2.00		mg/L	10		6020A	Total/NA
Cobalt	0.000830		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.0180		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	948		60.0		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Cedar Falls

# Detection Summary

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

## Client Sample ID: MW17

## Lab Sample ID: 310-77024-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	51.3		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.36		0.500		mg/L	5		9056A	Total/NA
Sulfate	1010		100		mg/L	100		9056A	Total/NA
Lithium	0.114		0.0500		mg/L	1		6010C	Total/NA
Arsenic	0.00735		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0276		0.00200		mg/L	1		6020A	Total/NA
Boron	0.668		0.200		mg/L	1		6020A	Total/NA
Calcium	392		2.00		mg/L	10		6020A	Total/NA
Cobalt	0.00813		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	3150		750		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW18

## Lab Sample ID: 310-77024-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	24.8		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.00345		0.00200		mg/L	1		6020A	Total/NA
Barium	0.343		0.00200		mg/L	1		6020A	Total/NA
Calcium	115		2.00		mg/L	10		6020A	Total/NA
Cobalt	0.00152		0.000500		mg/L	1		6020A	Total/NA
Lead	0.00479		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	504		30.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW19

## Lab Sample ID: 310-77024-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.50		5.00		mg/L	5		9056A	Total/NA
Sulfate	29.5		5.00		mg/L	5		9056A	Total/NA
Barium	0.330		0.00200		mg/L	1		6020A	Total/NA
Calcium	103		2.00		mg/L	10		6020A	Total/NA
Total Dissolved Solids	494		30.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW20

## Lab Sample ID: 310-77024-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	35.3		5.00		mg/L	5		9056A	Total/NA
Sulfate	477		20.0		mg/L	20		9056A	Total/NA
Arsenic	0.0483		0.00200		mg/L	1		6020A	Total/NA
Barium	0.105		0.00200		mg/L	1		6020A	Total/NA
Boron	0.289		0.200		mg/L	1		6020A	Total/NA
Calcium	176		2.00		mg/L	10		6020A	Total/NA
Cobalt	0.000740		0.000500		mg/L	1		6020A	Total/NA
Lead	0.000741		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.0106		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1070		60.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: DUP-1

## Lab Sample ID: 310-77024-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.55		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.670		0.500		mg/L	5		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Cedar Falls



# Detection Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

## Client Sample ID: DUP-1 (Continued)

## Lab Sample ID: 310-77024-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	498		20.0		mg/L	20		9056A	Total/NA
Arsenic	0.144		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0790		0.00200		mg/L	1		6020A	Total/NA
Boron	1.96		0.200		mg/L	1		6020A	Total/NA
Calcium	130		2.00		mg/L	10		6020A	Total/NA
Molybdenum	0.778		0.00200		mg/L	1		6020A	Total/NA
Selenium	0.0242		0.00500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1060		60.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: DUP-2

## Lab Sample ID: 310-77024-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	12.5		5.00		mg/L	5		9056A	Total/NA
Sulfate	587		100		mg/L	100		9056A	Total/NA
Arsenic	0.0180		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0917		0.00200		mg/L	1		6020A	Total/NA
Boron	0.966		0.200		mg/L	1		6020A	Total/NA
Calcium	127		2.00		mg/L	10		6020A	Total/NA
Cobalt	0.000581		0.000500		mg/L	1		6020A	Total/NA
Lead	0.00220		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.105		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	976		60.0		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Cedar Falls

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

**Client Sample ID: MW2**  
**Date Collected: 03/22/16 12:49**  
**Date Received: 03/25/16 09:40**

**Lab Sample ID: 310-77024-1**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>23.1</b>		5.00		mg/L			03/28/16 22:24	5
Fluoride	<0.500		0.500		mg/L			03/28/16 22:24	5
<b>Sulfate</b>	<b>1320</b>		100		mg/L			03/29/16 22:00	100

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		03/30/16 08:00	03/30/16 22:29	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		03/30/16 08:00	03/31/16 19:23	1
<b>Arsenic</b>	<b>0.245</b>		0.00200		mg/L		03/30/16 08:00	03/31/16 19:23	1
<b>Barium</b>	<b>0.115</b>		0.00200		mg/L		03/30/16 08:00	03/31/16 19:23	1
Beryllium	<0.00100		0.00100		mg/L		03/30/16 08:00	04/04/16 14:40	1
<b>Boron</b>	<b>1.60</b>		0.200		mg/L		03/30/16 08:00	04/04/16 14:40	1
Cadmium	<0.000500		0.000500		mg/L		03/30/16 08:00	03/31/16 19:23	1
<b>Calcium</b>	<b>267</b>		2.00		mg/L		03/30/16 08:00	04/04/16 15:57	10
Chromium	<0.00500		0.00500		mg/L		03/30/16 08:00	04/04/16 14:40	1
<b>Cobalt</b>	<b>0.000514</b>		0.000500		mg/L		03/30/16 08:00	03/31/16 19:23	1
<b>Lead</b>	<b>0.000601</b>		0.000500		mg/L		03/30/16 08:00	03/31/16 19:23	1
Molybdenum	<0.00200		0.00200		mg/L		03/30/16 08:00	03/31/16 19:23	1
Selenium	<0.00500		0.00500		mg/L		03/30/16 08:00	04/04/16 14:40	1
Thallium	<0.00100		0.00100		mg/L		03/30/16 08:00	03/31/16 19:23	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		04/04/16 09:54	04/05/16 09:55	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>1920</b>		300		mg/L			03/29/16 09:48	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

**Client Sample ID: MW5**  
**Date Collected: 03/23/16 10:37**  
**Date Received: 03/25/16 09:40**

**Lab Sample ID: 310-77024-2**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>47.7</b>		5.00		mg/L			03/28/16 22:24	5
Fluoride	<0.500		0.500		mg/L			03/28/16 22:24	5
<b>Sulfate</b>	<b>1230</b>		100		mg/L			03/29/16 22:00	100

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Lithium</b>	<b>0.0799</b>		0.0500		mg/L		03/30/16 08:00	03/30/16 22:31	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		03/30/16 08:00	03/31/16 19:27	1
<b>Arsenic</b>	<b>0.0432</b>		0.00200		mg/L		03/30/16 08:00	03/31/16 19:27	1
<b>Barium</b>	<b>0.0437</b>		0.00200		mg/L		03/30/16 08:00	03/31/16 19:27	1
Beryllium	<0.00100		0.00100		mg/L		03/30/16 08:00	04/04/16 14:43	1
<b>Boron</b>	<b>0.545</b>		0.200		mg/L		03/30/16 08:00	04/04/16 14:43	1
Cadmium	<0.000500		0.000500		mg/L		03/30/16 08:00	03/31/16 19:27	1
<b>Calcium</b>	<b>458</b>		2.00		mg/L		03/30/16 08:00	04/04/16 16:01	10
Chromium	<0.00500		0.00500		mg/L		03/30/16 08:00	04/04/16 14:43	1
Cobalt	<0.000500		0.000500		mg/L		03/30/16 08:00	03/31/16 19:27	1
Lead	<0.000500		0.000500		mg/L		03/30/16 08:00	03/31/16 19:27	1
Molybdenum	<0.00200		0.00200		mg/L		03/30/16 08:00	03/31/16 19:27	1
Selenium	<0.00500		0.00500		mg/L		03/30/16 08:00	04/04/16 14:43	1
Thallium	<0.00100		0.00100		mg/L		03/30/16 08:00	03/31/16 19:27	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		04/04/16 09:54	04/05/16 09:56	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>3150</b>		750		mg/L			03/29/16 09:48	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

**Client Sample ID: MW6**  
**Date Collected: 03/22/16 14:49**  
**Date Received: 03/25/16 09:40**

**Lab Sample ID: 310-77024-3**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>217</b>		5.00		mg/L			03/28/16 22:24	5
Fluoride	<0.500		0.500		mg/L			03/28/16 22:24	5
<b>Sulfate</b>	<b>219</b>		5.00		mg/L			03/28/16 22:24	5

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		03/30/16 08:00	03/30/16 22:39	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		03/30/16 08:00	03/31/16 19:39	1
<b>Arsenic</b>	<b>0.0365</b>		0.00200		mg/L		03/30/16 08:00	03/31/16 19:39	1
<b>Barium</b>	<b>0.183</b>		0.00200		mg/L		03/30/16 08:00	03/31/16 19:39	1
Beryllium	<0.00100		0.00100		mg/L		03/30/16 08:00	04/04/16 15:02	1
<b>Boron</b>	<b>0.376</b>		0.200		mg/L		03/30/16 08:00	04/04/16 15:02	1
<b>Cadmium</b>	<b>0.00213</b>		0.000500		mg/L		03/30/16 08:00	03/31/16 19:39	1
<b>Calcium</b>	<b>263</b>		2.00		mg/L		03/30/16 08:00	04/04/16 16:19	10
Chromium	<0.00500		0.00500		mg/L		03/30/16 08:00	04/04/16 15:02	1
<b>Cobalt</b>	<b>0.00592</b>		0.000500		mg/L		03/30/16 08:00	03/31/16 19:39	1
<b>Lead</b>	<b>0.00596</b>		0.000500		mg/L		03/30/16 08:00	03/31/16 19:39	1
<b>Molybdenum</b>	<b>0.0435</b>		0.00200		mg/L		03/30/16 08:00	03/31/16 19:39	1
Selenium	<0.00500		0.00500		mg/L		03/30/16 08:00	04/04/16 15:02	1
Thallium	<0.00100		0.00100		mg/L		03/30/16 08:00	03/31/16 19:39	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		04/04/16 09:54	04/05/16 10:01	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>1200</b>		60.0		mg/L			03/29/16 09:48	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

**Client Sample ID: MW8**  
**Date Collected: 03/23/16 08:35**  
**Date Received: 03/25/16 09:40**

**Lab Sample ID: 310-77024-4**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>10.6</b>		5.00		mg/L			03/28/16 22:24	5
Fluoride	<0.500		0.500		mg/L			03/28/16 22:24	5
<b>Sulfate</b>	<b>618</b>		100		mg/L			03/29/16 22:00	100

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		03/30/16 08:00	03/30/16 22:41	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		03/30/16 08:00	03/31/16 19:51	1
<b>Arsenic</b>	<b>0.0163</b>		0.00200		mg/L		03/30/16 08:00	03/31/16 19:51	1
<b>Barium</b>	<b>0.0880</b>		0.00200		mg/L		03/30/16 08:00	03/31/16 19:51	1
Beryllium	<0.00100		0.00100		mg/L		03/30/16 08:00	04/04/16 15:05	1
<b>Boron</b>	<b>1.01</b>		0.200		mg/L		03/30/16 08:00	04/04/16 15:05	1
Cadmium	<0.000500		0.000500		mg/L		03/30/16 08:00	03/31/16 19:51	1
<b>Calcium</b>	<b>133</b>		2.00		mg/L		03/30/16 08:00	04/04/16 16:22	10
Chromium	<0.00500		0.00500		mg/L		03/30/16 08:00	04/04/16 15:05	1
Cobalt	<0.000500		0.000500		mg/L		03/30/16 08:00	03/31/16 19:51	1
<b>Lead</b>	<b>0.00168</b>		0.000500		mg/L		03/30/16 08:00	03/31/16 19:51	1
<b>Molybdenum</b>	<b>0.107</b>		0.00200		mg/L		03/30/16 08:00	03/31/16 19:51	1
Selenium	<0.00500		0.00500		mg/L		03/30/16 08:00	04/04/16 15:05	1
Thallium	<0.00100		0.00100		mg/L		03/30/16 08:00	03/31/16 19:51	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		04/04/16 09:54	04/05/16 10:06	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>964</b>		30.0		mg/L			03/29/16 09:48	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

**Client Sample ID: MW9**  
**Date Collected: 03/22/16 11:40**  
**Date Received: 03/25/16 09:40**

**Lab Sample ID: 310-77024-5**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	121		5.00		mg/L			03/28/16 22:24	5
Fluoride	1.35		0.500		mg/L			03/28/16 22:24	5
Sulfate	23.0		5.00		mg/L			03/28/16 22:24	5

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		03/30/16 08:00	03/30/16 22:43	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		03/30/16 08:00	03/31/16 19:54	1
Arsenic	0.00454		0.00200		mg/L		03/30/16 08:00	03/31/16 19:54	1
Barium	0.442		0.00200		mg/L		03/30/16 08:00	03/31/16 19:54	1
Beryllium	<0.00100		0.00100		mg/L		03/30/16 08:00	04/04/16 15:08	1
Boron	<0.200		0.200		mg/L		03/30/16 08:00	04/04/16 15:08	1
Cadmium	<0.000500		0.000500		mg/L		03/30/16 08:00	03/31/16 19:54	1
Calcium	147		2.00		mg/L		03/30/16 08:00	04/04/16 16:25	10
Chromium	<0.00500		0.00500		mg/L		03/30/16 08:00	04/04/16 15:08	1
Cobalt	0.00146		0.000500		mg/L		03/30/16 08:00	03/31/16 19:54	1
Lead	0.00366		0.000500		mg/L		03/30/16 08:00	03/31/16 19:54	1
Molybdenum	<0.00200		0.00200		mg/L		03/30/16 08:00	03/31/16 19:54	1
Selenium	<0.00500		0.00500		mg/L		03/30/16 08:00	04/04/16 15:08	1
Thallium	<0.00100		0.00100		mg/L		03/30/16 08:00	03/31/16 19:54	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		04/04/16 09:54	04/05/16 10:07	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	708		30.0		mg/L			03/29/16 09:48	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

**Client Sample ID: MW13**  
**Date Collected: 03/22/16 12:21**  
**Date Received: 03/25/16 09:40**

**Lab Sample ID: 310-77024-6**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.97		5.00		mg/L			03/28/16 22:24	5
Fluoride	0.796		0.500		mg/L			03/28/16 22:24	5
Sulfate	486		20.0		mg/L			03/29/16 22:00	20

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		03/30/16 08:00	03/30/16 22:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		03/30/16 08:00	03/31/16 19:57	1
Arsenic	0.0923		0.00200		mg/L		03/30/16 08:00	04/04/16 15:11	1
Barium	0.0652		0.00200		mg/L		03/30/16 08:00	03/31/16 19:57	1
Beryllium	<0.00100		0.00100		mg/L		03/30/16 08:00	04/04/16 15:11	1
Boron	2.05		0.200		mg/L		03/30/16 08:00	04/04/16 15:11	1
Cadmium	<0.000500		0.000500		mg/L		03/30/16 08:00	03/31/16 19:57	1
Calcium	127		2.00		mg/L		03/30/16 08:00	04/04/16 16:29	10
Chromium	<0.00500		0.00500		mg/L		03/30/16 08:00	04/04/16 15:11	1
Cobalt	<0.000500		0.000500		mg/L		03/30/16 08:00	03/31/16 19:57	1
Lead	<0.000500		0.000500		mg/L		03/30/16 08:00	03/31/16 19:57	1
Molybdenum	0.704		0.00200		mg/L		03/30/16 08:00	03/31/16 19:57	1
Selenium	0.0205		0.00500		mg/L		03/30/16 08:00	04/04/16 15:11	1
Thallium	<0.00100		0.00100		mg/L		03/30/16 08:00	03/31/16 19:57	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		04/04/16 09:54	04/05/16 10:09	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1050		60.0		mg/L			03/29/16 09:48	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

**Client Sample ID: MW15**  
**Date Collected: 03/22/16 14:16**  
**Date Received: 03/25/16 09:40**

**Lab Sample ID: 310-77024-7**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>24.3</b>		5.00		mg/L			03/28/16 22:24	5
Fluoride	<0.500		0.500		mg/L			03/28/16 22:24	5
<b>Sulfate</b>	<b>262</b>		100		mg/L			03/29/16 22:00	100

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		03/30/16 08:00	03/30/16 22:51	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.00145</b>		0.00100		mg/L		03/30/16 08:00	03/31/16 20:01	1
Arsenic	<0.00200		0.00200		mg/L		03/30/16 08:00	03/31/16 20:01	1
<b>Barium</b>	<b>0.0314</b>		0.00200		mg/L		03/30/16 08:00	03/31/16 20:01	1
Beryllium	<0.00100		0.00100		mg/L		03/30/16 08:00	04/04/16 15:14	1
<b>Boron</b>	<b>3.11</b>		0.200		mg/L		03/30/16 08:00	04/04/16 15:14	1
Cadmium	<0.000500		0.000500		mg/L		03/30/16 08:00	03/31/16 20:01	1
<b>Calcium</b>	<b>311</b>		2.00		mg/L		03/30/16 08:00	04/04/16 16:32	10
<b>Chromium</b>	<b>0.0194</b>		0.00500		mg/L		03/30/16 08:00	04/04/16 15:14	1
Cobalt	<0.000500		0.000500		mg/L		03/30/16 08:00	03/31/16 20:01	1
Lead	<0.000500		0.000500		mg/L		03/30/16 08:00	03/31/16 20:01	1
<b>Molybdenum</b>	<b>0.389</b>		0.00200		mg/L		03/30/16 08:00	03/31/16 20:01	1
<b>Selenium</b>	<b>0.104</b>		0.00500		mg/L		03/30/16 08:00	04/04/16 15:14	1
Thallium	<0.00100		0.00100		mg/L		03/30/16 08:00	03/31/16 20:01	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		04/04/16 09:54	04/05/16 10:11	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>1510</b>		60.0		mg/L			03/29/16 09:48	1



# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

**Client Sample ID: MW16**  
**Date Collected: 03/22/16 12:19**  
**Date Received: 03/25/16 09:40**

**Lab Sample ID: 310-77024-8**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	64.7		5.00		mg/L			03/28/16 22:24	5
Fluoride	1.84		0.500		mg/L			03/28/16 22:24	5
Sulfate	345		20.0		mg/L			03/29/16 22:00	20

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		03/30/16 08:00	03/30/16 22:53	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		03/30/16 08:00	03/31/16 20:04	1
Arsenic	<0.00200		0.00200		mg/L		03/30/16 08:00	03/31/16 20:04	1
Barium	0.0665		0.00200		mg/L		03/30/16 08:00	03/31/16 20:04	1
Beryllium	<0.00100		0.00100		mg/L		03/30/16 08:00	04/04/16 15:17	1
Boron	0.367		0.200		mg/L		03/30/16 08:00	04/04/16 15:17	1
Cadmium	<0.000500		0.000500		mg/L		03/30/16 08:00	03/31/16 20:04	1
Calcium	180		2.00		mg/L		03/30/16 08:00	04/04/16 16:35	10
Chromium	<0.00500		0.00500		mg/L		03/30/16 08:00	04/04/16 15:17	1
Cobalt	0.000830		0.000500		mg/L		03/30/16 08:00	03/31/16 20:04	1
Lead	<0.000500		0.000500		mg/L		03/30/16 08:00	03/31/16 20:04	1
Molybdenum	0.0180		0.00200		mg/L		03/30/16 08:00	03/31/16 20:04	1
Selenium	<0.00500		0.00500		mg/L		03/30/16 08:00	04/04/16 15:17	1
Thallium	<0.00100		0.00100		mg/L		03/30/16 08:00	03/31/16 20:04	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		04/04/16 09:54	04/05/16 10:12	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	948		60.0		mg/L			03/29/16 09:48	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

**Client Sample ID: MW17**  
**Date Collected: 03/23/16 09:58**  
**Date Received: 03/25/16 09:40**

**Lab Sample ID: 310-77024-9**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	51.3		5.00		mg/L			03/28/16 22:24	5
Fluoride	1.36		0.500		mg/L			03/28/16 22:24	5
Sulfate	1010		100		mg/L			03/29/16 22:00	100

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.114		0.0500		mg/L		03/30/16 08:00	03/30/16 22:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		03/30/16 08:00	03/31/16 20:07	1
Arsenic	0.00735		0.00200		mg/L		03/30/16 08:00	03/31/16 20:07	1
Barium	0.0276		0.00200		mg/L		03/30/16 08:00	03/31/16 20:07	1
Beryllium	<0.00100		0.00100		mg/L		03/30/16 08:00	04/04/16 15:20	1
Boron	0.668		0.200		mg/L		03/30/16 08:00	04/04/16 15:20	1
Cadmium	<0.000500		0.000500		mg/L		03/30/16 08:00	03/31/16 20:07	1
Calcium	392		2.00		mg/L		03/30/16 08:00	04/04/16 16:38	10
Chromium	<0.00500		0.00500		mg/L		03/30/16 08:00	04/04/16 15:20	1
Cobalt	0.00813		0.000500		mg/L		03/30/16 08:00	03/31/16 20:07	1
Lead	<0.000500		0.000500		mg/L		03/30/16 08:00	03/31/16 20:07	1
Molybdenum	<0.00200		0.00200		mg/L		03/30/16 08:00	03/31/16 20:07	1
Selenium	<0.00500		0.00500		mg/L		03/30/16 08:00	04/04/16 15:20	1
Thallium	<0.00100		0.00100		mg/L		03/30/16 08:00	03/31/16 20:07	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		04/04/16 09:54	04/05/16 10:14	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3150		750		mg/L			03/29/16 09:48	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

**Client Sample ID: MW18**  
**Date Collected: 03/22/16 10:06**  
**Date Received: 03/25/16 09:40**

**Lab Sample ID: 310-77024-10**  
**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			03/28/16 22:24	5
Fluoride	<0.500		0.500		mg/L			03/28/16 22:24	5
<b>Sulfate</b>	<b>24.8</b>		5.00		mg/L			03/28/16 22:24	5

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		03/30/16 08:00	03/30/16 22:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		03/30/16 08:00	03/31/16 20:13	1
<b>Arsenic</b>	<b>0.00345</b>		0.00200		mg/L		03/30/16 08:00	03/31/16 20:13	1
<b>Barium</b>	<b>0.343</b>		0.00200		mg/L		03/30/16 08:00	03/31/16 20:13	1
Beryllium	<0.00100		0.00100		mg/L		03/30/16 08:00	04/04/16 15:26	1
Boron	<0.200		0.200		mg/L		03/30/16 08:00	04/04/16 15:26	1
Cadmium	<0.000500		0.000500		mg/L		03/30/16 08:00	03/31/16 20:13	1
<b>Calcium</b>	<b>115</b>		2.00		mg/L		03/30/16 08:00	04/04/16 16:44	10
Chromium	<0.00500		0.00500		mg/L		03/30/16 08:00	04/04/16 15:26	1
<b>Cobalt</b>	<b>0.00152</b>		0.000500		mg/L		03/30/16 08:00	03/31/16 20:13	1
<b>Lead</b>	<b>0.00479</b>		0.000500		mg/L		03/30/16 08:00	03/31/16 20:13	1
Molybdenum	<0.00200		0.00200		mg/L		03/30/16 08:00	03/31/16 20:13	1
Selenium	<0.00500		0.00500		mg/L		03/30/16 08:00	04/04/16 15:26	1
Thallium	<0.00100		0.00100		mg/L		03/30/16 08:00	03/31/16 20:13	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		04/04/16 09:54	04/05/16 10:15	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>504</b>		30.0		mg/L			03/29/16 09:48	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

**Client Sample ID: MW19**  
**Date Collected: 03/22/16 12:02**  
**Date Received: 03/25/16 09:40**

**Lab Sample ID: 310-77024-11**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>6.50</b>		5.00		mg/L			03/28/16 22:24	5
Fluoride	<0.500		0.500		mg/L			03/28/16 22:24	5
<b>Sulfate</b>	<b>29.5</b>		5.00		mg/L			03/28/16 22:24	5

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		03/30/16 08:00	03/30/16 23:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		03/30/16 08:00	03/31/16 20:16	1
Arsenic	<0.00200		0.00200		mg/L		03/30/16 08:00	03/31/16 20:16	1
<b>Barium</b>	<b>0.330</b>		0.00200		mg/L		03/30/16 08:00	03/31/16 20:16	1
Beryllium	<0.00100		0.00100		mg/L		03/30/16 08:00	04/04/16 15:39	1
Boron	<0.200		0.200		mg/L		03/30/16 08:00	04/04/16 15:39	1
Cadmium	<0.000500		0.000500		mg/L		03/30/16 08:00	03/31/16 20:16	1
<b>Calcium</b>	<b>103</b>		2.00		mg/L		03/30/16 08:00	04/04/16 16:47	10
Chromium	<0.00500		0.00500		mg/L		03/30/16 08:00	04/04/16 15:39	1
Cobalt	<0.000500		0.000500		mg/L		03/30/16 08:00	03/31/16 20:16	1
Lead	<0.000500		0.000500		mg/L		03/30/16 08:00	03/31/16 20:16	1
Molybdenum	<0.00200		0.00200		mg/L		03/30/16 08:00	03/31/16 20:16	1
Selenium	<0.00500		0.00500		mg/L		03/30/16 08:00	04/04/16 15:39	1
Thallium	<0.00100		0.00100		mg/L		03/30/16 08:00	03/31/16 20:16	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		04/04/16 09:54	04/05/16 10:17	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>494</b>		30.0		mg/L			03/29/16 09:48	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

**Client Sample ID: MW20**  
**Date Collected: 03/23/16 09:17**  
**Date Received: 03/25/16 09:40**

**Lab Sample ID: 310-77024-12**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>35.3</b>		5.00		mg/L			03/28/16 22:24	5
Fluoride	<0.500		0.500		mg/L			03/28/16 22:24	5
<b>Sulfate</b>	<b>477</b>		20.0		mg/L			03/29/16 22:00	20

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		03/30/16 08:00	03/30/16 23:03	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		03/30/16 08:00	03/31/16 20:19	1
<b>Arsenic</b>	<b>0.0483</b>		0.00200		mg/L		03/30/16 08:00	03/31/16 20:19	1
<b>Barium</b>	<b>0.105</b>		0.00200		mg/L		03/30/16 08:00	03/31/16 20:19	1
Beryllium	<0.00100		0.00100		mg/L		03/30/16 08:00	04/04/16 15:42	1
<b>Boron</b>	<b>0.289</b>		0.200		mg/L		03/30/16 08:00	04/04/16 15:42	1
Cadmium	<0.000500		0.000500		mg/L		03/30/16 08:00	03/31/16 20:19	1
<b>Calcium</b>	<b>176</b>		2.00		mg/L		03/30/16 08:00	04/04/16 17:00	10
Chromium	<0.00500		0.00500		mg/L		03/30/16 08:00	04/04/16 15:42	1
<b>Cobalt</b>	<b>0.000740</b>		0.000500		mg/L		03/30/16 08:00	03/31/16 20:19	1
<b>Lead</b>	<b>0.000741</b>		0.000500		mg/L		03/30/16 08:00	03/31/16 20:19	1
<b>Molybdenum</b>	<b>0.0106</b>		0.00200		mg/L		03/30/16 08:00	03/31/16 20:19	1
Selenium	<0.00500		0.00500		mg/L		03/30/16 08:00	04/04/16 15:42	1
Thallium	<0.00100		0.00100		mg/L		03/30/16 08:00	03/31/16 20:19	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		04/04/16 09:54	04/05/16 10:19	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>1070</b>		60.0		mg/L			03/29/16 09:48	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

**Client Sample ID: DUP-1**

**Date Collected: 03/22/16 12:23**

**Date Received: 03/25/16 09:40**

**Lab Sample ID: 310-77024-13**

**Matrix: Ground Water**

**Method: 9056A - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.55		5.00		mg/L			03/28/16 22:24	5
Fluoride	0.670		0.500		mg/L			03/28/16 22:24	5
Sulfate	498		20.0		mg/L			03/29/16 22:00	20

**Method: 6010C - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		03/30/16 08:00	03/30/16 23:06	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		03/30/16 08:00	03/31/16 21:16	1
Arsenic	0.144		0.00200		mg/L		03/30/16 08:00	03/31/16 21:16	1
Barium	0.0790		0.00200		mg/L		03/30/16 08:00	03/31/16 21:16	1
Beryllium	<0.00100		0.00100		mg/L		03/30/16 08:00	03/31/16 21:16	1
Boron	1.96		0.200		mg/L		03/30/16 08:00	04/04/16 15:45	1
Cadmium	<0.000500		0.000500		mg/L		03/30/16 08:00	03/31/16 21:16	1
Calcium	130		2.00		mg/L		03/30/16 08:00	04/04/16 21:00	10
Chromium	<0.00500		0.00500		mg/L		03/30/16 08:00	04/04/16 15:45	1
Cobalt	<0.000500		0.000500		mg/L		03/30/16 08:00	03/31/16 21:16	1
Lead	<0.000500		0.000500		mg/L		03/30/16 08:00	03/31/16 21:16	1
Molybdenum	0.778		0.00200		mg/L		03/30/16 08:00	03/31/16 21:16	1
Selenium	0.0242		0.00500		mg/L		03/30/16 08:00	04/04/16 15:45	1
Thallium	<0.00100		0.00100		mg/L		03/30/16 08:00	03/31/16 21:16	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		04/04/16 09:54	04/05/16 10:20	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1060		60.0		mg/L			03/29/16 09:48	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

**Client Sample ID: DUP-2**

**Date Collected: 03/23/16 08:37**

**Date Received: 03/25/16 09:40**

**Lab Sample ID: 310-77024-14**

**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>12.5</b>		5.00		mg/L			03/28/16 22:24	5
Fluoride	<0.500		0.500		mg/L			03/28/16 22:24	5
<b>Sulfate</b>	<b>587</b>		100		mg/L			03/29/16 22:00	100

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		03/30/16 08:00	03/30/16 23:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		03/30/16 08:00	03/31/16 21:19	1
<b>Arsenic</b>	<b>0.0180</b>		0.00200		mg/L		03/30/16 08:00	03/31/16 21:19	1
<b>Barium</b>	<b>0.0917</b>		0.00200		mg/L		03/30/16 08:00	03/31/16 21:19	1
Beryllium	<0.00100		0.00100		mg/L		03/30/16 08:00	03/31/16 21:19	1
<b>Boron</b>	<b>0.966</b>		0.200		mg/L		03/30/16 08:00	04/04/16 15:48	1
Cadmium	<0.000500		0.000500		mg/L		03/30/16 08:00	03/31/16 21:19	1
<b>Calcium</b>	<b>127</b>		2.00		mg/L		03/30/16 08:00	04/04/16 17:06	10
Chromium	<0.00500		0.00500		mg/L		03/30/16 08:00	03/31/16 21:19	1
<b>Cobalt</b>	<b>0.000581</b>		0.000500		mg/L		03/30/16 08:00	03/31/16 21:19	1
<b>Lead</b>	<b>0.00220</b>		0.000500		mg/L		03/30/16 08:00	03/31/16 21:19	1
<b>Molybdenum</b>	<b>0.105</b>		0.00200		mg/L		03/30/16 08:00	03/31/16 21:19	1
Selenium	<0.00500		0.00500		mg/L		03/30/16 08:00	03/31/16 21:19	1
Thallium	<0.00100		0.00100		mg/L		03/30/16 08:00	03/31/16 21:19	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		04/04/16 09:54	04/05/16 10:25	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>976</b>		60.0		mg/L			03/29/16 09:48	1

# Definitions/Glossary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

## 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.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)



# QC Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

## Method: 9056A - Anions, Ion Chromatography

**Lab Sample ID: MB 310-122126/3**  
**Matrix: Water**  
**Analysis Batch: 122126**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.00		1.00		mg/L			03/28/16 22:24	1
Fluoride	<0.100		0.100		mg/L			03/28/16 22:24	1
Sulfate	<1.00		1.00		mg/L			03/28/16 22:24	1

**Lab Sample ID: LCS 310-122126/4**  
**Matrix: Water**  
**Analysis Batch: 122126**

**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	7.231		mg/L		96	90 - 110
Fluoride	1.50	1.487		mg/L		99	90 - 110
Sulfate	7.50	7.260		mg/L		97	90 - 110

**Lab Sample ID: 310-77024-2 MS**  
**Matrix: Ground Water**  
**Analysis Batch: 122126**

**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	47.7		25.0	71.80		mg/L		96	80 - 120
Fluoride	<0.500		5.00	4.871		mg/L		93	80 - 120

**Lab Sample ID: 310-77024-2 MSD**  
**Matrix: Ground Water**  
**Analysis Batch: 122126**

**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	Limit
Chloride	47.7		25.0	72.96		mg/L		101	80 - 120	2	15
Fluoride	<0.500		5.00	4.825		mg/L		92	80 - 120	1	15

**Lab Sample ID: MB 310-122303/3**  
**Matrix: Water**  
**Analysis Batch: 122303**

**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			03/29/16 22:00	1
Fluoride	<0.100		0.100		mg/L			03/29/16 22:00	1
Sulfate	<1.00		1.00		mg/L			03/29/16 22:00	1

**Lab Sample ID: LCS 310-122303/4**  
**Matrix: Water**  
**Analysis Batch: 122303**

**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	7.688		mg/L		103	90 - 110
Sulfate	7.50	7.858		mg/L		105	90 - 110

TestAmerica Cedar Falls

# QC Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

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

**Lab Sample ID: 310-77024-2 MS**  
**Matrix: Ground Water**  
**Analysis Batch: 122303**

**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	1230		500	1758		mg/L		106	80 - 120

**Lab Sample ID: 310-77024-2 MSD**  
**Matrix: Ground Water**  
**Analysis Batch: 122303**

**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	1230		500	1682		mg/L		91	80 - 120	4	15

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 310-122114/1-A**  
**Matrix: Water**  
**Analysis Batch: 122426**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 122114**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		03/30/16 08:00	03/30/16 22:17	1

**Lab Sample ID: LCS 310-122114/2-A**  
**Matrix: Water**  
**Analysis Batch: 122426**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 122114**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	2.00	1.840		mg/L		92	80 - 120

**Lab Sample ID: 310-77024-2 MS**  
**Matrix: Ground Water**  
**Analysis Batch: 122426**

**Client Sample ID: MW5**  
**Prep Type: Total/NA**  
**Prep Batch: 122114**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	0.0799		2.00	1.943		mg/L		93	75 - 125

**Lab Sample ID: 310-77024-2 MSD**  
**Matrix: Ground Water**  
**Analysis Batch: 122426**

**Client Sample ID: MW5**  
**Prep Type: Total/NA**  
**Prep Batch: 122114**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lithium	0.0799		2.00	1.982		mg/L		95	75 - 125	2	20

**Lab Sample ID: 310-77024-9 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 122426**

**Client Sample ID: MW17**  
**Prep Type: Total/NA**  
**Prep Batch: 122114**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Lithium	0.114		0.1157		mg/L		2	20

TestAmerica Cedar Falls

# QC Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

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

**Lab Sample ID: MB 310-122147/1-A**  
**Matrix: Water**  
**Analysis Batch: 122551**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 122147**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		03/30/16 08:00	03/31/16 19:11	1
Arsenic	<0.00200		0.00200		mg/L		03/30/16 08:00	03/31/16 19:11	1
Barium	<0.00200		0.00200		mg/L		03/30/16 08:00	03/31/16 19:11	1
Cadmium	<0.000500		0.000500		mg/L		03/30/16 08:00	03/31/16 19:11	1
Cobalt	<0.000500		0.000500		mg/L		03/30/16 08:00	03/31/16 19:11	1
Lead	<0.000500		0.000500		mg/L		03/30/16 08:00	03/31/16 19:11	1
Molybdenum	<0.00200		0.00200		mg/L		03/30/16 08:00	03/31/16 19:11	1
Thallium	<0.00100		0.00100		mg/L		03/30/16 08:00	03/31/16 19:11	1

**Lab Sample ID: MB 310-122147/1-A**  
**Matrix: Water**  
**Analysis Batch: 122919**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 122147**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00100		0.00100		mg/L		03/30/16 08:00	04/04/16 14:26	1
Boron	<0.200		0.200		mg/L		03/30/16 08:00	04/04/16 14:26	1
Chromium	<0.00500		0.00500		mg/L		03/30/16 08:00	04/04/16 14:26	1
Selenium	<0.00500		0.00500		mg/L		03/30/16 08:00	04/04/16 14:26	1

**Lab Sample ID: LCS 310-122147/2-A**  
**Matrix: Water**  
**Analysis Batch: 122551**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 122147**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0200	0.01844		mg/L		92	80 - 120
Arsenic	0.0400	0.03710		mg/L		93	80 - 120
Barium	0.0400	0.03888		mg/L		97	80 - 120
Cadmium	0.0200	0.02006		mg/L		100	80 - 120
Cobalt	0.0200	0.01855		mg/L		93	80 - 120
Lead	0.0200	0.01968		mg/L		98	80 - 120
Molybdenum	0.0400	0.03891		mg/L		97	80 - 120
Thallium	0.0160	0.01590		mg/L		99	80 - 120

**Lab Sample ID: LCS 310-122147/2-A**  
**Matrix: Water**  
**Analysis Batch: 122919**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 122147**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Beryllium	0.0200	0.02122		mg/L		106	80 - 120
Boron	0.880	0.8969		mg/L		102	80 - 120
Calcium	2.00	2.099		mg/L		105	80 - 120
Chromium	0.0400	0.04079		mg/L		102	80 - 120
Selenium	0.0400	0.04088		mg/L		102	80 - 120

# QC Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

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

**Lab Sample ID: 310-77024-2 MS**

**Matrix: Ground Water**

**Analysis Batch: 122551**

**Client Sample ID: MW5**

**Prep Type: Total/NA**

**Prep Batch: 122147**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	<0.00100		0.0200	0.01879		mg/L		94	75 - 125
Arsenic	0.0432		0.0400	0.09035		mg/L		118	75 - 125
Barium	0.0437		0.0400	0.08793		mg/L		110	75 - 125
Cadmium	<0.000500		0.0200	0.02048		mg/L		102	75 - 125
Cobalt	<0.000500		0.0200	0.01965		mg/L		96	75 - 125
Lead	<0.000500		0.0200	0.02096		mg/L		105	75 - 125
Molybdenum	<0.00200		0.0400	0.04430		mg/L		108	75 - 125
Thallium	<0.00100		0.0160	0.01604		mg/L		100	75 - 125

**Lab Sample ID: 310-77024-2 MS**

**Matrix: Ground Water**

**Analysis Batch: 122919**

**Client Sample ID: MW5**

**Prep Type: Total/NA**

**Prep Batch: 122147**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Beryllium	<0.00100		0.0200	0.01990		mg/L		100	75 - 125
Boron	0.545		0.880	1.416		mg/L		99	75 - 125
Chromium	<0.00500		0.0400	0.04171		mg/L		104	75 - 125
Selenium	<0.00500		0.0400	0.04205		mg/L		105	75 - 125

**Lab Sample ID: 310-77024-2 MS**

**Matrix: Ground Water**

**Analysis Batch: 122919**

**Client Sample ID: MW5**

**Prep Type: Total/NA**

**Prep Batch: 122147**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Calcium	458		2.00	476.1	4	mg/L		893	75 - 125

**Lab Sample ID: 310-77024-2 MSD**

**Matrix: Ground Water**

**Analysis Batch: 122551**

**Client Sample ID: MW5**

**Prep Type: Total/NA**

**Prep Batch: 122147**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	<0.00100		0.0200	0.01840		mg/L		92	75 - 125	2	20
Arsenic	0.0432		0.0400	0.08768		mg/L		111	75 - 125	3	20
Barium	0.0437		0.0400	0.08625		mg/L		106	75 - 125	2	20
Cadmium	<0.000500		0.0200	0.02037		mg/L		102	75 - 125	1	20
Cobalt	<0.000500		0.0200	0.01935		mg/L		95	75 - 125	2	20
Lead	<0.000500		0.0200	0.02060		mg/L		103	75 - 125	2	20
Molybdenum	<0.00200		0.0400	0.04389		mg/L		107	75 - 125	1	20
Thallium	<0.00100		0.0160	0.01606		mg/L		100	75 - 125	0	20

**Lab Sample ID: 310-77024-2 MSD**

**Matrix: Ground Water**

**Analysis Batch: 122919**

**Client Sample ID: MW5**

**Prep Type: Total/NA**

**Prep Batch: 122147**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Beryllium	<0.00100		0.0200	0.01938		mg/L		97	75 - 125	3	20
Boron	0.545		0.880	1.343		mg/L		91	75 - 125	5	20
Chromium	<0.00500		0.0400	0.04030		mg/L		101	75 - 125	3	20
Selenium	<0.00500		0.0400	0.04174		mg/L		104	75 - 125	1	20

TestAmerica Cedar Falls

# QC Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

**Lab Sample ID: 310-77024-2 MSD**  
**Matrix: Ground Water**  
**Analysis Batch: 122919**

**Client Sample ID: MW5**  
**Prep Type: Total/NA**  
**Prep Batch: 122147**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	458		2.00	416.4	4	mg/L		-2094	75 - 125	13	20

**Lab Sample ID: 310-77024-9 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 122551**

**Client Sample ID: MW17**  
**Prep Type: Total/NA**  
**Prep Batch: 122147**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Antimony	<0.00100		<0.00100		mg/L		NC	20
Arsenic	0.00735		0.007967		mg/L		8	20
Barium	0.0276		0.03041		mg/L		10	20
Cadmium	<0.000500		<0.000500		mg/L		NC	20
Cobalt	0.00813		0.008980		mg/L		10	20
Lead	<0.000500		<0.000500		mg/L		NC	20
Molybdenum	<0.00200		<0.00200		mg/L		NC	20
Thallium	<0.00100		<0.00100		mg/L		NC	20

**Lab Sample ID: 310-77024-9 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 122919**

**Client Sample ID: MW17**  
**Prep Type: Total/NA**  
**Prep Batch: 122147**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Beryllium	<0.00100		<0.00100		mg/L		NC	20
Boron	0.668		0.6636		mg/L		0.7	20
Chromium	<0.00500		<0.00500		mg/L		NC	20
Selenium	<0.00500		<0.00500		mg/L		NC	20

**Lab Sample ID: 310-77024-9 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 122919**

**Client Sample ID: MW17**  
**Prep Type: Total/NA**  
**Prep Batch: 122147**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Calcium	392		384.7		mg/L		2	20

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 310-122752/1-A**  
**Matrix: Water**  
**Analysis Batch: 123024**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 122752**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		04/04/16 09:54	04/05/16 09:46	1

**Lab Sample ID: LCS 310-122752/2-A**  
**Matrix: Water**  
**Analysis Batch: 123024**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 122752**

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

TestAmerica Cedar Falls

# QC Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

## Method: 7470A - Mercury (CVAA) (Continued)

**Lab Sample ID: 310-77024-2 MS**  
**Matrix: Ground Water**  
**Analysis Batch: 123024**

**Client Sample ID: MW5**  
**Prep Type: Total/NA**  
**Prep Batch: 122752**  
 %Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000200		0.00167	0.001536		mg/L		92	80 - 120

**Lab Sample ID: 310-77024-2 MSD**  
**Matrix: Ground Water**  
**Analysis Batch: 123024**

**Client Sample ID: MW5**  
**Prep Type: Total/NA**  
**Prep Batch: 122752**  
 %Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000200		0.00167	0.001467		mg/L		88	80 - 120	5	20

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

**Lab Sample ID: MB 310-122103/1**  
**Matrix: Water**  
**Analysis Batch: 122103**

**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			03/29/16 09:48	1

**Lab Sample ID: LCS 310-122103/2**  
**Matrix: Water**  
**Analysis Batch: 122103**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	1000	982.0		mg/L		98	90 - 110

**Lab Sample ID: 310-77024-1 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 122103**

**Client Sample ID: MW2**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	1920		1860		mg/L		1	20

**Lab Sample ID: 310-77024-2 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 122103**

**Client Sample ID: MW5**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	3150		3100		mg/L		2	20

TestAmerica Cedar Falls

# QC Association Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

## HPLC/IC

### Analysis Batch: 122126

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-77024-1	MW2	Total/NA	Ground Water	9056A	
310-77024-2	MW5	Total/NA	Ground Water	9056A	
310-77024-2 MS	MW5	Total/NA	Ground Water	9056A	
310-77024-2 MSD	MW5	Total/NA	Ground Water	9056A	
310-77024-3	MW6	Total/NA	Ground Water	9056A	
310-77024-4	MW8	Total/NA	Ground Water	9056A	
310-77024-5	MW9	Total/NA	Ground Water	9056A	
310-77024-6	MW13	Total/NA	Ground Water	9056A	
310-77024-7	MW15	Total/NA	Ground Water	9056A	
310-77024-8	MW16	Total/NA	Ground Water	9056A	
310-77024-9	MW17	Total/NA	Ground Water	9056A	
310-77024-10	MW18	Total/NA	Ground Water	9056A	
310-77024-11	MW19	Total/NA	Ground Water	9056A	
310-77024-12	MW20	Total/NA	Ground Water	9056A	
310-77024-13	DUP-1	Total/NA	Ground Water	9056A	
310-77024-14	DUP-2	Total/NA	Ground Water	9056A	
LCS 310-122126/4	Lab Control Sample	Total/NA	Water	9056A	
MB 310-122126/3	Method Blank	Total/NA	Water	9056A	

### Analysis Batch: 122303

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-77024-1	MW2	Total/NA	Ground Water	9056A	
310-77024-2	MW5	Total/NA	Ground Water	9056A	
310-77024-2 MS	MW5	Total/NA	Ground Water	9056A	
310-77024-2 MSD	MW5	Total/NA	Ground Water	9056A	
310-77024-4	MW8	Total/NA	Ground Water	9056A	
310-77024-6	MW13	Total/NA	Ground Water	9056A	
310-77024-7	MW15	Total/NA	Ground Water	9056A	
310-77024-8	MW16	Total/NA	Ground Water	9056A	
310-77024-9	MW17	Total/NA	Ground Water	9056A	
310-77024-12	MW20	Total/NA	Ground Water	9056A	
310-77024-13	DUP-1	Total/NA	Ground Water	9056A	
310-77024-14	DUP-2	Total/NA	Ground Water	9056A	
LCS 310-122303/4	Lab Control Sample	Total/NA	Water	9056A	
MB 310-122303/3	Method Blank	Total/NA	Water	9056A	

## Metals

### Prep Batch: 122114

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-77024-1	MW2	Total/NA	Ground Water	3010A	
310-77024-2	MW5	Total/NA	Ground Water	3010A	
310-77024-2 MS	MW5	Total/NA	Ground Water	3010A	
310-77024-2 MSD	MW5	Total/NA	Ground Water	3010A	
310-77024-3	MW6	Total/NA	Ground Water	3010A	
310-77024-4	MW8	Total/NA	Ground Water	3010A	
310-77024-5	MW9	Total/NA	Ground Water	3010A	
310-77024-6	MW13	Total/NA	Ground Water	3010A	
310-77024-7	MW15	Total/NA	Ground Water	3010A	
310-77024-8	MW16	Total/NA	Ground Water	3010A	

TestAmerica Cedar Falls

# QC Association Summary

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

## Metals (Continued)

### Prep Batch: 122114 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-77024-9	MW17	Total/NA	Ground Water	3010A	
310-77024-9 DU	MW17	Total/NA	Ground Water	3010A	
310-77024-10	MW18	Total/NA	Ground Water	3010A	
310-77024-11	MW19	Total/NA	Ground Water	3010A	
310-77024-12	MW20	Total/NA	Ground Water	3010A	
310-77024-13	DUP-1	Total/NA	Ground Water	3010A	
310-77024-14	DUP-2	Total/NA	Ground Water	3010A	
LCS 310-122114/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 310-122114/1-A	Method Blank	Total/NA	Water	3010A	

### Prep Batch: 122147

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-77024-1	MW2	Total/NA	Ground Water	3010A	
310-77024-2	MW5	Total/NA	Ground Water	3010A	
310-77024-2 MS	MW5	Total/NA	Ground Water	3010A	
310-77024-2 MSD	MW5	Total/NA	Ground Water	3010A	
310-77024-3	MW6	Total/NA	Ground Water	3010A	
310-77024-4	MW8	Total/NA	Ground Water	3010A	
310-77024-5	MW9	Total/NA	Ground Water	3010A	
310-77024-6	MW13	Total/NA	Ground Water	3010A	
310-77024-7	MW15	Total/NA	Ground Water	3010A	
310-77024-8	MW16	Total/NA	Ground Water	3010A	
310-77024-9	MW17	Total/NA	Ground Water	3010A	
310-77024-9 DU	MW17	Total/NA	Ground Water	3010A	
310-77024-10	MW18	Total/NA	Ground Water	3010A	
310-77024-11	MW19	Total/NA	Ground Water	3010A	
310-77024-12	MW20	Total/NA	Ground Water	3010A	
310-77024-13	DUP-1	Total/NA	Ground Water	3010A	
310-77024-14	DUP-2	Total/NA	Ground Water	3010A	
LCS 310-122147/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 310-122147/1-A	Method Blank	Total/NA	Water	3010A	

### Analysis Batch: 122426

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-77024-1	MW2	Total/NA	Ground Water	6010C	122114
310-77024-2	MW5	Total/NA	Ground Water	6010C	122114
310-77024-2 MS	MW5	Total/NA	Ground Water	6010C	122114
310-77024-2 MSD	MW5	Total/NA	Ground Water	6010C	122114
310-77024-3	MW6	Total/NA	Ground Water	6010C	122114
310-77024-4	MW8	Total/NA	Ground Water	6010C	122114
310-77024-5	MW9	Total/NA	Ground Water	6010C	122114
310-77024-6	MW13	Total/NA	Ground Water	6010C	122114
310-77024-7	MW15	Total/NA	Ground Water	6010C	122114
310-77024-8	MW16	Total/NA	Ground Water	6010C	122114
310-77024-9	MW17	Total/NA	Ground Water	6010C	122114
310-77024-9 DU	MW17	Total/NA	Ground Water	6010C	122114
310-77024-10	MW18	Total/NA	Ground Water	6010C	122114
310-77024-11	MW19	Total/NA	Ground Water	6010C	122114
310-77024-12	MW20	Total/NA	Ground Water	6010C	122114
310-77024-13	DUP-1	Total/NA	Ground Water	6010C	122114
310-77024-14	DUP-2	Total/NA	Ground Water	6010C	122114

TestAmerica Cedar Falls



# QC Association Summary

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

## Metals (Continued)

### Analysis Batch: 122426 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 310-122114/2-A	Lab Control Sample	Total/NA	Water	6010C	122114
MB 310-122114/1-A	Method Blank	Total/NA	Water	6010C	122114

### Analysis Batch: 122551

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-77024-1	MW2	Total/NA	Ground Water	6020A	122147
310-77024-2	MW5	Total/NA	Ground Water	6020A	122147
310-77024-2 MS	MW5	Total/NA	Ground Water	6020A	122147
310-77024-2 MSD	MW5	Total/NA	Ground Water	6020A	122147
310-77024-3	MW6	Total/NA	Ground Water	6020A	122147
310-77024-4	MW8	Total/NA	Ground Water	6020A	122147
310-77024-5	MW9	Total/NA	Ground Water	6020A	122147
310-77024-6	MW13	Total/NA	Ground Water	6020A	122147
310-77024-7	MW15	Total/NA	Ground Water	6020A	122147
310-77024-8	MW16	Total/NA	Ground Water	6020A	122147
310-77024-9	MW17	Total/NA	Ground Water	6020A	122147
310-77024-9 DU	MW17	Total/NA	Ground Water	6020A	122147
310-77024-10	MW18	Total/NA	Ground Water	6020A	122147
310-77024-11	MW19	Total/NA	Ground Water	6020A	122147
310-77024-12	MW20	Total/NA	Ground Water	6020A	122147
310-77024-13	DUP-1	Total/NA	Ground Water	6020A	122147
310-77024-14	DUP-2	Total/NA	Ground Water	6020A	122147
LCS 310-122147/2-A	Lab Control Sample	Total/NA	Water	6020A	122147
MB 310-122147/1-A	Method Blank	Total/NA	Water	6020A	122147

### Prep Batch: 122752

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-77024-1	MW2	Total/NA	Ground Water	7470A	
310-77024-2	MW5	Total/NA	Ground Water	7470A	
310-77024-2 MS	MW5	Total/NA	Ground Water	7470A	
310-77024-2 MSD	MW5	Total/NA	Ground Water	7470A	
310-77024-3	MW6	Total/NA	Ground Water	7470A	
310-77024-4	MW8	Total/NA	Ground Water	7470A	
310-77024-5	MW9	Total/NA	Ground Water	7470A	
310-77024-6	MW13	Total/NA	Ground Water	7470A	
310-77024-7	MW15	Total/NA	Ground Water	7470A	
310-77024-8	MW16	Total/NA	Ground Water	7470A	
310-77024-9	MW17	Total/NA	Ground Water	7470A	
310-77024-10	MW18	Total/NA	Ground Water	7470A	
310-77024-11	MW19	Total/NA	Ground Water	7470A	
310-77024-12	MW20	Total/NA	Ground Water	7470A	
310-77024-13	DUP-1	Total/NA	Ground Water	7470A	
310-77024-14	DUP-2	Total/NA	Ground Water	7470A	
LCS 310-122752/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 310-122752/1-A	Method Blank	Total/NA	Water	7470A	

### Analysis Batch: 122919

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-77024-1	MW2	Total/NA	Ground Water	6020A	122147
310-77024-1	MW2	Total/NA	Ground Water	6020A	122147
310-77024-2	MW5	Total/NA	Ground Water	6020A	122147

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# QC Association Summary

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

## Metals (Continued)

### Analysis Batch: 122919 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-77024-2	MW5	Total/NA	Ground Water	6020A	122147
310-77024-2 MS	MW5	Total/NA	Ground Water	6020A	122147
310-77024-2 MS	MW5	Total/NA	Ground Water	6020A	122147
310-77024-2 MSD	MW5	Total/NA	Ground Water	6020A	122147
310-77024-2 MSD	MW5	Total/NA	Ground Water	6020A	122147
310-77024-3	MW6	Total/NA	Ground Water	6020A	122147
310-77024-3	MW6	Total/NA	Ground Water	6020A	122147
310-77024-4	MW8	Total/NA	Ground Water	6020A	122147
310-77024-4	MW8	Total/NA	Ground Water	6020A	122147
310-77024-5	MW9	Total/NA	Ground Water	6020A	122147
310-77024-5	MW9	Total/NA	Ground Water	6020A	122147
310-77024-6	MW13	Total/NA	Ground Water	6020A	122147
310-77024-6	MW13	Total/NA	Ground Water	6020A	122147
310-77024-7	MW15	Total/NA	Ground Water	6020A	122147
310-77024-7	MW15	Total/NA	Ground Water	6020A	122147
310-77024-8	MW16	Total/NA	Ground Water	6020A	122147
310-77024-8	MW16	Total/NA	Ground Water	6020A	122147
310-77024-9	MW17	Total/NA	Ground Water	6020A	122147
310-77024-9	MW17	Total/NA	Ground Water	6020A	122147
310-77024-9 DU	MW17	Total/NA	Ground Water	6020A	122147
310-77024-9 DU	MW17	Total/NA	Ground Water	6020A	122147
310-77024-10	MW18	Total/NA	Ground Water	6020A	122147
310-77024-10	MW18	Total/NA	Ground Water	6020A	122147
310-77024-11	MW19	Total/NA	Ground Water	6020A	122147
310-77024-11	MW19	Total/NA	Ground Water	6020A	122147
310-77024-12	MW20	Total/NA	Ground Water	6020A	122147
310-77024-12	MW20	Total/NA	Ground Water	6020A	122147
310-77024-13	DUP-1	Total/NA	Ground Water	6020A	122147
310-77024-14	DUP-2	Total/NA	Ground Water	6020A	122147
310-77024-14	DUP-2	Total/NA	Ground Water	6020A	122147
LCS 310-122147/2-A	Lab Control Sample	Total/NA	Water	6020A	122147
MB 310-122147/1-A	Method Blank	Total/NA	Water	6020A	122147

### Analysis Batch: 122920

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-77024-13	DUP-1	Total/NA	Ground Water	6020A	122147

### Analysis Batch: 123024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-77024-1	MW2	Total/NA	Ground Water	7470A	122752
310-77024-2	MW5	Total/NA	Ground Water	7470A	122752
310-77024-2 MS	MW5	Total/NA	Ground Water	7470A	122752
310-77024-2 MSD	MW5	Total/NA	Ground Water	7470A	122752
310-77024-3	MW6	Total/NA	Ground Water	7470A	122752
310-77024-4	MW8	Total/NA	Ground Water	7470A	122752
310-77024-5	MW9	Total/NA	Ground Water	7470A	122752
310-77024-6	MW13	Total/NA	Ground Water	7470A	122752
310-77024-7	MW15	Total/NA	Ground Water	7470A	122752
310-77024-8	MW16	Total/NA	Ground Water	7470A	122752
310-77024-9	MW17	Total/NA	Ground Water	7470A	122752
310-77024-10	MW18	Total/NA	Ground Water	7470A	122752

TestAmerica Cedar Falls

# QC Association Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

## Metals (Continued)

### Analysis Batch: 123024 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-77024-11	MW19	Total/NA	Ground Water	7470A	122752
310-77024-12	MW20	Total/NA	Ground Water	7470A	122752
310-77024-13	DUP-1	Total/NA	Ground Water	7470A	122752
310-77024-14	DUP-2	Total/NA	Ground Water	7470A	122752
LCS 310-122752/2-A	Lab Control Sample	Total/NA	Water	7470A	122752
MB 310-122752/1-A	Method Blank	Total/NA	Water	7470A	122752

## General Chemistry

### Analysis Batch: 122103

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-77024-1	MW2	Total/NA	Ground Water	SM 2540C	
310-77024-1 DU	MW2	Total/NA	Ground Water	SM 2540C	
310-77024-2	MW5	Total/NA	Ground Water	SM 2540C	
310-77024-2 DU	MW5	Total/NA	Ground Water	SM 2540C	
310-77024-3	MW6	Total/NA	Ground Water	SM 2540C	
310-77024-4	MW8	Total/NA	Ground Water	SM 2540C	
310-77024-5	MW9	Total/NA	Ground Water	SM 2540C	
310-77024-6	MW13	Total/NA	Ground Water	SM 2540C	
310-77024-7	MW15	Total/NA	Ground Water	SM 2540C	
310-77024-8	MW16	Total/NA	Ground Water	SM 2540C	
310-77024-9	MW17	Total/NA	Ground Water	SM 2540C	
310-77024-10	MW18	Total/NA	Ground Water	SM 2540C	
310-77024-11	MW19	Total/NA	Ground Water	SM 2540C	
310-77024-12	MW20	Total/NA	Ground Water	SM 2540C	
310-77024-13	DUP-1	Total/NA	Ground Water	SM 2540C	
310-77024-14	DUP-2	Total/NA	Ground Water	SM 2540C	
LCS 310-122103/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 310-122103/1	Method Blank	Total/NA	Water	SM 2540C	

# Lab Chronicle

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

**Client Sample ID: MW2**  
**Date Collected: 03/22/16 12:49**  
**Date Received: 03/25/16 09:40**

**Lab Sample ID: 310-77024-1**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		100	122303	03/29/16 22:00	AJG	TAL CF
Total/NA	Analysis	9056A		5	122126	03/28/16 22:24	AJG	TAL CF
Total/NA	Prep	3010A			122114	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6010C		1	122426	03/30/16 22:29	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	122551	03/31/16 19:23	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	122919	04/04/16 14:40	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		10	122919	04/04/16 15:57	OAD	TAL CF
Total/NA	Prep	7470A			122752	04/04/16 09:54	SAD	TAL CF
Total/NA	Analysis	7470A		1	123024	04/05/16 09:55	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	122103	03/29/16 09:48	MDK	TAL CF

**Client Sample ID: MW5**  
**Date Collected: 03/23/16 10:37**  
**Date Received: 03/25/16 09:40**

**Lab Sample ID: 310-77024-2**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		100	122303	03/29/16 22:00	AJG	TAL CF
Total/NA	Analysis	9056A		5	122126	03/28/16 22:24	AJG	TAL CF
Total/NA	Prep	3010A			122114	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6010C		1	122426	03/30/16 22:31	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	122551	03/31/16 19:27	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	122919	04/04/16 14:43	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		10	122919	04/04/16 16:01	OAD	TAL CF
Total/NA	Prep	7470A			122752	04/04/16 09:54	SAD	TAL CF
Total/NA	Analysis	7470A		1	123024	04/05/16 09:56	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	122103	03/29/16 09:48	MDK	TAL CF

**Client Sample ID: MW6**  
**Date Collected: 03/22/16 14:49**  
**Date Received: 03/25/16 09:40**

**Lab Sample ID: 310-77024-3**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	122126	03/28/16 22:24	AJG	TAL CF
Total/NA	Prep	3010A			122114	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6010C		1	122426	03/30/16 22:39	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF

TestAmerica Cedar Falls

# Lab Chronicle

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

**Client Sample ID: MW6**  
**Date Collected: 03/22/16 14:49**  
**Date Received: 03/25/16 09:40**

**Lab Sample ID: 310-77024-3**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6020A		1	122551	03/31/16 19:39	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	122919	04/04/16 15:02	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		10	122919	04/04/16 16:19	OAD	TAL CF
Total/NA	Prep	7470A			122752	04/04/16 09:54	SAD	TAL CF
Total/NA	Analysis	7470A		1	123024	04/05/16 10:01	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	122103	03/29/16 09:48	MDK	TAL CF

**Client Sample ID: MW8**  
**Date Collected: 03/23/16 08:35**  
**Date Received: 03/25/16 09:40**

**Lab Sample ID: 310-77024-4**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		100	122303	03/29/16 22:00	AJG	TAL CF
Total/NA	Analysis	9056A		5	122126	03/28/16 22:24	AJG	TAL CF
Total/NA	Prep	3010A			122114	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6010C		1	122426	03/30/16 22:41	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	122551	03/31/16 19:51	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	122919	04/04/16 15:05	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		10	122919	04/04/16 16:22	OAD	TAL CF
Total/NA	Prep	7470A			122752	04/04/16 09:54	SAD	TAL CF
Total/NA	Analysis	7470A		1	123024	04/05/16 10:06	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	122103	03/29/16 09:48	MDK	TAL CF

**Client Sample ID: MW9**  
**Date Collected: 03/22/16 11:40**  
**Date Received: 03/25/16 09:40**

**Lab Sample ID: 310-77024-5**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	122126	03/28/16 22:24	AJG	TAL CF
Total/NA	Prep	3010A			122114	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6010C		1	122426	03/30/16 22:43	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	122551	03/31/16 19:54	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	122919	04/04/16 15:08	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		10	122919	04/04/16 16:25	OAD	TAL CF
Total/NA	Prep	7470A			122752	04/04/16 09:54	SAD	TAL CF

TestAmerica Cedar Falls

# Lab Chronicle

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

## Client Sample ID: MW9

Date Collected: 03/22/16 11:40

Date Received: 03/25/16 09:40

## Lab Sample ID: 310-77024-5

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7470A		1	123024	04/05/16 10:07	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	122103	03/29/16 09:48	MDK	TAL CF

## Client Sample ID: MW13

Date Collected: 03/22/16 12:21

Date Received: 03/25/16 09:40

## Lab Sample ID: 310-77024-6

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		20	122303	03/29/16 22:00	AJG	TAL CF
Total/NA	Analysis	9056A		5	122126	03/28/16 22:24	AJG	TAL CF
Total/NA	Prep	3010A			122114	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6010C		1	122426	03/30/16 22:45	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	122551	03/31/16 19:57	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	122919	04/04/16 15:11	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		10	122919	04/04/16 16:29	OAD	TAL CF
Total/NA	Prep	7470A			122752	04/04/16 09:54	SAD	TAL CF
Total/NA	Analysis	7470A		1	123024	04/05/16 10:09	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	122103	03/29/16 09:48	MDK	TAL CF

## Client Sample ID: MW15

Date Collected: 03/22/16 14:16

Date Received: 03/25/16 09:40

## Lab Sample ID: 310-77024-7

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		100	122303	03/29/16 22:00	AJG	TAL CF
Total/NA	Analysis	9056A		5	122126	03/28/16 22:24	AJG	TAL CF
Total/NA	Prep	3010A			122114	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6010C		1	122426	03/30/16 22:51	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	122551	03/31/16 20:01	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	122919	04/04/16 15:14	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		10	122919	04/04/16 16:32	OAD	TAL CF
Total/NA	Prep	7470A			122752	04/04/16 09:54	SAD	TAL CF
Total/NA	Analysis	7470A		1	123024	04/05/16 10:11	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	122103	03/29/16 09:48	MDK	TAL CF

TestAmerica Cedar Falls

# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

**Client Sample ID: MW16**

**Date Collected: 03/22/16 12:19**

**Date Received: 03/25/16 09:40**

**Lab Sample ID: 310-77024-8**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		20	122303	03/29/16 22:00	AJG	TAL CF
Total/NA	Analysis	9056A		5	122126	03/28/16 22:24	AJG	TAL CF
Total/NA	Prep	3010A			122114	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6010C		1	122426	03/30/16 22:53	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	122551	03/31/16 20:04	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	122919	04/04/16 15:17	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		10	122919	04/04/16 16:35	OAD	TAL CF
Total/NA	Prep	7470A			122752	04/04/16 09:54	SAD	TAL CF
Total/NA	Analysis	7470A		1	123024	04/05/16 10:12	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	122103	03/29/16 09:48	MDK	TAL CF

**Client Sample ID: MW17**

**Date Collected: 03/23/16 09:58**

**Date Received: 03/25/16 09:40**

**Lab Sample ID: 310-77024-9**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		100	122303	03/29/16 22:00	AJG	TAL CF
Total/NA	Analysis	9056A		5	122126	03/28/16 22:24	AJG	TAL CF
Total/NA	Prep	3010A			122114	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6010C		1	122426	03/30/16 22:55	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	122551	03/31/16 20:07	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	122919	04/04/16 15:20	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		10	122919	04/04/16 16:38	OAD	TAL CF
Total/NA	Prep	7470A			122752	04/04/16 09:54	SAD	TAL CF
Total/NA	Analysis	7470A		1	123024	04/05/16 10:14	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	122103	03/29/16 09:48	MDK	TAL CF

**Client Sample ID: MW18**

**Date Collected: 03/22/16 10:06**

**Date Received: 03/25/16 09:40**

**Lab Sample ID: 310-77024-10**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	122126	03/28/16 22:24	AJG	TAL CF
Total/NA	Prep	3010A			122114	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6010C		1	122426	03/30/16 22:59	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	122551	03/31/16 20:13	OAD	TAL CF

TestAmerica Cedar Falls



# Lab Chronicle

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	122919	04/04/16 15:26	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		10	122919	04/04/16 16:44	OAD	TAL CF
Total/NA	Prep	7470A			122752	04/04/16 09:54	SAD	TAL CF
Total/NA	Analysis	7470A		1	123024	04/05/16 10:15	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	122103	03/29/16 09:48	MDK	TAL CF

**Client Sample ID: MW19**

**Date Collected: 03/22/16 12:02**

**Date Received: 03/25/16 09:40**

**Lab Sample ID: 310-77024-11**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	122126	03/28/16 22:24	AJG	TAL CF
Total/NA	Prep	3010A			122114	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6010C		1	122426	03/30/16 23:01	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	122551	03/31/16 20:16	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	122919	04/04/16 15:39	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		10	122919	04/04/16 16:47	OAD	TAL CF
Total/NA	Prep	7470A			122752	04/04/16 09:54	SAD	TAL CF
Total/NA	Analysis	7470A		1	123024	04/05/16 10:17	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	122103	03/29/16 09:48	MDK	TAL CF

**Client Sample ID: MW20**

**Date Collected: 03/23/16 09:17**

**Date Received: 03/25/16 09:40**

**Lab Sample ID: 310-77024-12**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		20	122303	03/29/16 22:00	AJG	TAL CF
Total/NA	Analysis	9056A		5	122126	03/28/16 22:24	AJG	TAL CF
Total/NA	Prep	3010A			122114	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6010C		1	122426	03/30/16 23:03	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	122551	03/31/16 20:19	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	122919	04/04/16 15:42	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		10	122919	04/04/16 17:00	OAD	TAL CF
Total/NA	Prep	7470A			122752	04/04/16 09:54	SAD	TAL CF
Total/NA	Analysis	7470A		1	123024	04/05/16 10:19	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	122103	03/29/16 09:48	MDK	TAL CF

TestAmerica Cedar Falls



# Lab Chronicle

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

**Client Sample ID: DUP-1**

**Date Collected: 03/22/16 12:23**

**Date Received: 03/25/16 09:40**

**Lab Sample ID: 310-77024-13**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		20	122303	03/29/16 22:00	AJG	TAL CF
Total/NA	Analysis	9056A		5	122126	03/28/16 22:24	AJG	TAL CF
Total/NA	Prep	3010A			122114	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6010C		1	122426	03/30/16 23:06	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	122551	03/31/16 21:16	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	122919	04/04/16 15:45	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		10	122920	04/04/16 21:00	OAD	TAL CF
Total/NA	Prep	7470A			122752	04/04/16 09:54	SAD	TAL CF
Total/NA	Analysis	7470A		1	123024	04/05/16 10:20	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	122103	03/29/16 09:48	MDK	TAL CF

**Client Sample ID: DUP-2**

**Date Collected: 03/23/16 08:37**

**Date Received: 03/25/16 09:40**

**Lab Sample ID: 310-77024-14**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		100	122303	03/29/16 22:00	AJG	TAL CF
Total/NA	Analysis	9056A		5	122126	03/28/16 22:24	AJG	TAL CF
Total/NA	Prep	3010A			122114	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6010C		1	122426	03/30/16 23:08	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	122551	03/31/16 21:19	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	122919	04/04/16 15:48	OAD	TAL CF
Total/NA	Prep	3010A			122147	03/30/16 08:00	SAD	TAL CF
Total/NA	Analysis	6020A		10	122919	04/04/16 17:06	OAD	TAL CF
Total/NA	Prep	7470A			122752	04/04/16 09:54	SAD	TAL CF
Total/NA	Analysis	7470A		1	123024	04/05/16 10:25	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	122103	03/29/16 09:48	MDK	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: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

## 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.

TestAmerica Cedar Falls

# Method Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-1

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





**Cooler/Sample Receipt and Temperature Log Form**

<b>Client Information</b>	
Client: <u>Omaha PPD</u>	
City/State:	Project: <u>N. Omaha Sta.</u>
<b>Receipt Information</b>	
Date/Time Received: <u>3-25-16 09:40</u>	Received By: <u>CH</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: Cooler ID: <u>BN6</u>
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: Cooler # <u>1</u> of <u>3</u>
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: Cooler custody seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No If yes: Which VOA samples are in cooler? ↓
<b>Temperature Record</b>	
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE	
Temperature Blank?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: <u>H</u>	Correction Factor (°C): <u>+0.1°C</u>
Uncorrected Temp (°C): <u>1.8°C</u>	Corrected Temp (°C): <u>1.9°C</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	

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**Cooler/Sample Receipt and Temperature Log Form**

<b>Client Information</b>	
Client: <u>Omaha PPD</u>	
City/State:	Project: <u>N. Omaha Sta.</u>
<b>Receipt Information</b>	
Date/Time Received: <u>3-25-16 09:40</u> Received By: <u>CH</u>	
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler ID: <u>BM3</u></i>
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler # <u>2</u> of <u>3</u></i>
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler custody seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</i>
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</i>
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Which VOA samples are in cooler? ↓</i>
<b>Temperature Record</b>	
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE	
Temperature Blank?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: <u>H</u>	Correction Factor (°C): <u>+0.1°C</u>
Uncorrected Temp (°C): <u>2.1°C</u>	Corrected Temp (°C): <u>2.2°C</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) <i>If yes: Is there evidence that the chilling process began?</i> <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	

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**Cooler/Sample Receipt and Temperature Log Form**

<b>Client Information</b>	
Client: <u>Omaha PPD</u>	
City/State:	Project: <u>N. Omaha Sta.</u>
<b>Receipt Information</b>	
Date/Time Received: <u>3-25-16 09:40</u> Received By: <u>CH</u>	
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler ID: <u>BM10</u></i>
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler # <u>3</u> of <u>3</u></i>
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler custody seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</i>
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</i>
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Which VOA samples are in cooler? ↓</i>
<b>Temperature Record</b>	
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE	
Temperature Blank?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: <u>H</u>	Correction Factor (°C): <u>+0.1°C</u>
Uncorrected Temp (°C): <u>0.5°C</u>	Corrected Temp (°C): <u>0.6°C</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) <i>If yes: Is there evidence that the chilling process began?</i> <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	

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### Chain of Custody Record

<b>Client Information</b>		Sampler: Lab PM: Hayes, Shawn M		Carrier Tracking No(s):	
Client Contact: Brad Sojka		E-Mail: shawn.hayes@testamericainc.com		Page:	
Company: Omaha Public Power District		Due Date Requested:		Job #:	
Address: 444 South 16th Street Mall 9E/EP1		TAT Requested (days):		Preservation Codes:	
City: Omaha		PO #:		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 Other:	
State, Zip: NE, 68102-2247		WO #:		M - Hexane N - None O - AshNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 Z - other (specify)	
Phone: 402-636-2515(Tel)		TestAmerica Project #:		Total Number of containers	
Email: bsojka@oppd.com		31007560		X	
Project Name: North Omaha Station CCR Q1 2016		SSOW#:		Special Instructions/Note:	
Site:					

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=BTissue, A=Air)	Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Analysis Requested	Special Instructions/Note:
					Sample Date	Sample Time	Sample Date	Sample Time		
MW20	3/23/16	0917	G	W	X	D	N	9315, Ra226, 9320, Ra228, Combined Ra226 and Ra228		
DUP-1	3/22/16	1233	G	W	X	D	N	6010C Lithium, 6020A CCR List, 7470A Mercury		
DUP-2	3/23/16	0837	G	W	X	D	N	2540C TDS, 9056A Chloride, Fluoride, Sulfate		
ms/msd (mws)	3/23/16	1039	G	W	X	D	N			

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

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

Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date: 3/24/16 1300 Company: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_

Custody Seal No.: \_\_\_\_\_ Custody Seal Intact:  Yes  No

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

Special Instructions/QC Requirements:

Received by: *Swabach* Date/Time: 3/25/16 0940 Company: TA-CF

Received by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_

Received by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_

Cooler Temperature(s) °C and Other Remarks:





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<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container pH</u>	<u>Preservative Added (mls)</u>	<u>Lot #</u>
MW19	310-77024-C-11	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW19	310-77024-D-11	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW20	310-77024-B-12	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW20	310-77024-C-12	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW20	310-77024-D-12	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-1	310-77024-B-13	Plastic 250ml - with Nitric Acid	<2	_____	_____
DUP-1	310-77024-C-13	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-1	310-77024-D-13	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-2	310-77024-B-14	Plastic 250ml - with Nitric Acid	<2	_____	_____
DUP-2	310-77024-C-14	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-2	310-77024-D-14	Plastic 1 liter - Nitric Acid	<2	_____	_____

## Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-77024-1

**Login Number: 77024**

**List Number: 1**

**Creator: Tuladhar, Sushil X**

**List Source: TestAmerica Cedar Falls**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> 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 <math><6\text{mm}</math> (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: 310-77024-2

Client Project/Site: North Omaha Station CCR Q1 2016

For:

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

Attn: Brad Sojka



Authorized for release by:  
4/25/2016 12:58:26 PM

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

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.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: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-2

**Job ID: 310-77024-2**

**Laboratory: TestAmerica Cedar Falls**

## Narrative

### Job Narrative 310-77024-2

#### Comments

No additional comments.

#### Receipt

The samples were received on 3/25/2016 9:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 0.6° C, 1.9° C and 2.2° C.

#### RAD

Method(s) 9320: Radium-228 Prep Batch 160-244056:

The radium-228 detection goal was not met for the following sample due to the reduced sample volume attributed to the presence of matrix interferences (see prep NCM 81830): MW18 (310-77024-10). Analytical results are reported with the detection limit achieved.

Method(s) PrecSep\_0: Radium-228 Prep Batch 160-244056:

The following samples were prepared at a reduced aliquot due to sediment and discoloration: MW2 (310-77024-1), MW5 (310-77024-2[DU]), MW6 (310-77024-3), MW9 (310-77024-5), MW13 (310-77024-6), MW18 (310-77024-10), MW19 (310-77024-11) and MW20 (310-77024-12).

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: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-77024-1	MW2	Ground Water	03/22/16 12:49	03/25/16 09:40
310-77024-2	MW5	Ground Water	03/23/16 10:37	03/25/16 09:40
310-77024-3	MW6	Ground Water	03/22/16 14:49	03/25/16 09:40
310-77024-4	MW8	Ground Water	03/23/16 08:35	03/25/16 09:40
310-77024-5	MW9	Ground Water	03/22/16 11:40	03/25/16 09:40
310-77024-6	MW13	Ground Water	03/22/16 12:21	03/25/16 09:40
310-77024-7	MW15	Ground Water	03/22/16 14:16	03/25/16 09:40
310-77024-8	MW16	Ground Water	03/22/16 12:19	03/25/16 09:40
310-77024-9	MW17	Ground Water	03/23/16 09:58	03/25/16 09:40
310-77024-10	MW18	Ground Water	03/22/16 10:06	03/25/16 09:40
310-77024-11	MW19	Ground Water	03/22/16 12:02	03/25/16 09:40
310-77024-12	MW20	Ground Water	03/23/16 09:17	03/25/16 09:40
310-77024-13	DUP-1	Ground Water	03/22/16 12:23	03/25/16 09:40
310-77024-14	DUP-2	Ground Water	03/23/16 08:37	03/25/16 09:40

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-2

**Client Sample ID: MW2**  
**Date Collected: 03/22/16 12:49**  
**Date Received: 03/25/16 09:40**

**Lab Sample ID: 310-77024-1**  
**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	0.312	U	0.229	0.231	1.00	0.326	pCi/L	03/30/16 17:03	04/21/16 06:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.3		40 - 110					03/30/16 17:03	04/21/16 06:33	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.352	U	0.487	0.488	1.00	0.813	pCi/L	04/04/16 10:45	04/20/16 12:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.3		40 - 110					04/04/16 10:45	04/20/16 12:41	1
Y Carrier	92.0		40 - 110					04/04/16 10:45	04/20/16 12:41	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	0.664	U	0.538	0.540	5.00	0.813	pCi/L		04/22/16 15:29	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-2

**Client Sample ID: MW5**  
**Date Collected: 03/23/16 10:37**  
**Date Received: 03/25/16 09:40**

**Lab Sample ID: 310-77024-2**  
**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	0.0167	U	0.140	0.140	1.00	0.262	pCi/L	03/30/16 17:03	04/21/16 06:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.2		40 - 110					03/30/16 17:03	04/21/16 06:33	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.375	U	0.283	0.285	1.00	0.445	pCi/L	04/04/16 10:45	04/20/16 12:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.2		40 - 110					04/04/16 10:45	04/20/16 12:41	1
Y Carrier	89.0		40 - 110					04/04/16 10:45	04/20/16 12:41	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	0.391	U	0.316	0.318	5.00	0.445	pCi/L		04/22/16 15:29	1



# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-2

**Client Sample ID: MW6**

**Lab Sample ID: 310-77024-3**

Date Collected: 03/22/16 14:49

Matrix: Ground Water

Date Received: 03/25/16 09:40

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.630		0.336	0.341	1.00	0.461	pCi/L	03/30/16 17:03	04/21/16 06:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.7		40 - 110					03/30/16 17:03	04/21/16 06:33	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.534	U	0.476	0.479	1.00	0.764	pCi/L	04/04/16 10:45	04/20/16 12:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.7		40 - 110					04/04/16 10:45	04/20/16 12:41	1
Y Carrier	91.2		40 - 110					04/04/16 10:45	04/20/16 12:41	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.16		0.583	0.588	5.00	0.764	pCi/L		04/22/16 15:29	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-2

**Client Sample ID: MW8**

**Lab Sample ID: 310-77024-4**

**Date Collected: 03/23/16 08:35**

**Matrix: Ground Water**

**Date Received: 03/25/16 09:40**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.216	U	0.165	0.166	1.00	0.251	pCi/L	03/30/16 17:03	04/21/16 06:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.2		40 - 110					03/30/16 17:03	04/21/16 06:33	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.137	U	0.242	0.243	1.00	0.411	pCi/L	04/04/16 10:45	04/20/16 12:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.2		40 - 110					04/04/16 10:45	04/20/16 12:41	1
Y Carrier	94.2		40 - 110					04/04/16 10:45	04/20/16 12:41	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	0.353	U	0.293	0.294	5.00	0.411	pCi/L		04/22/16 15:29	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-2

**Client Sample ID: MW9**  
**Date Collected: 03/22/16 11:40**  
**Date Received: 03/25/16 09:40**

**Lab Sample ID: 310-77024-5**  
**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	0.931		0.381	0.390	1.00	0.473	pCi/L	03/30/16 17:03	04/21/16 06:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.0		40 - 110					03/30/16 17:03	04/21/16 06:33	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.311	U	0.508	0.509	1.00	0.858	pCi/L	04/04/16 10:45	04/20/16 12:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.0		40 - 110					04/04/16 10:45	04/20/16 12:41	1
Y Carrier	88.2		40 - 110					04/04/16 10:45	04/20/16 12:41	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	1.24		0.635	0.641	5.00	0.858	pCi/L		04/22/16 15:29	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-2

**Client Sample ID: MW13**  
**Date Collected: 03/22/16 12:21**  
**Date Received: 03/25/16 09:40**

**Lab Sample ID: 310-77024-6**  
**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	-0.00428	U	0.199	0.199	1.00	0.394	pCi/L	03/30/16 17:03	04/21/16 06:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.0		40 - 110					03/30/16 17:03	04/21/16 06:33	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.579	U	0.480	0.483	1.00	0.764	pCi/L	04/04/16 10:45	04/20/16 12:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.0		40 - 110					04/04/16 10:45	04/20/16 12:41	1
Y Carrier	93.5		40 - 110					04/04/16 10:45	04/20/16 12:41	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	0.575	U	0.520	0.522	5.00	0.764	pCi/L		04/22/16 15:29	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-2

**Client Sample ID: MW15**

**Lab Sample ID: 310-77024-7**

**Date Collected: 03/22/16 14:16**

**Matrix: Ground Water**

**Date Received: 03/25/16 09:40**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.154	U	0.144	0.145	1.00	0.228	pCi/L	03/30/16 17:03	04/21/16 06:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.3		40 - 110					03/30/16 17:03	04/21/16 06:33	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0906	U	0.221	0.221	1.00	0.381	pCi/L	04/04/16 10:45	04/20/16 12:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.3		40 - 110					04/04/16 10:45	04/20/16 12:41	1
Y Carrier	96.4		40 - 110					04/04/16 10:45	04/20/16 12:41	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	0.245	U	0.264	0.265	5.00	0.381	pCi/L		04/22/16 15:29	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-2

**Client Sample ID: MW16**

**Lab Sample ID: 310-77024-8**

**Date Collected: 03/22/16 12:19**

**Matrix: Ground Water**

**Date Received: 03/25/16 09:40**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0926	U	0.104	0.104	1.00	0.168	pCi/L	03/30/16 17:03	04/21/16 06:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.0		40 - 110					03/30/16 17:03	04/21/16 06:34	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.121	U	0.196	0.196	1.00	0.331	pCi/L	04/04/16 10:45	04/20/16 12:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.0		40 - 110					04/04/16 10:45	04/20/16 12:42	1
Y Carrier	94.6		40 - 110					04/04/16 10:45	04/20/16 12:42	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	0.214	U	0.222	0.222	5.00	0.331	pCi/L		04/22/16 15:29	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-2

**Client Sample ID: MW17**

**Lab Sample ID: 310-77024-9**

**Date Collected: 03/23/16 09:58**

**Matrix: Ground Water**

**Date Received: 03/25/16 09:40**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.106	U	0.129	0.129	1.00	0.212	pCi/L	03/30/16 17:03	04/21/16 06:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.2		40 - 110					03/30/16 17:03	04/21/16 06:34	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.260	U	0.243	0.244	1.00	0.391	pCi/L	04/04/16 10:45	04/20/16 12:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.2		40 - 110					04/04/16 10:45	04/20/16 12:42	1
Y Carrier	91.6		40 - 110					04/04/16 10:45	04/20/16 12:42	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	0.366	U	0.275	0.276	5.00	0.391	pCi/L		04/22/16 15:29	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-2

**Client Sample ID: MW18**

**Lab Sample ID: 310-77024-10**

Date Collected: 03/22/16 10:06

Matrix: Ground Water

Date Received: 03/25/16 09:40

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.16		0.560	0.570	1.00	0.664	pCi/L	03/30/16 17:03	04/21/16 06:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.6		40 - 110					03/30/16 17:03	04/21/16 06:34	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.54	G	0.989	0.999	1.00	1.51	pCi/L	04/04/16 10:45	04/20/16 12:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.6		40 - 110					04/04/16 10:45	04/20/16 12:42	1
Y Carrier	87.9		40 - 110					04/04/16 10:45	04/20/16 12:42	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	2.70		1.14	1.15	5.00	1.51	pCi/L		04/22/16 15:29	1



# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-2

**Client Sample ID: MW19**

**Lab Sample ID: 310-77024-11**

Date Collected: 03/22/16 12:02

Matrix: Ground Water

Date Received: 03/25/16 09:40

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.683		0.324	0.329	1.00	0.429	pCi/L	03/30/16 17:03	04/21/16 06:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.5		40 - 110					03/30/16 17:03	04/21/16 06:39	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.25		0.544	0.556	1.00	0.780	pCi/L	04/04/16 10:45	04/20/16 12:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.5		40 - 110					04/04/16 10:45	04/20/16 12:46	1
Y Carrier	89.3		40 - 110					04/04/16 10:45	04/20/16 12:46	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	1.93		0.633	0.646	5.00	0.780	pCi/L		04/22/16 15:29	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-2

**Client Sample ID: MW20**

**Lab Sample ID: 310-77024-12**

Date Collected: 03/23/16 09:17

Matrix: Ground Water

Date Received: 03/25/16 09:40

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.831		0.332	0.340	1.00	0.398	pCi/L	03/30/16 17:03	04/21/16 06:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.0		40 - 110					03/30/16 17:03	04/21/16 06:39	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.663	U	0.568	0.571	1.00	0.910	pCi/L	04/04/16 10:45	04/20/16 12:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.0		40 - 110					04/04/16 10:45	04/20/16 12:46	1
Y Carrier	87.9		40 - 110					04/04/16 10:45	04/20/16 12:46	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	1.49		0.658	0.665	5.00	0.910	pCi/L		04/22/16 15:29	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-2

**Client Sample ID: DUP-1**

**Lab Sample ID: 310-77024-13**

**Date Collected: 03/22/16 12:23**

**Matrix: Ground Water**

**Date Received: 03/25/16 09:40**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.142	U	0.129	0.129	1.00	0.201	pCi/L	03/30/16 17:03	04/21/16 06:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		40 - 110					03/30/16 17:03	04/21/16 06:39	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.255	U	0.245	0.246	1.00	0.397	pCi/L	04/04/16 10:45	04/20/16 12:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		40 - 110					04/04/16 10:45	04/20/16 12:46	1
Y Carrier	90.5		40 - 110					04/04/16 10:45	04/20/16 12:46	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.397		0.277	0.278	5.00	0.397	pCi/L		04/22/16 15:29	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-2

**Client Sample ID: DUP-2**

**Lab Sample ID: 310-77024-14**

**Date Collected: 03/23/16 08:37**

**Matrix: Ground Water**

**Date Received: 03/25/16 09:40**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.188	U	0.134	0.135	1.00	0.196	pCi/L	03/30/16 17:03	04/21/16 06:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					03/30/16 17:03	04/21/16 06:39	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.499		0.270	0.274	1.00	0.407	pCi/L	04/04/16 10:45	04/20/16 12:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					04/04/16 10:45	04/20/16 12:46	1
Y Carrier	92.7		40 - 110					04/04/16 10:45	04/20/16 12:46	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	0.687		0.301	0.305	5.00	0.407	pCi/L		04/22/16 15:29	1

## Definitions/Glossary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-2

### Qualifiers

#### Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.
G	The Sample MDC is greater than the requested RL.

### 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)

# QC Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-2

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

**Lab Sample ID: MB 160-242975/1-A**  
**Matrix: Water**  
**Analysis Batch: 247108**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 242975**

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.03254	U	0.0840	0.0841	1.00	0.156	pCi/L	03/30/16 17:03	04/21/16 06:32	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	Limits							
Ba Carrier	92.0		40 - 110		03/30/16 17:03	04/21/16 06:32	1			

**Lab Sample ID: LCS 160-242975/2-A**  
**Matrix: Water**  
**Analysis Batch: 247109**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 242975**

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.2	14.46		1.50	1.00	0.202	pCi/L	130	68 - 137
Carrier	LCS LCS		Limits		Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier	Limits						
Ba Carrier	90.6		40 - 110						

**Lab Sample ID: 310-77024-2 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 247108**

**Client Sample ID: MW5**  
**Prep Type: Total/NA**  
**Prep Batch: 242975**

Analyte	Sample Sample		DU	DU	Total	RL	MDC	Unit	RER	RER
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					Limit
Radium-226	0.0167	U	0.3454		0.233	1.00	0.311	pCi/L	0.88	1
Carrier	DU DU		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	Limits							
Ba Carrier	84.0		40 - 110							

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

**Lab Sample ID: MB 160-244056/1-A**  
**Matrix: Water**  
**Analysis Batch: 246925**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 244056**

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.1961	U	0.241	0.241	1.00	0.398	pCi/L	04/04/16 10:45	04/20/16 12:41	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	Limits							
Ba Carrier	92.0		40 - 110		04/04/16 10:45	04/20/16 12:41	1			
Y Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Y Carrier	%Yield	Qualifier	Limits							
Y Carrier	84.1		40 - 110		04/04/16 10:45	04/20/16 12:41	1			

TestAmerica Cedar Falls

# QC Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-2

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

**Lab Sample ID:** LCS 160-244056/2-A  
**Matrix:** Water  
**Analysis Batch:** 246925

**Client Sample ID:** Lab Control Sample  
**Prep Type:** Total/NA  
**Prep Batch:** 244056

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	
Radium-228	15.3	17.82		1.87	1.00	0.421	pCi/L	117	56 - 140	
<b>Carrier</b>	<b>%Yield</b>	<b>LCS Qualifier</b>	<b>Limits</b>							
Ba Carrier	90.6		40 - 110							
Y Carrier	91.2		40 - 110							

**Lab Sample ID:** 310-77024-2 DU  
**Matrix:** Ground Water  
**Analysis Batch:** 246925

**Client Sample ID:** MW5  
**Prep Type:** Total/NA  
**Prep Batch:** 244056

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.375	U	0.1164	U	0.476	1.00	0.835	pCi/L	0.34	1
<b>Carrier</b>	<b>%Yield</b>	<b>DU Qualifier</b>	<b>Limits</b>							
Ba Carrier	84.0		40 - 110							
Y Carrier	86.4		40 - 110							

## Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

**Lab Sample ID:** 310-77024-2 DU  
**Matrix:** Ground Water  
**Analysis Batch:** 247472

**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	0.391	U	0.4617	U	0.530	5.00	0.835	pCi/L	0.08	

# QC Association Summary

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-2

## Rad

### Prep Batch: 242975

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-77024-1	MW2	Total/NA	Ground Water	PrecSep-21	
310-77024-2	MW5	Total/NA	Ground Water	PrecSep-21	
310-77024-2 DU	MW5	Total/NA	Ground Water	PrecSep-21	
310-77024-3	MW6	Total/NA	Ground Water	PrecSep-21	
310-77024-4	MW8	Total/NA	Ground Water	PrecSep-21	
310-77024-5	MW9	Total/NA	Ground Water	PrecSep-21	
310-77024-6	MW13	Total/NA	Ground Water	PrecSep-21	
310-77024-7	MW15	Total/NA	Ground Water	PrecSep-21	
310-77024-8	MW16	Total/NA	Ground Water	PrecSep-21	
310-77024-9	MW17	Total/NA	Ground Water	PrecSep-21	
310-77024-10	MW18	Total/NA	Ground Water	PrecSep-21	
310-77024-11	MW19	Total/NA	Ground Water	PrecSep-21	
310-77024-12	MW20	Total/NA	Ground Water	PrecSep-21	
310-77024-13	DUP-1	Total/NA	Ground Water	PrecSep-21	
310-77024-14	DUP-2	Total/NA	Ground Water	PrecSep-21	
LCS 160-242975/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
MB 160-242975/1-A	Method Blank	Total/NA	Water	PrecSep-21	

### Prep Batch: 244056

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-77024-1	MW2	Total/NA	Ground Water	PrecSep_0	
310-77024-2	MW5	Total/NA	Ground Water	PrecSep_0	
310-77024-2 DU	MW5	Total/NA	Ground Water	PrecSep_0	
310-77024-3	MW6	Total/NA	Ground Water	PrecSep_0	
310-77024-4	MW8	Total/NA	Ground Water	PrecSep_0	
310-77024-5	MW9	Total/NA	Ground Water	PrecSep_0	
310-77024-6	MW13	Total/NA	Ground Water	PrecSep_0	
310-77024-7	MW15	Total/NA	Ground Water	PrecSep_0	
310-77024-8	MW16	Total/NA	Ground Water	PrecSep_0	
310-77024-9	MW17	Total/NA	Ground Water	PrecSep_0	
310-77024-10	MW18	Total/NA	Ground Water	PrecSep_0	
310-77024-11	MW19	Total/NA	Ground Water	PrecSep_0	
310-77024-12	MW20	Total/NA	Ground Water	PrecSep_0	
310-77024-13	DUP-1	Total/NA	Ground Water	PrecSep_0	
310-77024-14	DUP-2	Total/NA	Ground Water	PrecSep_0	
LCS 160-244056/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
MB 160-244056/1-A	Method Blank	Total/NA	Water	PrecSep_0	



# Lab Chronicle

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-2

## Client Sample ID: MW2

Date Collected: 03/22/16 12:49

Date Received: 03/25/16 09:40

## Lab Sample ID: 310-77024-1

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			242975	03/30/16 17:03	MRB	TAL SL
Total/NA	Analysis	9315		1	247108	04/21/16 06:33	RTM	TAL SL
Total/NA	Prep	PrecSep_0			244056	04/04/16 10:45	CMC	TAL SL
Total/NA	Analysis	9320		1	246925	04/20/16 12:41	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	247472	04/22/16 15:29	CAH	TAL SL

## Client Sample ID: MW5

Date Collected: 03/23/16 10:37

Date Received: 03/25/16 09:40

## Lab Sample ID: 310-77024-2

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			242975	03/30/16 17:03	MRB	TAL SL
Total/NA	Analysis	9315		1	247108	04/21/16 06:33	RTM	TAL SL
Total/NA	Prep	PrecSep_0			244056	04/04/16 10:45	CMC	TAL SL
Total/NA	Analysis	9320		1	246925	04/20/16 12:41	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	247472	04/22/16 15:29	CAH	TAL SL

## Client Sample ID: MW6

Date Collected: 03/22/16 14:49

Date Received: 03/25/16 09:40

## Lab Sample ID: 310-77024-3

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			242975	03/30/16 17:03	MRB	TAL SL
Total/NA	Analysis	9315		1	247108	04/21/16 06:33	RTM	TAL SL
Total/NA	Prep	PrecSep_0			244056	04/04/16 10:45	CMC	TAL SL
Total/NA	Analysis	9320		1	246925	04/20/16 12:41	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	247472	04/22/16 15:29	CAH	TAL SL

## Client Sample ID: MW8

Date Collected: 03/23/16 08:35

Date Received: 03/25/16 09:40

## Lab Sample ID: 310-77024-4

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			242975	03/30/16 17:03	MRB	TAL SL
Total/NA	Analysis	9315		1	247108	04/21/16 06:33	RTM	TAL SL
Total/NA	Prep	PrecSep_0			244056	04/04/16 10:45	CMC	TAL SL
Total/NA	Analysis	9320		1	246925	04/20/16 12:41	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	247472	04/22/16 15:29	CAH	TAL SL

# Lab Chronicle

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-2

## Client Sample ID: MW9

Lab Sample ID: 310-77024-5

Date Collected: 03/22/16 11:40

Matrix: Ground Water

Date Received: 03/25/16 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			242975	03/30/16 17:03	MRB	TAL SL
Total/NA	Analysis	9315		1	247108	04/21/16 06:33	RTM	TAL SL
Total/NA	Prep	PrecSep_0			244056	04/04/16 10:45	CMC	TAL SL
Total/NA	Analysis	9320		1	246925	04/20/16 12:41	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	247472	04/22/16 15:29	CAH	TAL SL

## Client Sample ID: MW13

Lab Sample ID: 310-77024-6

Date Collected: 03/22/16 12:21

Matrix: Ground Water

Date Received: 03/25/16 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			242975	03/30/16 17:03	MRB	TAL SL
Total/NA	Analysis	9315		1	247108	04/21/16 06:33	RTM	TAL SL
Total/NA	Prep	PrecSep_0			244056	04/04/16 10:45	CMC	TAL SL
Total/NA	Analysis	9320		1	246925	04/20/16 12:41	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	247472	04/22/16 15:29	CAH	TAL SL

## Client Sample ID: MW15

Lab Sample ID: 310-77024-7

Date Collected: 03/22/16 14:16

Matrix: Ground Water

Date Received: 03/25/16 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			242975	03/30/16 17:03	MRB	TAL SL
Total/NA	Analysis	9315		1	247108	04/21/16 06:33	RTM	TAL SL
Total/NA	Prep	PrecSep_0			244056	04/04/16 10:45	CMC	TAL SL
Total/NA	Analysis	9320		1	246925	04/20/16 12:41	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	247472	04/22/16 15:29	CAH	TAL SL

## Client Sample ID: MW16

Lab Sample ID: 310-77024-8

Date Collected: 03/22/16 12:19

Matrix: Ground Water

Date Received: 03/25/16 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			242975	03/30/16 17:03	MRB	TAL SL
Total/NA	Analysis	9315		1	247108	04/21/16 06:34	RTM	TAL SL
Total/NA	Prep	PrecSep_0			244056	04/04/16 10:45	CMC	TAL SL
Total/NA	Analysis	9320		1	246925	04/20/16 12:42	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	247472	04/22/16 15:29	CAH	TAL SL

# Lab Chronicle

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-2

## Client Sample ID: MW17

Lab Sample ID: 310-77024-9

Date Collected: 03/23/16 09:58

Matrix: Ground Water

Date Received: 03/25/16 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			242975	03/30/16 17:03	MRB	TAL SL
Total/NA	Analysis	9315		1	247108	04/21/16 06:34	RTM	TAL SL
Total/NA	Prep	PrecSep_0			244056	04/04/16 10:45	CMC	TAL SL
Total/NA	Analysis	9320		1	246925	04/20/16 12:42	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	247472	04/22/16 15:29	CAH	TAL SL

## Client Sample ID: MW18

Lab Sample ID: 310-77024-10

Date Collected: 03/22/16 10:06

Matrix: Ground Water

Date Received: 03/25/16 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			242975	03/30/16 17:03	MRB	TAL SL
Total/NA	Analysis	9315		1	247108	04/21/16 06:34	RTM	TAL SL
Total/NA	Prep	PrecSep_0			244056	04/04/16 10:45	CMC	TAL SL
Total/NA	Analysis	9320		1	246925	04/20/16 12:42	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	247472	04/22/16 15:29	CAH	TAL SL

## Client Sample ID: MW19

Lab Sample ID: 310-77024-11

Date Collected: 03/22/16 12:02

Matrix: Ground Water

Date Received: 03/25/16 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			242975	03/30/16 17:03	MRB	TAL SL
Total/NA	Analysis	9315		1	247109	04/21/16 06:39	RTM	TAL SL
Total/NA	Prep	PrecSep_0			244056	04/04/16 10:45	CMC	TAL SL
Total/NA	Analysis	9320		1	246926	04/20/16 12:46	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	247472	04/22/16 15:29	CAH	TAL SL

## Client Sample ID: MW20

Lab Sample ID: 310-77024-12

Date Collected: 03/23/16 09:17

Matrix: Ground Water

Date Received: 03/25/16 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			242975	03/30/16 17:03	MRB	TAL SL
Total/NA	Analysis	9315		1	247109	04/21/16 06:39	RTM	TAL SL
Total/NA	Prep	PrecSep_0			244056	04/04/16 10:45	CMC	TAL SL
Total/NA	Analysis	9320		1	246926	04/20/16 12:46	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	247472	04/22/16 15:29	CAH	TAL SL

# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-2

## Client Sample ID: DUP-1

Date Collected: 03/22/16 12:23

Date Received: 03/25/16 09:40

## Lab Sample ID: 310-77024-13

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			242975	03/30/16 17:03	MRB	TAL SL
Total/NA	Analysis	9315		1	247109	04/21/16 06:39	RTM	TAL SL
Total/NA	Prep	PrecSep_0			244056	04/04/16 10:45	CMC	TAL SL
Total/NA	Analysis	9320		1	246926	04/20/16 12:46	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	247472	04/22/16 15:29	CAH	TAL SL

## Client Sample ID: DUP-2

Date Collected: 03/23/16 08:37

Date Received: 03/25/16 09:40

## Lab Sample ID: 310-77024-14

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			242975	03/30/16 17:03	MRB	TAL SL
Total/NA	Analysis	9315		1	247109	04/21/16 06:39	RTM	TAL SL
Total/NA	Prep	PrecSep_0			244056	04/04/16 10:45	CMC	TAL SL
Total/NA	Analysis	9320		1	246926	04/20/16 12:46	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	247472	04/22/16 15:29	CAH	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: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-2

## 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: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-2

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







**Cooler/Sample Receipt and Temperature Log Form**

<b>Client Information</b>	
Client: <u>Omaha PPD</u>	
City/State:	Project: <u>N. Omaha Sta.</u>
<b>Receipt Information</b>	
Date/Time Received: <u>3-25-16 09:40</u>	Received By: <u>CH</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID: <u>BN6</u>
Multiple Coolers? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>1</u> of <u>3</u>
Cooler Custody Seals Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓
<b>Temperature Record</b>	
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE	
Temperature Blank? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: <u>H</u>	Correction Factor (°C): <u>+0.1°C</u>
Uncorrected Temp (°C): <u>1.8°C</u>	Corrected Temp (°C): <u>1.9°C</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	

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## Cooler/Sample Receipt and Temperature Log Form

<b>Client Information</b>	
Client: <u>Omaha PPD</u>	
City/State:	Project: <u>N. Omaha Sta.</u>
<b>Receipt Information</b>	
Date/Time Received: <u>3-25-16 09:40</u>	Received By: <u>CH</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler ID: <u>BM3</u></i>
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler # <u>2</u> of <u>3</u></i>
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler custody seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</i>
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</i>
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Which VOA samples are in cooler? ↓</i>
<b>Temperature Record</b>	
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE	
Temperature Blank?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: <u>H</u>	Correction Factor (°C): <u>+0.1°C</u>
Uncorrected Temp (°C): <u>2.1°C</u>	Corrected Temp (°C): <u>2.2°C</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) <i>If yes: Is there evidence that the chilling process began?</i> <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	





**Cooler/Sample Receipt and Temperature Log Form**

<b>Client Information</b>	
Client: <u>Omaha PPD</u>	
City/State:	Project: <u>N. Omaha Sta.</u>
<b>Receipt Information</b>	
Date/Time Received: <u>3-25-16 09:40</u> Received By: <u>CH</u>	
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler ID: <u>BM10</u></i>
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler # <u>3</u> of <u>3</u></i>
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler custody seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</i>
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</i>
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Which VOA samples are in cooler? ↓</i>
<b>Temperature Record</b>	
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE	
Temperature Blank?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: <u>H</u>	Correction Factor (°C): <u>+0.1°C</u>
Uncorrected Temp (°C): <u>0.5°C</u>	Corrected Temp (°C): <u>0.6°C</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) <i>If yes: Is there evidence that the chilling process began?</i> <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	

### Chain of Custody Record

<b>Client Information</b> Client Contact: Brad Sojka Company: Omaha Public Power District Address: 444 South 16th Street Mail 9E/EP1 City: Omaha State, Zip: NE, 68102-2247 Phone: 402-636-2515(Tel) Email: bsojka@oppd.com Project Name: North Omaha Station CCR Q1 2016 Site:		Lab PM: Hayes, Shawn M E-Mail: shawn.hayes@testamericainc.com		Carrier Tracking No(s): Job #:		COC No: Page: Job #:									
Due Date Requested: TAT Requested (days): PO #: WO #: TestAmerica Project #: SSOW#:		Analysis Requested 9315_Ra226, 9320_Ra228, Combined Ra226 and Ra228 6010C Lithium, 6020A CCR List, 7470A Mercury 2540C TDS, 9056A Chloride, Fluoride, Sulfate		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - Nat-SO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: 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)		Total Number of Containers:									
Sample Identification MW2 MW5 MW6 MW8 MW9 MW13 MW15 MW16 MW17 MW18 MW19		Sample Date 3/23/16 3/23/16 3/22/16 3/23/16 3/22/16 3/22/16 3/23/16 3/23/16 3/23/16 3/23/16 3/23/16		Sample Time 1249 1037 1444 0835 1140 1221 1414 1219 0958 1006 1202		Sample Type (C=comp, G=grab) G G G G G G G G G G G G G		Matrix (W=water, S=solid, O=wasteoil, BT=tissue, A=air) W W W W W W W W W W W W W		Field Filtered Sample (Yes or No) N Y N N N N N N N N N N N		Perform MS/MSD (Yes or No) X X X X X X X X X X X X X		Special Instructions/Note: D D N N N N N N N N N N N	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Special Instructions/QC Requirements:									
Empty Kit Relinquished by:		Date:		Method of Shipment:		Date/Time:									
Relinquished by:		Date/Time:		Received by:		Date/Time:									
Relinquished by:		Date/Time:		Received by:		Date/Time:									
Relinquished by:		Date/Time:		Received by:		Date/Time:									
Custody Seals Intact:		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		Company TA-CF									





### Chain of Custody Record

<b>Client Information</b>		Lab PM: Hayes, Shawn M		Carrier Tracking No(s):	
Client Contact: Brad Sojka		E-Mail: shawn.hayes@testamericainc.com		Page:	
Company: Omaha Public Power District		Due Date Requested:		Job #:	
Address: 444 South 16th Street Mall 9E/EP1		TAT Requested (days):		Preservation Codes:	
City: Omaha		PO #:		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 Other:	
State, Zip: NE, 68102-2247		WO #:		M - Hexane N - None O - AshNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 Z - other (specify)	
Phone: 402-636-2515(Tel)		TestAmerica Project #:		Total Number of containers	
Email: bsojka@oppd.com		31007560		X	
Project Name: North Omaha Station CCR Q1 2016		SSOW#:		Special Instructions/Note:	
Site:					

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=BTissue, A=Air)	Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Special Instructions/Note:
					Sample Date	Sample Time	Sample Date	Sample Time	
MW20	3/23/16	0917	G	W	X	D	N	9315, Ra226, 9320, Ra228, Combined Ra226 and Ra228	
DUP-1	3/22/16	1223	G	W	X	D	N	2540C TDS, 9056A Chloride, Fluoride, Sulfate	
DUP-2	3/23/16	0837	G	W	X	D	N		
ms/msd (mws)	3/23/16	1039	G	W	X	D	N		

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

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

Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date: 3/24/16 1300 Company: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_

Custody Seal No.: \_\_\_\_\_ Custody Seal Intact:  Yes  No

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

Special Instructions/QC Requirements:

Received by: *Swabach* Date/Time: 3/25/16 0940 Company: TA-CF

Received by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_

Received by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_

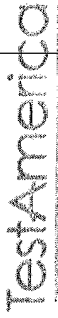
Cooler Temperature(s) °C and Other Remarks:



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<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container pH</u>	<u>Preservative Added (mls)</u>	<u>Lot #</u>
MW19	310-77024-C-11	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW19	310-77024-D-11	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW20	310-77024-B-12	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW20	310-77024-C-12	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW20	310-77024-D-12	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-1	310-77024-B-13	Plastic 250ml - with Nitric Acid	<2	_____	_____
DUP-1	310-77024-C-13	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-1	310-77024-D-13	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-2	310-77024-B-14	Plastic 250ml - with Nitric Acid	<2	_____	_____
DUP-2	310-77024-C-14	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-2	310-77024-D-14	Plastic 1 liter - Nitric Acid	<2	_____	_____

Chain of Custody Record



<b>Client Information (Sub Contract Lab)</b> Client Contact: Hayes, Shawn M Shipping/Receiving: shawn.hayes@testamericainc.com Company: TestAmerica Laboratories, Inc. Address: 13715 Rider Trail North, Earth City, MO, 63045 Phone: 314-298-8566 (Tel) 314-298-8757 (Fax) Email:		Lab Pk: Hayes, Shawn M E-Mail: shawn.hayes@testamericainc.com Carrier Tracking No(s): 310-6311.1 Page: Page 1 of 2 Job #: 310-77024-2									
Due Date Requested: 4/22/2016 TAT Requested (days):		Analysis Requested									
PO #:	WO #:	Project #:	SSOW#:								
314-298-8566 (Tel) 314-298-8757 (Fax)		31007560									
Project Name: North Omaha Station CCR Q1 2016 Site:		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:									
Matrix (W=water, S=solid, O=wastewat, ENT=entire, ANA=)		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 X - EDTA Y - EDA Z - other (specify)									
Sample ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Ra228/Ra226_GFP	9315_Ra226/PreSep_21 Standard Target List	9320_Ra228/PreSep_0 Standard Target List	Total Number of Containers	Special Instructions/Note:
MW2 (310-77024-1)	3/22/16	12:49 Central	Water	Water	X	X	X	X	X	2	
MW5 (310-77024-2)	3/23/16	10:37 Central	Water	Water	X	X	X	X	X	2	
MW5 (310-77024-2DU)	3/23/16	10:37 Central	DU	Water	X	X	X	X	X	1	
MW6 (310-77024-3)	3/22/16	14:49 Central	Water	Water	X	X	X	X	X	2	
MW8 (310-77024-4)	3/23/16	08:35 Central	Water	Water	X	X	X	X	X	2	
MW9 (310-77024-5)	3/22/16	11:40 Central	Water	Water	X	X	X	X	X	2	
MW13 (310-77024-6)	3/22/16	12:21 Central	Water	Water	X	X	X	X	X	2	
MW15 (310-77024-7)	3/22/16	14:16 Central	Water	Water	X	X	X	X	X	2	
MW16 (310-77024-8)	3/22/16	12:19 Central	Water	Water	X	X	X	X	X	2	
MW17 (310-77024-9)	3/23/16	09:58 Central	Water	Water	X	X	X	X	X	2	
MW18 (310-77024-10)	3/22/16	10:06 Central	Water	Water	X	X	X	X	X	2	
<b>Possible Hazard Identification</b> Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) Empty Kit Relinquished by:											
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements:											
Date/Time: 3/28/16 14:36 Date/Time:		Date/Time: 3/29/16 10:15 Date/Time:		Date/Time: 3/29/16 14:36 Date/Time:		Date/Time: 3/29/16 14:36 Date/Time:		Date/Time: 3/29/16 14:36 Date/Time:		Date/Time: 3/29/16 14:36 Date/Time:	
Relinquished by: T. Decker		Relinquished by: J. Clark		Relinquished by: J. Clark		Relinquished by: J. Clark		Relinquished by: J. Clark		Relinquished by: J. Clark	
Relinquished by:		Relinquished by:		Relinquished by:		Relinquished by:		Relinquished by:		Relinquished by:	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		Cooler Temperature(s) °C and Other Remarks:		Cooler Temperature(s) °C and Other Remarks:		Cooler Temperature(s) °C and Other Remarks:	



Chain of Custody Record

<b>Client Information (Sub Contract Lab)</b> Client Contact: _____ Shipping/Receiving Company: _____ TestAmerica Laboratories, Inc. Address: 13715 Rider Trail North, Earth City, MO, 63045 Phone: 314-298-8566(Tel) 314-298-8757(Fax) Email: _____ Project Name: North Omaha Station CCR Q1 2016 Site: _____		Sampler: Lab PM Hayes, Shawn M Phone: _____ E-Mail: shawn.hayes@testamericainc.com		Carrier Tracking No(s): _____ COC No: 310-6311.2 Page: Page 2 of 2 Job #: 310-77024-2	
Due Date Requested: 4/22/2016 TAT Requested (days): _____ PO #: _____ WO #: _____ Project #: 31007560 SSOV#: _____		<b>Analysis Requested</b> Total Number of Containers: _____ Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Arsenic Acid H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: _____ 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)			
<b>Sample Identification - Client ID (Lab ID)</b> MW19 (310-77024-11) MW20 (310-77024-12) DUP-1 (310-77024-13) DUP-2 (310-77024-14)		Field Filtered Sample (Yes or No) _____ Perform MS/MSD (Yes or No) _____ Ra228Ra228_GFPc _____ 9315_Ra226/PreSep_21 Standard Target List _____ 9320_Ra228/PreSep_0 Standard Target List _____		Special Instructions/Note: _____ _____ _____	
Sample Date 3/22/16 3/23/16 3/22/16 3/23/16	Sample Time 12:02 Central 09:17 Central 12:23 Central 08:37 Central	Sample Type (C=Comp, G=grab) _____ _____ _____ _____	Matrix (W=water, S=solid, O=waste/oil, ET=ETOS, A=AU) Water Water Water Water	X X X X	X X X X
<b>Possible Hazard Identification</b> Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) _____ Empty Kit Relinquished by: _____ Date: _____ Relinquished by: T. Beck Date: 3/28/16 1437 Relinquished by: _____ Date/Time: _____ Relinquished by: _____ Date/Time: _____ Custody Seal Intact: _____ Custody Seal No.: _____ Δ Yes Δ No					
<b>Special Instructions/QC Requirements:</b> Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal/By Lab <input type="checkbox"/> Archive For _____ Months Method of Shipment: _____ Received by: Shawn Clark Date/Time: 3/29/16 10:15 Company: TASTR Received by: _____ Date/Time: _____ Company: _____ Received by: _____ Date/Time: _____ Company: _____ Cooler Temperature(s) °C and Other Remarks: _____					



## Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-77024-2

**Login Number: 77024**

**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: 310-77024-2

**Login Number: 77024**

**List Number: 2**

**Creator: McKinney, Gerrod E**

**List Source: TestAmerica St. Louis**

**List Creation: 03/29/16 12:30 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	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	





## Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-77024-2

**Login Number: 77024**

**List Number: 3**

**Creator: McKinney, Gerrod E**

**List Source: TestAmerica St. Louis**

**List Creation: 03/29/16 12:34 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	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: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-2

## 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)	
310-77024-1	MW2	88.3	
310-77024-2	MW5	79.2	
310-77024-2 DU	MW5	84.0	
310-77024-3	MW6	87.7	
310-77024-4	MW8	85.2	
310-77024-5	MW9	84.0	
310-77024-6	MW13	88.0	
310-77024-7	MW15	84.3	
310-77024-8	MW16	88.0	
310-77024-9	MW17	77.2	
310-77024-10	MW18	84.6	
310-77024-11	MW19	91.5	
310-77024-12	MW20	88.0	
310-77024-13	DUP-1	89.5	
310-77024-14	DUP-2	90.9	

**Tracer/Carrier Legend**  
 Ba = Ba Carrier

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

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (40-110)	
LCS 160-242975/2-A	Lab Control Sample	90.6	
MB 160-242975/1-A	Method Blank	92.0	

**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)
310-77024-1	MW2	88.3	92.0
310-77024-2	MW5	79.2	89.0
310-77024-2 DU	MW5	84.0	86.4
310-77024-3	MW6	87.7	91.2
310-77024-4	MW8	85.2	94.2
310-77024-5	MW9	84.0	88.2
310-77024-6	MW13	88.0	93.5
310-77024-7	MW15	84.3	96.4
310-77024-8	MW16	88.0	94.6
310-77024-9	MW17	77.2	91.6
310-77024-10	MW18	84.6	87.9
310-77024-11	MW19	91.5	89.3
310-77024-12	MW20	88.0	87.9

TestAmerica Cedar Falls

# Tracer/Carrier Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR Q1 2016

TestAmerica Job ID: 310-77024-2

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

Matrix: Ground Water

Prep Type: Total/NA

### Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
310-77024-13	DUP-1	89.5	90.5
310-77024-14	DUP-2	90.9	92.7

#### 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 160-244056/2-A	Lab Control Sample	90.6	91.2
MB 160-244056/1-A	Method Blank	92.0	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: 310-82986-1

Client Project/Site: North Omaha Station

Sampling Event: CCR and Landfill Parameters (Q2 and Q4)

Revision: 1

For:

Omaha Public Power District

Attn: Accounts Payable, 4E/EP-5

444 South 16th Street Mall

Omaha, Nebraska 68102-2247

Attn: Brad Sojka



Authorized for release by:

7/15/2016 10:57:44 AM

Shawn Hayes, Project Manager II

(319)277-2401

[shawn.hayes@testamericainc.com](mailto:shawn.hayes@testamericainc.com)

### LINKS

Review your project  
results through

TotalAccess

Have a Question?



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[www.testamericainc.com](http://www.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: North Omaha Station

TestAmerica Job ID: 310-82986-1

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## Job ID: 310-82986-1

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### Laboratory: TestAmerica Cedar Falls

#### Narrative

---

#### Job Narrative 310-82986-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 6/16/2016 9:25 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.0° C, 2.5° C and 2.6° 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: 310-82986-2

---

### Laboratory: TestAmerica Cedar Falls

#### Narrative

---

#### Job Narrative 310-82986-2

#### RAD

Method(s) PrecSep\_0: Radium 228 Batch 160-257624:

Sample MW9 (310-82986-5) was prepared at a reduced aliquot due to sediment and discoloration. The sample was not used to demonstrate batch duplicity to avoid matrix interference with homogeneity.

Method(s) PrecSep-21: Radium 226 Batch 160-257619:

Sample MW13 (310-82986-6) was prepared at a reduced aliquot due to sediment and discoloration. The sample was not used to demonstrate batch duplicity to avoid matrix interference with homogeneity.

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: North Omaha Station

TestAmerica Job ID: 310-82986-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-82986-1	MW2	Ground Water	06/14/16 10:12	06/16/16 09:25
310-82986-2	MW5	Ground Water	06/14/16 15:28	06/16/16 09:25
310-82986-3	MW6	Ground Water	06/14/16 12:48	06/16/16 09:25
310-82986-4	MW8	Ground Water	06/14/16 13:21	06/16/16 09:25
310-82986-5	MW9	Ground Water	06/14/16 10:24	06/16/16 09:25
310-82986-6	MW13	Ground Water	06/14/16 11:35	06/16/16 09:25
310-82986-7	MW15	Ground Water	06/14/16 12:15	06/16/16 09:25
310-82986-8	MW16	Ground Water	06/14/16 10:50	06/16/16 09:25
310-82986-9	MW17	Ground Water	06/14/16 14:51	06/16/16 09:25
310-82986-10	MW18	Ground Water	06/14/16 09:16	06/16/16 09:25
310-82986-11	MW19	Ground Water	06/14/16 09:46	06/16/16 09:25
310-82986-12	MW20	Ground Water	06/14/16 13:49	06/16/16 09:25
310-82986-13	DUP-1	Ground Water	06/14/16 13:51	06/16/16 09:25
310-82986-14	DUP-2	Ground Water	06/14/16 15:30	06/16/16 09:25

# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: MW2**  
**Date Collected: 06/14/16 10:12**  
**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-1**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	25.7		5.00		mg/L			06/20/16 14:12	5
Fluoride	<0.500		0.500		mg/L			06/20/16 14:12	5
Sulfate	774		20.0		mg/L			06/21/16 14:52	20

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/21/16 06:56	06/21/16 19:52	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 21:29	1
Arsenic	0.234		0.00200		mg/L		06/20/16 08:09	07/09/16 21:29	1
Barium	0.113		0.00200		mg/L		06/20/16 08:09	07/09/16 21:29	1
Beryllium	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 21:29	1
Boron	1.52		0.200		mg/L		06/20/16 08:09	07/11/16 22:25	1
Cadmium	<0.000500		0.000500		mg/L		06/20/16 08:09	07/09/16 21:29	1
Calcium	278		0.200		mg/L		06/20/16 08:09	07/11/16 22:25	1
Chromium	<0.00500		0.00500		mg/L		06/20/16 08:09	07/09/16 21:29	1
Cobalt	0.000566		0.000500		mg/L		06/20/16 08:09	07/11/16 22:25	1
Lead	0.00211		0.000500		mg/L		06/20/16 08:09	07/09/16 21:29	1
Molybdenum	<0.00200		0.00200		mg/L		06/20/16 08:09	07/09/16 21:29	1
Selenium	<0.00500		0.00500		mg/L		06/20/16 08:09	07/09/16 21:29	1
Thallium	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 21:29	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/20/16 10:06	06/21/16 12:03	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1560		30.0		mg/L			06/17/16 08:46	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.115	U	0.0973	0.0979	1.00	0.151	pCi/L	06/22/16 14:27	07/14/16 06:48	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Ba Carrier</i>	80.3		40 - 110					06/22/16 14:27	07/14/16 06:48	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.479	U	0.314	0.317	1.00	0.488	pCi/L	06/22/16 14:51	07/11/16 13:21	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Ba Carrier</i>	80.3		40 - 110					06/22/16 14:51	07/11/16 13:21	1
<i>Y Carrier</i>	91.2		40 - 110					06/22/16 14:51	07/11/16 13:21	1

TestAmerica Cedar Falls



# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: MW2**  
**Date Collected: 06/14/16 10:12**  
**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-1**  
**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	0.594		0.329	0.332	5.00	0.488	pCi/L		07/14/16 18:10	1

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# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: MW5**  
**Date Collected: 06/14/16 15:28**  
**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-2**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>52.1</b>		5.00		mg/L			06/20/16 14:12	5
Fluoride	<0.500		0.500		mg/L			06/20/16 14:12	5
<b>Sulfate</b>	<b>1160</b>		50.0		mg/L			06/21/16 14:52	50

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Lithium</b>	<b>0.0866</b>		0.0500		mg/L		06/21/16 06:56	06/21/16 19:54	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 21:32	1
<b>Arsenic</b>	<b>0.0389</b>		0.00200		mg/L		06/20/16 08:09	07/09/16 21:32	1
<b>Barium</b>	<b>0.0701</b>		0.00200		mg/L		06/20/16 08:09	07/09/16 21:32	1
Beryllium	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 21:32	1
<b>Boron</b>	<b>0.533</b>		0.200		mg/L		06/20/16 08:09	07/11/16 22:28	1
Cadmium	<0.000500		0.000500		mg/L		06/20/16 08:09	07/09/16 21:32	1
<b>Calcium</b>	<b>434</b>		0.200		mg/L		06/20/16 08:09	07/11/16 22:28	1
Chromium	<0.00500		0.00500		mg/L		06/20/16 08:09	07/09/16 21:32	1
<b>Cobalt</b>	<b>0.000509</b>		0.000500		mg/L		06/20/16 08:09	07/11/16 22:28	1
Lead	<0.000500		0.000500		mg/L		06/20/16 08:09	07/09/16 21:32	1
Molybdenum	<0.00200		0.00200		mg/L		06/20/16 08:09	07/09/16 21:32	1
Selenium	<0.00500		0.00500		mg/L		06/20/16 08:09	07/09/16 21:32	1
Thallium	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 21:32	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/20/16 10:06	06/21/16 12:11	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>2530</b>		150		mg/L			06/17/16 08:46	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-226</b>	<b>0.156</b>		0.0921	0.0931	1.00	0.124	pCi/L	06/22/16 14:27	07/14/16 06:48	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	80.6		40 - 110					06/22/16 14:27	07/14/16 06:48	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-228</b>	<b>0.497</b>		0.263	0.267	1.00	0.385	pCi/L	06/22/16 14:51	07/11/16 13:21	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	80.6		40 - 110					06/22/16 14:51	07/11/16 13:21	1
Y Carrier	90.1		40 - 110					06/22/16 14:51	07/11/16 13:21	1

TestAmerica Cedar Falls

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: MW5**  
**Date Collected: 06/14/16 15:28**  
**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-2**  
**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	0.653		0.279	0.283	5.00	0.385	pCi/L		07/14/16 18:10	1

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# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: MW6**  
**Date Collected: 06/14/16 12:48**  
**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-3**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	230		5.00		mg/L			06/20/16 14:12	5
Fluoride	<0.500		0.500		mg/L			06/20/16 14:12	5
Sulfate	226		5.00		mg/L			06/20/16 14:12	5

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/21/16 06:56	06/21/16 20:02	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 21:35	1
Arsenic	0.0324		0.00200		mg/L		06/20/16 08:09	07/09/16 21:35	1
Barium	0.225		0.00200		mg/L		06/20/16 08:09	07/09/16 21:35	1
Beryllium	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 21:35	1
Boron	0.383		0.200		mg/L		06/20/16 08:09	07/11/16 22:34	1
Cadmium	<0.000500		0.000500		mg/L		06/20/16 08:09	07/09/16 21:35	1
Calcium	261		0.200		mg/L		06/20/16 08:09	07/11/16 22:34	1
Chromium	<0.00500		0.00500		mg/L		06/20/16 08:09	07/09/16 21:35	1
Cobalt	0.00527		0.000500		mg/L		06/20/16 08:09	07/11/16 22:34	1
Lead	0.00269		0.000500		mg/L		06/20/16 08:09	07/09/16 21:35	1
Molybdenum	0.0507		0.00200		mg/L		06/20/16 08:09	07/11/16 22:34	1
Selenium	<0.00500		0.00500		mg/L		06/20/16 08:09	07/09/16 21:35	1
Thallium	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 21:35	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/20/16 10:06	06/21/16 12:13	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1100		60.0		mg/L			06/17/16 08:46	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.387		0.119	0.124	1.00	0.112	pCi/L	06/22/16 14:27	07/14/16 06:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.6		40 - 110					06/22/16 14:27	07/14/16 06:48	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.438		0.263	0.266	1.00	0.396	pCi/L	06/22/16 14:51	07/11/16 13:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.6		40 - 110					06/22/16 14:51	07/11/16 13:21	1
Y Carrier	86.7		40 - 110					06/22/16 14:51	07/11/16 13:21	1

TestAmerica Cedar Falls

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: MW6**  
**Date Collected: 06/14/16 12:48**  
**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-3**  
**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	0.825		0.289	0.294	5.00	0.396	pCi/L		07/14/16 18:10	1

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# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: MW8**  
**Date Collected: 06/14/16 13:21**  
**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-4**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15.1		5.00		mg/L			06/20/16 14:12	5
Fluoride	0.518		0.500		mg/L			06/20/16 14:12	5
Sulfate	608		20.0		mg/L			06/21/16 14:52	20

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/21/16 06:56	06/21/16 20:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 21:38	1
Arsenic	0.0162		0.00200		mg/L		06/20/16 08:09	07/09/16 21:38	1
Barium	0.100		0.00200		mg/L		06/20/16 08:09	07/09/16 21:38	1
Beryllium	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 21:38	1
Boron	0.974		0.200		mg/L		06/20/16 08:09	07/11/16 22:37	1
Cadmium	<0.000500		0.000500		mg/L		06/20/16 08:09	07/09/16 21:38	1
Calcium	142		0.200		mg/L		06/20/16 08:09	07/11/16 22:37	1
Chromium	<0.00500		0.00500		mg/L		06/20/16 08:09	07/09/16 21:38	1
Cobalt	<0.000500		0.000500		mg/L		06/20/16 08:09	07/09/16 21:38	1
Lead	0.00169		0.000500		mg/L		06/20/16 08:09	07/09/16 21:38	1
Molybdenum	0.102		0.00200		mg/L		06/20/16 08:09	07/11/16 22:37	1
Selenium	<0.00500		0.00500		mg/L		06/20/16 08:09	07/09/16 21:38	1
Thallium	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 21:38	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/20/16 10:06	06/21/16 12:14	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	934		30.0		mg/L			06/17/16 08:46	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0801	U	0.0919	0.0922	1.00	0.150	pCi/L	06/22/16 14:27	07/14/16 06:48	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Ba Carrier</i>	84.6		40 - 110					06/22/16 14:27	07/14/16 06:48	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.300	U	0.252	0.253	1.00	0.400	pCi/L	06/22/16 14:51	07/11/16 13:21	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Ba Carrier</i>	84.6		40 - 110					06/22/16 14:51	07/11/16 13:21	1
<i>Y Carrier</i>	89.7		40 - 110					06/22/16 14:51	07/11/16 13:21	1

TestAmerica Cedar Falls

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: MW8**

**Date Collected: 06/14/16 13:21**

**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-4**

**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	0.380	U	0.268	0.269	5.00	0.400	pCi/L		07/14/16 18:10	1

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# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: MW9**  
**Date Collected: 06/14/16 10:24**  
**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-5**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	165		5.00		mg/L			06/20/16 14:12	5
Fluoride	0.864		0.500		mg/L			06/20/16 14:12	5
Sulfate	31.7		5.00		mg/L			06/20/16 14:12	5

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/21/16 06:56	06/21/16 20:06	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 21:41	1
Arsenic	0.00542		0.00200		mg/L		06/20/16 08:09	07/09/16 21:41	1
Barium	0.542		0.00200		mg/L		06/20/16 08:09	07/09/16 21:41	1
Beryllium	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 21:41	1
Boron	<0.200		0.200		mg/L		06/20/16 08:09	07/11/16 22:50	1
Cadmium	<0.000500		0.000500		mg/L		06/20/16 08:09	07/09/16 21:41	1
Calcium	159		0.200		mg/L		06/20/16 08:09	07/11/16 22:50	1
Chromium	<0.00500		0.00500		mg/L		06/20/16 08:09	07/09/16 21:41	1
Cobalt	0.00148		0.000500		mg/L		06/20/16 08:09	07/11/16 22:50	1
Lead	0.00339		0.000500		mg/L		06/20/16 08:09	07/09/16 21:41	1
Molybdenum	<0.00200		0.00200		mg/L		06/20/16 08:09	07/09/16 21:41	1
Selenium	<0.00500		0.00500		mg/L		06/20/16 08:09	07/09/16 21:41	1
Thallium	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 21:41	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/20/16 10:06	06/21/16 12:16	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	770		30.0		mg/L			06/17/16 08:46	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.952		0.290	0.302	1.00	0.323	pCi/L	06/22/16 14:27	07/14/16 06:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.5		40 - 110					06/22/16 14:27	07/14/16 06:48	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.17		0.566	0.577	1.00	0.822	pCi/L	06/22/16 14:51	07/11/16 13:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.5		40 - 110					06/22/16 14:51	07/11/16 13:21	1
Y Carrier	88.6		40 - 110					06/22/16 14:51	07/11/16 13:21	1

TestAmerica Cedar Falls



# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: MW9**

**Date Collected: 06/14/16 10:24**

**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-5**

**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	2.12		0.636	0.651	5.00	0.822	pCi/L		07/14/16 18:10	1

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# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: MW13**  
**Date Collected: 06/14/16 11:35**  
**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-6**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>6.70</b>		5.00		mg/L			06/20/16 14:12	5
Fluoride	<0.500		0.500		mg/L			06/20/16 14:12	5
<b>Sulfate</b>	<b>500</b>		20.0		mg/L			06/21/16 14:52	20

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/21/16 06:56	06/21/16 20:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 21:44	1
<b>Arsenic</b>	<b>0.217</b>		0.00200		mg/L		06/20/16 08:09	07/09/16 21:44	1
<b>Barium</b>	<b>0.0906</b>		0.00200		mg/L		06/20/16 08:09	07/09/16 21:44	1
Beryllium	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 21:44	1
<b>Boron</b>	<b>1.97</b>		0.200		mg/L		06/20/16 08:09	07/11/16 22:53	1
Cadmium	<0.000500		0.000500		mg/L		06/20/16 08:09	07/09/16 21:44	1
<b>Calcium</b>	<b>138</b>		0.200		mg/L		06/20/16 08:09	07/11/16 22:53	1
Chromium	<0.00500		0.00500		mg/L		06/20/16 08:09	07/09/16 21:44	1
Cobalt	<0.000500		0.000500		mg/L		06/20/16 08:09	07/09/16 21:44	1
Lead	<0.000500		0.000500		mg/L		06/20/16 08:09	07/09/16 21:44	1
<b>Molybdenum</b>	<b>0.592</b>		0.00200		mg/L		06/20/16 08:09	07/11/16 22:53	1
<b>Selenium</b>	<b>0.0141</b>		0.00500		mg/L		06/20/16 08:09	07/09/16 21:44	1
Thallium	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 21:44	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/20/16 10:06	06/21/16 12:17	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>1030</b>		30.0		mg/L			06/17/16 08:46	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0914	U	0.0686	0.0691	1.00	0.0971	pCi/L	06/22/16 14:27	07/14/16 06:49	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	82.9		40 - 110					06/22/16 14:27	07/14/16 06:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.225	U	0.238	0.239	1.00	0.389	pCi/L	06/22/16 14:51	07/11/16 13:21	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	82.9		40 - 110					06/22/16 14:51	07/11/16 13:21	1
Y Carrier	93.1		40 - 110					06/22/16 14:51	07/11/16 13:21	1

TestAmerica Cedar Falls

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: MW13**

**Date Collected: 06/14/16 11:35**

**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-6**

**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	0.317	U	0.248	0.249	5.00	0.389	pCi/L		07/14/16 18:10	1

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# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: MW15**  
**Date Collected: 06/14/16 12:15**  
**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-7**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>13.0</b>		5.00		mg/L			06/20/16 14:12	5
Fluoride	<0.500		0.500		mg/L			06/20/16 14:12	5
<b>Sulfate</b>	<b>934</b>		20.0		mg/L			06/21/16 14:52	20

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/21/16 06:56	06/21/16 20:14	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.00195</b>		0.00100		mg/L		06/20/16 08:09	07/09/16 21:50	1
Arsenic	<0.00200		0.00200		mg/L		06/20/16 08:09	07/09/16 21:50	1
<b>Barium</b>	<b>0.0552</b>		0.00200		mg/L		06/20/16 08:09	07/09/16 21:50	1
Beryllium	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 21:50	1
<b>Boron</b>	<b>5.39</b>		0.200		mg/L		06/20/16 08:09	07/11/16 22:59	1
Cadmium	<0.000500		0.000500		mg/L		06/20/16 08:09	07/09/16 21:50	1
<b>Calcium</b>	<b>340</b>		0.200		mg/L		06/20/16 08:09	07/11/16 22:59	1
<b>Chromium</b>	<b>0.0199</b>		0.00500		mg/L		06/20/16 08:09	07/11/16 22:59	1
Cobalt	<0.000500		0.000500		mg/L		06/20/16 08:09	07/09/16 21:50	1
<b>Lead</b>	<b>0.000668</b>		0.000500		mg/L		06/20/16 08:09	07/09/16 21:50	1
<b>Molybdenum</b>	<b>0.254</b>		0.00200		mg/L		06/20/16 08:09	07/11/16 22:59	1
<b>Selenium</b>	<b>0.115</b>		0.00500		mg/L		06/20/16 08:09	07/09/16 21:50	1
Thallium	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 21:50	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/20/16 10:06	06/21/16 12:19	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>1640</b>		60.0		mg/L			06/17/16 08:46	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0930	U	0.0715	0.0719	1.00	0.104	pCi/L	06/22/16 14:27	07/14/16 06:49	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	85.5		40 - 110					06/22/16 14:27	07/14/16 06:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.218	U	0.232	0.233	1.00	0.378	pCi/L	06/22/16 14:51	07/11/16 13:21	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	85.5		40 - 110					06/22/16 14:51	07/11/16 13:21	1
Y Carrier	90.5		40 - 110					06/22/16 14:51	07/11/16 13:21	1

TestAmerica Cedar Falls

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: MW15**

**Date Collected: 06/14/16 12:15**

**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-7**

**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	0.311	U	0.243	0.244	5.00	0.378	pCi/L		07/14/16 18:10	1

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# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: MW16**  
**Date Collected: 06/14/16 10:50**  
**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-8**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>65.5</b>		5.00		mg/L			06/20/16 14:12	5
Fluoride	<0.500		0.500		mg/L			06/20/16 14:12	5
<b>Sulfate</b>	<b>340</b>		20.0		mg/L			06/21/16 14:52	20

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Lithium</b>	<b>0.0514</b>		0.0500		mg/L		06/21/16 06:56	06/21/16 20:16	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 22:03	1
Arsenic	<0.00200		0.00200		mg/L		06/20/16 08:09	07/09/16 22:03	1
<b>Barium</b>	<b>0.0730</b>		0.00200		mg/L		06/20/16 08:09	07/09/16 22:03	1
Beryllium	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 22:03	1
<b>Boron</b>	<b>0.409</b>		0.200		mg/L		06/20/16 08:09	07/11/16 23:02	1
Cadmium	<0.000500		0.000500		mg/L		06/20/16 08:09	07/09/16 22:03	1
<b>Calcium</b>	<b>180</b>		0.200		mg/L		06/20/16 08:09	07/11/16 23:02	1
Chromium	<0.00500		0.00500		mg/L		06/20/16 08:09	07/11/16 23:02	1
<b>Cobalt</b>	<b>0.000634</b>		0.000500		mg/L		06/20/16 08:09	07/11/16 23:02	1
Lead	<0.000500		0.000500		mg/L		06/20/16 08:09	07/09/16 22:03	1
<b>Molybdenum</b>	<b>0.0125</b>		0.00200		mg/L		06/20/16 08:09	07/11/16 23:02	1
Selenium	<0.00500		0.00500		mg/L		06/20/16 08:09	07/09/16 22:03	1
Thallium	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 22:03	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/20/16 10:06	06/21/16 12:21	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>968</b>		30.0		mg/L			06/17/16 08:46	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0978	U	0.0772	0.0777	1.00	0.114	pCi/L	06/22/16 14:27	07/14/16 06:49	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	85.5		40 - 110					06/22/16 14:27	07/14/16 06:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.356	U	0.252	0.254	1.00	0.392	pCi/L	06/22/16 14:51	07/11/16 13:21	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	85.5		40 - 110					06/22/16 14:51	07/11/16 13:21	1
Y Carrier	92.0		40 - 110					06/22/16 14:51	07/11/16 13:21	1

TestAmerica Cedar Falls

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: MW16**  
**Date Collected: 06/14/16 10:50**  
**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-8**  
**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	0.454		0.264	0.266	5.00	0.392	pCi/L		07/14/16 18:10	1

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# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: MW17**  
**Date Collected: 06/14/16 14:51**  
**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-9**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>50.0</b>		5.00		mg/L			06/20/16 14:12	5
Fluoride	<0.500		0.500		mg/L			06/20/16 14:12	5
<b>Sulfate</b>	<b>990</b>		50.0		mg/L			06/22/16 08:06	50

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Lithium</b>	<b>0.129</b>		0.0500		mg/L		06/21/16 06:56	06/21/16 20:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 22:06	1
<b>Arsenic</b>	<b>0.0360</b>		0.00200		mg/L		06/20/16 08:09	07/09/16 22:06	1
<b>Barium</b>	<b>0.0396</b>		0.00200		mg/L		06/20/16 08:09	07/09/16 22:06	1
Beryllium	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 22:06	1
<b>Boron</b>	<b>0.706</b>		0.200		mg/L		06/20/16 08:09	07/11/16 23:05	1
Cadmium	<0.000500		0.000500		mg/L		06/20/16 08:09	07/09/16 22:06	1
<b>Calcium</b>	<b>376</b>		0.200		mg/L		06/20/16 08:09	07/11/16 23:05	1
Chromium	<0.00500		0.00500		mg/L		06/20/16 08:09	07/11/16 23:05	1
<b>Cobalt</b>	<b>0.0127</b>		0.000500		mg/L		06/20/16 08:09	07/11/16 23:05	1
Lead	<0.000500		0.000500		mg/L		06/20/16 08:09	07/09/16 22:06	1
Molybdenum	<0.00200		0.00200		mg/L		06/20/16 08:09	07/11/16 23:05	1
Selenium	<0.00500		0.00500		mg/L		06/20/16 08:09	07/09/16 22:06	1
Thallium	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 22:06	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/20/16 10:06	06/21/16 12:22	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>2360</b>		150		mg/L			06/17/16 08:46	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.119	U	0.0847	0.0853	1.00	0.123	pCi/L	06/22/16 14:27	07/14/16 06:49	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	82.9		40 - 110					06/22/16 14:27	07/14/16 06:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.102	U	0.272	0.272	1.00	0.469	pCi/L	06/22/16 14:51	07/11/16 13:20	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	82.9		40 - 110					06/22/16 14:51	07/11/16 13:20	1
Y Carrier	89.7		40 - 110					06/22/16 14:51	07/11/16 13:20	1

TestAmerica Cedar Falls



# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: MW17**  
**Date Collected: 06/14/16 14:51**  
**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-9**  
**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	0.221	U	0.285	0.285	5.00	0.469	pCi/L		07/14/16 18:10	1

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# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: MW18**  
**Date Collected: 06/14/16 09:16**  
**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-10**  
**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			06/20/16 14:12	5
Fluoride	<0.500		0.500		mg/L			06/20/16 14:12	5
<b>Sulfate</b>	<b>5.00</b>		5.00		mg/L			06/20/16 14:12	5

## Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/21/16 06:56	06/21/16 20:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 22:09	1
Arsenic	<0.00200		0.00200		mg/L		06/20/16 08:09	07/09/16 22:09	1
<b>Barium</b>	<b>0.319</b>		0.00200		mg/L		06/20/16 08:09	07/09/16 22:09	1
Beryllium	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 22:09	1
Boron	<0.200		0.200		mg/L		06/20/16 08:09	07/11/16 23:08	1
Cadmium	<0.000500		0.000500		mg/L		06/20/16 08:09	07/09/16 22:09	1
<b>Calcium</b>	<b>96.1</b>		0.200		mg/L		06/20/16 08:09	07/11/16 23:08	1
Chromium	<0.00500		0.00500		mg/L		06/20/16 08:09	07/11/16 23:08	1
Cobalt	<0.000500		0.000500		mg/L		06/20/16 08:09	07/09/16 22:09	1
Lead	<0.000500		0.000500		mg/L		06/20/16 08:09	07/09/16 22:09	1
Molybdenum	<0.00200		0.00200		mg/L		06/20/16 08:09	07/11/16 23:08	1
Selenium	<0.00500		0.00500		mg/L		06/20/16 08:09	07/09/16 22:09	1
Thallium	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 22:09	1

## Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/20/16 10:06	06/21/16 12:24	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>468</b>		30.0		mg/L			06/17/16 08:46	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-226</b>	<b>0.450</b>		0.123	0.129	1.00	0.107	pCi/L	06/22/16 14:27	07/14/16 06:49	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	88.3		40 - 110					06/22/16 14:27	07/14/16 06:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.269	U	0.246	0.248	1.00	0.396	pCi/L	06/22/16 14:51	07/11/16 13:20	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	88.3		40 - 110					06/22/16 14:51	07/11/16 13:20	1
Y Carrier	90.5		40 - 110					06/22/16 14:51	07/11/16 13:20	1

TestAmerica Cedar Falls

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: MW18**  
**Date Collected: 06/14/16 09:16**  
**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-10**  
**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	0.720		0.275	0.279	5.00	0.396	pCi/L		07/14/16 18:10	1

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# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: MW19**  
**Date Collected: 06/14/16 09:46**  
**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-11**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>7.20</b>		5.00		mg/L			06/20/16 14:12	5
Fluoride	<0.500		0.500		mg/L			06/20/16 14:12	5
<b>Sulfate</b>	<b>29.9</b>		5.00		mg/L			06/20/16 14:12	5

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/21/16 06:56	06/21/16 20:23	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 22:12	1
Arsenic	<0.00200		0.00200		mg/L		06/20/16 08:09	07/09/16 22:12	1
<b>Barium</b>	<b>0.324</b>		0.00200		mg/L		06/20/16 08:09	07/09/16 22:12	1
Beryllium	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 22:12	1
Boron	<0.200		0.200		mg/L		06/20/16 08:09	07/11/16 23:11	1
Cadmium	<0.000500		0.000500		mg/L		06/20/16 08:09	07/09/16 22:12	1
<b>Calcium</b>	<b>110</b>		0.200		mg/L		06/20/16 08:09	07/11/16 23:11	1
Chromium	<0.00500		0.00500		mg/L		06/20/16 08:09	07/11/16 23:11	1
Cobalt	<0.000500		0.000500		mg/L		06/20/16 08:09	07/09/16 22:12	1
Lead	<0.000500		0.000500		mg/L		06/20/16 08:09	07/09/16 22:12	1
Molybdenum	<0.00200		0.00200		mg/L		06/20/16 08:09	07/11/16 23:11	1
Selenium	<0.00500		0.00500		mg/L		06/20/16 08:09	07/09/16 22:12	1
Thallium	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 22:12	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/20/16 10:06	06/21/16 12:28	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>508</b>		30.0		mg/L			06/17/16 08:46	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-226</b>	<b>0.555</b>		0.147	0.156	1.00	0.156	pCi/L	06/22/16 14:27	07/14/16 06:49	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	91.5		40 - 110					06/22/16 14:27	07/14/16 06:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-228</b>	<b>0.525</b>		0.262	0.267	1.00	0.386	pCi/L	06/22/16 14:51	07/11/16 13:20	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	91.5		40 - 110					06/22/16 14:51	07/11/16 13:20	1
Y Carrier	90.1		40 - 110					06/22/16 14:51	07/11/16 13:20	1

TestAmerica Cedar Falls

# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: MW19**

**Date Collected: 06/14/16 09:46**

**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-11**

**Matrix: Ground Water**

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.08		0.301	0.309	5.00	0.386	pCi/L		07/14/16 18:10	1

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# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: MW20**  
**Date Collected: 06/14/16 13:49**  
**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-12**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	41.3		5.00		mg/L			06/20/16 14:12	5
Fluoride	1.04		0.500		mg/L			06/20/16 14:12	5
Sulfate	455		20.0		mg/L			06/21/16 14:52	20

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/21/16 06:56	06/21/16 20:27	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 22:15	1
Arsenic	0.0456		0.00200		mg/L		06/20/16 08:09	07/09/16 22:15	1
Barium	0.108		0.00200		mg/L		06/20/16 08:09	07/09/16 22:15	1
Beryllium	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 22:15	1
Boron	0.297		0.200		mg/L		06/20/16 08:09	07/11/16 23:14	1
Cadmium	<0.000500		0.000500		mg/L		06/20/16 08:09	07/09/16 22:15	1
Calcium	185		0.200		mg/L		06/20/16 08:09	07/11/16 23:14	1
Chromium	<0.00500		0.00500		mg/L		06/20/16 08:09	07/11/16 23:14	1
Cobalt	<0.000500		0.000500		mg/L		06/20/16 08:09	07/09/16 22:15	1
Lead	<0.000500		0.000500		mg/L		06/20/16 08:09	07/09/16 22:15	1
Molybdenum	0.0103		0.00200		mg/L		06/20/16 08:09	07/11/16 23:14	1
Selenium	<0.00500		0.00500		mg/L		06/20/16 08:09	07/09/16 22:15	1
Thallium	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 22:15	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/20/16 10:06	06/21/16 12:30	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1140		30.0		mg/L			06/17/16 08:46	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.293		0.106	0.109	1.00	0.112	pCi/L	06/22/16 14:27	07/14/16 06:49	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Ba Carrier</i>	85.8		40 - 110					06/22/16 14:27	07/14/16 06:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.283	U	0.258	0.259	1.00	0.415	pCi/L	06/22/16 14:51	07/11/16 13:20	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Ba Carrier</i>	85.8		40 - 110					06/22/16 14:51	07/11/16 13:20	1
<i>Y Carrier</i>	89.0		40 - 110					06/22/16 14:51	07/11/16 13:20	1

TestAmerica Cedar Falls

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: MW20**  
**Date Collected: 06/14/16 13:49**  
**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-12**  
**Matrix: Ground Water**

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.576		0.279	0.281	5.00	0.415	pCi/L		07/14/16 18:10	1

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# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: DUP-1**

**Lab Sample ID: 310-82986-13**

**Date Collected: 06/14/16 13:51**

**Matrix: Ground Water**

**Date Received: 06/16/16 09:25**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	40.3		5.00		mg/L			06/20/16 14:12	5
Fluoride	0.647		0.500		mg/L			06/20/16 14:12	5
Sulfate	454		20.0		mg/L			06/21/16 14:52	20

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/21/16 06:56	06/21/16 20:29	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 22:18	1
Arsenic	0.0440		0.00200		mg/L		06/20/16 08:09	07/09/16 22:18	1
Barium	0.104		0.00200		mg/L		06/20/16 08:09	07/09/16 22:18	1
Beryllium	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 22:18	1
Boron	0.278		0.200		mg/L		06/20/16 08:09	07/11/16 23:18	1
Cadmium	<0.000500		0.000500		mg/L		06/20/16 08:09	07/09/16 22:18	1
Calcium	177		0.200		mg/L		06/20/16 08:09	07/11/16 23:18	1
Chromium	<0.00500		0.00500		mg/L		06/20/16 08:09	07/11/16 23:18	1
Cobalt	<0.000500		0.000500		mg/L		06/20/16 08:09	07/11/16 23:18	1
Lead	<0.000500		0.000500		mg/L		06/20/16 08:09	07/09/16 22:18	1
Molybdenum	0.00997		0.00200		mg/L		06/20/16 08:09	07/11/16 23:18	1
Selenium	<0.00500		0.00500		mg/L		06/20/16 08:09	07/09/16 22:18	1
Thallium	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 22:18	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/20/16 10:06	06/21/16 12:32	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1050		30.0		mg/L			06/17/16 08:46	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.357		0.131	0.135	1.00	0.160	pCi/L	06/22/16 14:27	07/14/16 06:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.0		40 - 110					06/22/16 14:27	07/14/16 06:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.600		0.279	0.284	1.00	0.399	pCi/L	06/22/16 14:51	07/11/16 13:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.0		40 - 110					06/22/16 14:51	07/11/16 13:20	1
Y Carrier	88.2		40 - 110					06/22/16 14:51	07/11/16 13:20	1

TestAmerica Cedar Falls



# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: DUP-1**  
**Date Collected: 06/14/16 13:51**  
**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-13**  
**Matrix: Ground Water**

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.957		0.308	0.315	5.00	0.399	pCi/L		07/14/16 18:10	1

- 1
- 2
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- 5
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- 12
- 13
- 14

# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: DUP-2**

**Date Collected: 06/14/16 15:30**

**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-14**

**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>53.2</b>		5.00		mg/L			06/20/16 14:12	5
Fluoride	<0.500		0.500		mg/L			06/20/16 14:12	5
<b>Sulfate</b>	<b>1200</b>		50.0		mg/L			06/21/16 14:52	50

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Lithium</b>	<b>0.0883</b>		0.0500		mg/L		06/21/16 06:56	06/21/16 20:31	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 22:21	1
<b>Arsenic</b>	<b>0.0417</b>		0.00200		mg/L		06/20/16 08:09	07/09/16 22:21	1
<b>Barium</b>	<b>0.0764</b>		0.00200		mg/L		06/20/16 08:09	07/09/16 22:21	1
Beryllium	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 22:21	1
<b>Boron</b>	<b>0.527</b>		0.200		mg/L		06/20/16 08:09	07/11/16 23:30	1
Cadmium	<0.000500		0.000500		mg/L		06/20/16 08:09	07/09/16 22:21	1
<b>Calcium</b>	<b>430</b>		0.200		mg/L		06/20/16 08:09	07/11/16 23:30	1
Chromium	<0.00500		0.00500		mg/L		06/20/16 08:09	07/11/16 23:30	1
Cobalt	<0.000500		0.000500		mg/L		06/20/16 08:09	07/11/16 23:30	1
Lead	<0.000500		0.000500		mg/L		06/20/16 08:09	07/09/16 22:21	1
Molybdenum	<0.00200		0.00200		mg/L		06/20/16 08:09	07/11/16 23:30	1
Selenium	<0.00500		0.00500		mg/L		06/20/16 08:09	07/09/16 22:21	1
Thallium	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 22:21	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/20/16 10:06	06/21/16 12:33	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>2680</b>		150		mg/L			06/17/16 08:46	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.118	U	0.109	0.110	1.00	0.174	pCi/L	06/22/16 14:27	07/14/16 06:50	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	82.1		40 - 110					06/22/16 14:27	07/14/16 06:50	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0967	U	0.259	0.259	1.00	0.447	pCi/L	06/22/16 14:51	07/11/16 13:19	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	82.1		40 - 110					06/22/16 14:51	07/11/16 13:19	1
Y Carrier	93.8		40 - 110					06/22/16 14:51	07/11/16 13:19	1

TestAmerica Cedar Falls

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: DUP-2**

**Date Collected: 06/14/16 15:30**

**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-14**

**Matrix: Ground Water**

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.214	U	0.281	0.282	5.00	0.447	pCi/L		07/14/16 18:10	1

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# Definitions/Glossary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

## Qualifiers

### 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.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)

# QC Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

## Method: 9056A - Anions, Ion Chromatography

**Lab Sample ID: MB 310-131686/3**  
**Matrix: Water**  
**Analysis Batch: 131686**

**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			06/20/16 14:12	1
Fluoride	<0.100		0.100		mg/L			06/20/16 14:12	1
Sulfate	<1.00		1.00		mg/L			06/20/16 14:12	1

**Lab Sample ID: LCS 310-131686/4**  
**Matrix: Water**  
**Analysis Batch: 131686**

**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	7.967		mg/L		106	90 - 110
Fluoride	1.50	1.570		mg/L		105	90 - 110
Sulfate	7.50	8.071		mg/L		108	90 - 110

**Lab Sample ID: 310-82986-12 MS**  
**Matrix: Ground Water**  
**Analysis Batch: 131686**

**Client Sample ID: MW20**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	41.3		25.0	64.82		mg/L		94	80 - 120
Fluoride	1.04		5.00	5.341		mg/L		86	80 - 120

**Lab Sample ID: 310-82986-12 MSD**  
**Matrix: Ground Water**  
**Analysis Batch: 131686**

**Client Sample ID: MW20**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	41.3		25.0	65.30		mg/L		96	80 - 120	1	15
Fluoride	1.04		5.00	5.444		mg/L		88	80 - 120	2	15

**Lab Sample ID: MB 310-131833/3**  
**Matrix: Water**  
**Analysis Batch: 131833**

**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			06/21/16 14:52	1
Sulfate	<1.00		1.00		mg/L			06/21/16 14:52	1

**Lab Sample ID: LCS 310-131833/4**  
**Matrix: Water**  
**Analysis Batch: 131833**

**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	7.710		mg/L		103	90 - 110
Sulfate	7.50	7.837		mg/L		104	90 - 110

TestAmerica Cedar Falls

# QC Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

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

**Lab Sample ID: MB 310-131928/3**  
**Matrix: Water**  
**Analysis Batch: 131928**

**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			06/22/16 08:06	1
Fluoride	<0.100		0.100		mg/L			06/22/16 08:06	1
Sulfate	<1.00		1.00		mg/L			06/22/16 08:06	1

**Lab Sample ID: LCS 310-131928/4**  
**Matrix: Water**  
**Analysis Batch: 131928**

**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	7.980		mg/L		106	90 - 110
Fluoride	1.50	1.534		mg/L		102	90 - 110
Sulfate	7.50	8.100		mg/L		108	90 - 110

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 310-131618/1-A**  
**Matrix: Water**  
**Analysis Batch: 131773**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 131618**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/21/16 06:56	06/21/16 19:48	1

**Lab Sample ID: LCS 310-131618/2-A**  
**Matrix: Water**  
**Analysis Batch: 131773**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 131618**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	2.00	1.942		mg/L		97	80 - 120

**Lab Sample ID: 310-82986-2 MS**  
**Matrix: Ground Water**  
**Analysis Batch: 131773**

**Client Sample ID: MW5**  
**Prep Type: Total/NA**  
**Prep Batch: 131618**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	0.0866		2.00	2.107		mg/L		101	75 - 125

**Lab Sample ID: 310-82986-2 MSD**  
**Matrix: Ground Water**  
**Analysis Batch: 131773**

**Client Sample ID: MW5**  
**Prep Type: Total/NA**  
**Prep Batch: 131618**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lithium	0.0866		2.00	2.061		mg/L		99	75 - 125	2	20

**Lab Sample ID: 310-82986-11 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 131773**

**Client Sample ID: MW19**  
**Prep Type: Total/NA**  
**Prep Batch: 131618**

Analyte	Sample Result	Sample Qualifier	Spike Added	DU Result	DU Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lithium	<0.0500			<0.0500		mg/L				NC	20

TestAmerica Cedar Falls

# QC Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

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

**Lab Sample ID: MB 310-131492/1-A**  
**Matrix: Water**  
**Analysis Batch: 133568**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 131492**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 21:23	1
Arsenic	<0.00200		0.00200		mg/L		06/20/16 08:09	07/09/16 21:23	1
Barium	<0.00200		0.00200		mg/L		06/20/16 08:09	07/09/16 21:23	1
Beryllium	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 21:23	1
Cadmium	<0.000500		0.000500		mg/L		06/20/16 08:09	07/09/16 21:23	1
Chromium	<0.00500		0.00500		mg/L		06/20/16 08:09	07/09/16 21:23	1
Lead	<0.000500		0.000500		mg/L		06/20/16 08:09	07/09/16 21:23	1
Molybdenum	<0.00200		0.00200		mg/L		06/20/16 08:09	07/09/16 21:23	1
Selenium	<0.00500		0.00500		mg/L		06/20/16 08:09	07/09/16 21:23	1
Thallium	<0.00100		0.00100		mg/L		06/20/16 08:09	07/09/16 21:23	1

**Lab Sample ID: MB 310-131492/1-A**  
**Matrix: Water**  
**Analysis Batch: 133747**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 131492**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.200		0.200		mg/L		06/20/16 08:09	07/11/16 22:15	1
Calcium	<0.200		0.200		mg/L		06/20/16 08:09	07/11/16 22:15	1
Cobalt	<0.000500		0.000500		mg/L		06/20/16 08:09	07/11/16 22:15	1

**Lab Sample ID: LCS 310-131492/2-A**  
**Matrix: Water**  
**Analysis Batch: 133568**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 131492**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0200	0.02022		mg/L		101	80 - 120
Arsenic	0.0400	0.04134		mg/L		103	80 - 120
Barium	0.0400	0.04362		mg/L		109	80 - 120
Beryllium	0.0200	0.02134		mg/L		107	80 - 120
Cadmium	0.0200	0.02179		mg/L		109	80 - 120
Chromium	0.0400	0.04405		mg/L		110	80 - 120
Lead	0.0200	0.02061		mg/L		103	80 - 120
Molybdenum	0.0400	0.04342		mg/L		109	80 - 120
Selenium	0.0400	0.04189		mg/L		105	80 - 120
Thallium	0.0160	0.01653		mg/L		103	80 - 120

**Lab Sample ID: LCS 310-131492/2-A**  
**Matrix: Water**  
**Analysis Batch: 133747**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 131492**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Boron	0.880	0.8682		mg/L		99	80 - 120
Calcium	2.00	2.149		mg/L		107	80 - 120
Cobalt	0.0200	0.02082		mg/L		104	80 - 120

TestAmerica Cedar Falls

# QC Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

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

**Lab Sample ID: 310-82986-6 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 133568**

**Client Sample ID: MW13**  
**Prep Type: Total/NA**  
**Prep Batch: 131492**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Antimony	<0.00100		<0.00100		mg/L		NC	20
Arsenic	0.217		0.2169		mg/L		0	20
Barium	0.0906		0.09073		mg/L		0.2	20
Beryllium	<0.00100		<0.00100		mg/L		NC	20
Cadmium	<0.000500		<0.000500		mg/L		NC	20
Chromium	<0.00500		<0.00500		mg/L		NC	20
Cobalt	<0.000500		<0.000500		mg/L		NC	20
Lead	<0.000500		<0.000500		mg/L		NC	20
Selenium	0.0141		0.01338		mg/L		6	20
Thallium	<0.00100		<0.00100		mg/L		NC	20

**Lab Sample ID: 310-82986-6 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 133747**

**Client Sample ID: MW13**  
**Prep Type: Total/NA**  
**Prep Batch: 131492**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Boron	1.97		2.043		mg/L		3	20
Calcium	138		138.6		mg/L		0.5	20
Cobalt	<0.000500		<0.000500		mg/L		NC	20

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 310-131537/1-A**  
**Matrix: Water**  
**Analysis Batch: 131713**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 131537**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.000200		0.000200		mg/L		06/20/16 10:06	06/21/16 12:00	1

**Lab Sample ID: LCS 310-131537/2-A**  
**Matrix: Water**  
**Analysis Batch: 131713**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 131537**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits

**Lab Sample ID: 310-82986-1 MS**  
**Matrix: Ground Water**  
**Analysis Batch: 131713**

**Client Sample ID: MW2**  
**Prep Type: Total/NA**  
**Prep Batch: 131537**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
Mercury	<0.000200		0.00167	0.001650		mg/L		99	80 - 120

**Lab Sample ID: 310-82986-1 MSD**  
**Matrix: Ground Water**  
**Analysis Batch: 131713**

**Client Sample ID: MW2**  
**Prep Type: Total/NA**  
**Prep Batch: 131537**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec. Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Mercury	<0.000200		0.00167	0.001652		mg/L		99	80 - 120	0	20

TestAmerica Cedar Falls



# QC Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

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

**Lab Sample ID: MB 310-131353/1**  
**Matrix: Water**  
**Analysis Batch: 131353**

**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			06/17/16 08:46	1

**Lab Sample ID: LCS 310-131353/2**  
**Matrix: Water**  
**Analysis Batch: 131353**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	1000	1004		mg/L		100	90 - 110

**Lab Sample ID: 310-82986-1 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 131353**

**Client Sample ID: MW2**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	1560		1576		mg/L		0.9	20

**Lab Sample ID: 310-82986-11 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 131353**

**Client Sample ID: MW19**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	508		484.0		mg/L		5	20

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

**Lab Sample ID: MB 160-257619/1-A**  
**Matrix: Water**  
**Analysis Batch: 260529**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 257619**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.02383	U	0.0625	0.0625	1.00	0.132	pCi/L	06/22/16 14:27	07/14/16 06:48	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	82.1		40 - 110	06/22/16 14:27	07/14/16 06:48	1

**Lab Sample ID: LCS 160-257619/2-A**  
**Matrix: Water**  
**Analysis Batch: 260529**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 257619**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.2	14.28		1.42	1.00	0.128	pCi/L	128	68 - 137

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	92.6		40 - 110

TestAmerica Cedar Falls

# QC Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

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

**Lab Sample ID: LCSD 160-257619/3-A**  
**Matrix: Water**  
**Analysis Batch: 260529**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 257619**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	11.2	14.29		1.43	1.00	0.104	pCi/L	128	68 - 137	0	1
<b>Carrier</b>	<b>%Yield</b>	<b>LCSD Qualifier</b>	<b>Limits</b>								
Ba Carrier	90.0		40 - 110								

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

**Lab Sample ID: MB 160-257624/1-A**  
**Matrix: Water**  
**Analysis Batch: 259958**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 257624**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1408	U	0.256	0.257	1.00	0.436	pCi/L	06/22/16 14:51	07/11/16 13:21	1
<b>Carrier</b>	<b>%Yield</b>	<b>MB Qualifier</b>	<b>Limits</b>							
Ba Carrier	82.1		40 - 110							
Y Carrier	88.6		40 - 110							
								<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
								06/22/16 14:51	07/11/16 13:21	1
								06/22/16 14:51	07/11/16 13:21	1

**Lab Sample ID: LCS 160-257624/2-A**  
**Matrix: Water**  
**Analysis Batch: 259958**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 257624**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.9	18.18		1.90	1.00	0.351	pCi/L	122	56 - 140
<b>Carrier</b>	<b>%Yield</b>	<b>LCS Qualifier</b>	<b>Limits</b>						
Ba Carrier	92.6		40 - 110						
Y Carrier	90.5		40 - 110						

**Lab Sample ID: LCSD 160-257624/3-A**  
**Matrix: Water**  
**Analysis Batch: 259958**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 257624**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	14.9	16.68		1.76	1.00	0.340	pCi/L	112	56 - 140	0.41	1
<b>Carrier</b>	<b>%Yield</b>	<b>LCSD Qualifier</b>	<b>Limits</b>								
Ba Carrier	90.0		40 - 110								
Y Carrier	93.5		40 - 110								

TestAmerica Cedar Falls

# QC Association Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

## HPLC/IC

### Analysis Batch: 131686

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82986-1	MW2	Total/NA	Ground Water	9056A	
310-82986-2	MW5	Total/NA	Ground Water	9056A	
310-82986-3	MW6	Total/NA	Ground Water	9056A	
310-82986-4	MW8	Total/NA	Ground Water	9056A	
310-82986-5	MW9	Total/NA	Ground Water	9056A	
310-82986-6	MW13	Total/NA	Ground Water	9056A	
310-82986-7	MW15	Total/NA	Ground Water	9056A	
310-82986-8	MW16	Total/NA	Ground Water	9056A	
310-82986-9	MW17	Total/NA	Ground Water	9056A	
310-82986-10	MW18	Total/NA	Ground Water	9056A	
310-82986-11	MW19	Total/NA	Ground Water	9056A	
310-82986-12	MW20	Total/NA	Ground Water	9056A	
310-82986-12 MS	MW20	Total/NA	Ground Water	9056A	
310-82986-12 MSD	MW20	Total/NA	Ground Water	9056A	
310-82986-13	DUP-1	Total/NA	Ground Water	9056A	
310-82986-14	DUP-2	Total/NA	Ground Water	9056A	
LCS 310-131686/4	Lab Control Sample	Total/NA	Water	9056A	
MB 310-131686/3	Method Blank	Total/NA	Water	9056A	

### Analysis Batch: 131833

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82986-1	MW2	Total/NA	Ground Water	9056A	
310-82986-2	MW5	Total/NA	Ground Water	9056A	
310-82986-4	MW8	Total/NA	Ground Water	9056A	
310-82986-6	MW13	Total/NA	Ground Water	9056A	
310-82986-7	MW15	Total/NA	Ground Water	9056A	
310-82986-8	MW16	Total/NA	Ground Water	9056A	
310-82986-12	MW20	Total/NA	Ground Water	9056A	
310-82986-13	DUP-1	Total/NA	Ground Water	9056A	
310-82986-14	DUP-2	Total/NA	Ground Water	9056A	
LCS 310-131833/4	Lab Control Sample	Total/NA	Water	9056A	
MB 310-131833/3	Method Blank	Total/NA	Water	9056A	

### Analysis Batch: 131928

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82986-9	MW17	Total/NA	Ground Water	9056A	
LCS 310-131928/4	Lab Control Sample	Total/NA	Water	9056A	
MB 310-131928/3	Method Blank	Total/NA	Water	9056A	

## Metals

### Prep Batch: 131492

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82986-1	MW2	Total/NA	Ground Water	3010A	
310-82986-2	MW5	Total/NA	Ground Water	3010A	
310-82986-3	MW6	Total/NA	Ground Water	3010A	
310-82986-4	MW8	Total/NA	Ground Water	3010A	
310-82986-5	MW9	Total/NA	Ground Water	3010A	
310-82986-6	MW13	Total/NA	Ground Water	3010A	
310-82986-6 DU	MW13	Total/NA	Ground Water	3010A	

TestAmerica Cedar Falls

# QC Association Summary

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

## Metals (Continued)

### Prep Batch: 131492 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82986-7	MW15	Total/NA	Ground Water	3010A	
310-82986-8	MW16	Total/NA	Ground Water	3010A	
310-82986-9	MW17	Total/NA	Ground Water	3010A	
310-82986-10	MW18	Total/NA	Ground Water	3010A	
310-82986-11	MW19	Total/NA	Ground Water	3010A	
310-82986-12	MW20	Total/NA	Ground Water	3010A	
310-82986-13	DUP-1	Total/NA	Ground Water	3010A	
310-82986-14	DUP-2	Total/NA	Ground Water	3010A	
LCS 310-131492/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 310-131492/1-A	Method Blank	Total/NA	Water	3010A	

### Prep Batch: 131537

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82986-1	MW2	Total/NA	Ground Water	7470A	
310-82986-1 MS	MW2	Total/NA	Ground Water	7470A	
310-82986-1 MSD	MW2	Total/NA	Ground Water	7470A	
310-82986-2	MW5	Total/NA	Ground Water	7470A	
310-82986-3	MW6	Total/NA	Ground Water	7470A	
310-82986-4	MW8	Total/NA	Ground Water	7470A	
310-82986-5	MW9	Total/NA	Ground Water	7470A	
310-82986-6	MW13	Total/NA	Ground Water	7470A	
310-82986-7	MW15	Total/NA	Ground Water	7470A	
310-82986-8	MW16	Total/NA	Ground Water	7470A	
310-82986-9	MW17	Total/NA	Ground Water	7470A	
310-82986-10	MW18	Total/NA	Ground Water	7470A	
310-82986-11	MW19	Total/NA	Ground Water	7470A	
310-82986-12	MW20	Total/NA	Ground Water	7470A	
310-82986-13	DUP-1	Total/NA	Ground Water	7470A	
310-82986-14	DUP-2	Total/NA	Ground Water	7470A	
LCS 310-131537/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 310-131537/1-A	Method Blank	Total/NA	Water	7470A	

### Prep Batch: 131618

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82986-1	MW2	Total/NA	Ground Water	3010A	
310-82986-2	MW5	Total/NA	Ground Water	3010A	
310-82986-2 MS	MW5	Total/NA	Ground Water	3010A	
310-82986-2 MSD	MW5	Total/NA	Ground Water	3010A	
310-82986-3	MW6	Total/NA	Ground Water	3010A	
310-82986-4	MW8	Total/NA	Ground Water	3010A	
310-82986-5	MW9	Total/NA	Ground Water	3010A	
310-82986-6	MW13	Total/NA	Ground Water	3010A	
310-82986-7	MW15	Total/NA	Ground Water	3010A	
310-82986-8	MW16	Total/NA	Ground Water	3010A	
310-82986-9	MW17	Total/NA	Ground Water	3010A	
310-82986-10	MW18	Total/NA	Ground Water	3010A	
310-82986-11	MW19	Total/NA	Ground Water	3010A	
310-82986-11 DU	MW19	Total/NA	Ground Water	3010A	
310-82986-12	MW20	Total/NA	Ground Water	3010A	
310-82986-13	DUP-1	Total/NA	Ground Water	3010A	
310-82986-14	DUP-2	Total/NA	Ground Water	3010A	

TestAmerica Cedar Falls

# QC Association Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

## Metals (Continued)

### Prep Batch: 131618 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 310-131618/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 310-131618/1-A	Method Blank	Total/NA	Water	3010A	

### Analysis Batch: 131713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82986-1	MW2	Total/NA	Ground Water	7470A	131537
310-82986-1 MS	MW2	Total/NA	Ground Water	7470A	131537
310-82986-1 MSD	MW2	Total/NA	Ground Water	7470A	131537
310-82986-2	MW5	Total/NA	Ground Water	7470A	131537
310-82986-3	MW6	Total/NA	Ground Water	7470A	131537
310-82986-4	MW8	Total/NA	Ground Water	7470A	131537
310-82986-5	MW9	Total/NA	Ground Water	7470A	131537
310-82986-6	MW13	Total/NA	Ground Water	7470A	131537
310-82986-7	MW15	Total/NA	Ground Water	7470A	131537
310-82986-8	MW16	Total/NA	Ground Water	7470A	131537
310-82986-9	MW17	Total/NA	Ground Water	7470A	131537
310-82986-10	MW18	Total/NA	Ground Water	7470A	131537
310-82986-11	MW19	Total/NA	Ground Water	7470A	131537
310-82986-12	MW20	Total/NA	Ground Water	7470A	131537
310-82986-13	DUP-1	Total/NA	Ground Water	7470A	131537
310-82986-14	DUP-2	Total/NA	Ground Water	7470A	131537
LCS 310-131537/2-A	Lab Control Sample	Total/NA	Water	7470A	131537
MB 310-131537/1-A	Method Blank	Total/NA	Water	7470A	131537

### Analysis Batch: 131773

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82986-1	MW2	Total/NA	Ground Water	6010C	131618
310-82986-2	MW5	Total/NA	Ground Water	6010C	131618
310-82986-2 MS	MW5	Total/NA	Ground Water	6010C	131618
310-82986-2 MSD	MW5	Total/NA	Ground Water	6010C	131618
310-82986-3	MW6	Total/NA	Ground Water	6010C	131618
310-82986-4	MW8	Total/NA	Ground Water	6010C	131618
310-82986-5	MW9	Total/NA	Ground Water	6010C	131618
310-82986-6	MW13	Total/NA	Ground Water	6010C	131618
310-82986-7	MW15	Total/NA	Ground Water	6010C	131618
310-82986-8	MW16	Total/NA	Ground Water	6010C	131618
310-82986-9	MW17	Total/NA	Ground Water	6010C	131618
310-82986-10	MW18	Total/NA	Ground Water	6010C	131618
310-82986-11	MW19	Total/NA	Ground Water	6010C	131618
310-82986-11 DU	MW19	Total/NA	Ground Water	6010C	131618
310-82986-12	MW20	Total/NA	Ground Water	6010C	131618
310-82986-13	DUP-1	Total/NA	Ground Water	6010C	131618
310-82986-14	DUP-2	Total/NA	Ground Water	6010C	131618
LCS 310-131618/2-A	Lab Control Sample	Total/NA	Water	6010C	131618
MB 310-131618/1-A	Method Blank	Total/NA	Water	6010C	131618

### Analysis Batch: 133568

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82986-1	MW2	Total/NA	Ground Water	6020A	131492
310-82986-2	MW5	Total/NA	Ground Water	6020A	131492
310-82986-3	MW6	Total/NA	Ground Water	6020A	131492

TestAmerica Cedar Falls

# QC Association Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

## Metals (Continued)

### Analysis Batch: 133568 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82986-4	MW8	Total/NA	Ground Water	6020A	131492
310-82986-5	MW9	Total/NA	Ground Water	6020A	131492
310-82986-6	MW13	Total/NA	Ground Water	6020A	131492
310-82986-6 DU	MW13	Total/NA	Ground Water	6020A	131492
310-82986-7	MW15	Total/NA	Ground Water	6020A	131492
310-82986-8	MW16	Total/NA	Ground Water	6020A	131492
310-82986-9	MW17	Total/NA	Ground Water	6020A	131492
310-82986-10	MW18	Total/NA	Ground Water	6020A	131492
310-82986-11	MW19	Total/NA	Ground Water	6020A	131492
310-82986-12	MW20	Total/NA	Ground Water	6020A	131492
310-82986-13	DUP-1	Total/NA	Ground Water	6020A	131492
310-82986-14	DUP-2	Total/NA	Ground Water	6020A	131492
LCS 310-131492/2-A	Lab Control Sample	Total/NA	Water	6020A	131492
MB 310-131492/1-A	Method Blank	Total/NA	Water	6020A	131492

### Analysis Batch: 133747

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82986-1	MW2	Total/NA	Ground Water	6020A	131492
310-82986-2	MW5	Total/NA	Ground Water	6020A	131492
310-82986-3	MW6	Total/NA	Ground Water	6020A	131492
310-82986-4	MW8	Total/NA	Ground Water	6020A	131492
310-82986-5	MW9	Total/NA	Ground Water	6020A	131492
310-82986-6	MW13	Total/NA	Ground Water	6020A	131492
310-82986-6 DU	MW13	Total/NA	Ground Water	6020A	131492
310-82986-7	MW15	Total/NA	Ground Water	6020A	131492
310-82986-8	MW16	Total/NA	Ground Water	6020A	131492
310-82986-9	MW17	Total/NA	Ground Water	6020A	131492
310-82986-10	MW18	Total/NA	Ground Water	6020A	131492
310-82986-11	MW19	Total/NA	Ground Water	6020A	131492
310-82986-12	MW20	Total/NA	Ground Water	6020A	131492
310-82986-13	DUP-1	Total/NA	Ground Water	6020A	131492
310-82986-14	DUP-2	Total/NA	Ground Water	6020A	131492
LCS 310-131492/2-A	Lab Control Sample	Total/NA	Water	6020A	131492
MB 310-131492/1-A	Method Blank	Total/NA	Water	6020A	131492

## General Chemistry

### Analysis Batch: 131353

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82986-1	MW2	Total/NA	Ground Water	SM 2540C	
310-82986-1 DU	MW2	Total/NA	Ground Water	SM 2540C	
310-82986-2	MW5	Total/NA	Ground Water	SM 2540C	
310-82986-3	MW6	Total/NA	Ground Water	SM 2540C	
310-82986-4	MW8	Total/NA	Ground Water	SM 2540C	
310-82986-5	MW9	Total/NA	Ground Water	SM 2540C	
310-82986-6	MW13	Total/NA	Ground Water	SM 2540C	
310-82986-7	MW15	Total/NA	Ground Water	SM 2540C	
310-82986-8	MW16	Total/NA	Ground Water	SM 2540C	
310-82986-9	MW17	Total/NA	Ground Water	SM 2540C	
310-82986-10	MW18	Total/NA	Ground Water	SM 2540C	

TestAmerica Cedar Falls

# QC Association Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

## General Chemistry (Continued)

### Analysis Batch: 131353 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82986-11	MW19	Total/NA	Ground Water	SM 2540C	
310-82986-11 DU	MW19	Total/NA	Ground Water	SM 2540C	
310-82986-12	MW20	Total/NA	Ground Water	SM 2540C	
310-82986-13	DUP-1	Total/NA	Ground Water	SM 2540C	
310-82986-14	DUP-2	Total/NA	Ground Water	SM 2540C	
LCS 310-131353/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 310-131353/1	Method Blank	Total/NA	Water	SM 2540C	

## Rad

### Prep Batch: 257619

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82986-1	MW2	Total/NA	Ground Water	PrecSep-21	
310-82986-2	MW5	Total/NA	Ground Water	PrecSep-21	
310-82986-3	MW6	Total/NA	Ground Water	PrecSep-21	
310-82986-4	MW8	Total/NA	Ground Water	PrecSep-21	
310-82986-5	MW9	Total/NA	Ground Water	PrecSep-21	
310-82986-6	MW13	Total/NA	Ground Water	PrecSep-21	
310-82986-7	MW15	Total/NA	Ground Water	PrecSep-21	
310-82986-8	MW16	Total/NA	Ground Water	PrecSep-21	
310-82986-9	MW17	Total/NA	Ground Water	PrecSep-21	
310-82986-10	MW18	Total/NA	Ground Water	PrecSep-21	
310-82986-11	MW19	Total/NA	Ground Water	PrecSep-21	
310-82986-12	MW20	Total/NA	Ground Water	PrecSep-21	
310-82986-13	DUP-1	Total/NA	Ground Water	PrecSep-21	
310-82986-14	DUP-2	Total/NA	Ground Water	PrecSep-21	
LCS 160-257619/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-257619/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	
MB 160-257619/1-A	Method Blank	Total/NA	Water	PrecSep-21	

### Prep Batch: 257624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-82986-1	MW2	Total/NA	Ground Water	PrecSep_0	
310-82986-2	MW5	Total/NA	Ground Water	PrecSep_0	
310-82986-3	MW6	Total/NA	Ground Water	PrecSep_0	
310-82986-4	MW8	Total/NA	Ground Water	PrecSep_0	
310-82986-5	MW9	Total/NA	Ground Water	PrecSep_0	
310-82986-6	MW13	Total/NA	Ground Water	PrecSep_0	
310-82986-7	MW15	Total/NA	Ground Water	PrecSep_0	
310-82986-8	MW16	Total/NA	Ground Water	PrecSep_0	
310-82986-9	MW17	Total/NA	Ground Water	PrecSep_0	
310-82986-10	MW18	Total/NA	Ground Water	PrecSep_0	
310-82986-11	MW19	Total/NA	Ground Water	PrecSep_0	
310-82986-12	MW20	Total/NA	Ground Water	PrecSep_0	
310-82986-13	DUP-1	Total/NA	Ground Water	PrecSep_0	
310-82986-14	DUP-2	Total/NA	Ground Water	PrecSep_0	
LCS 160-257624/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-257624/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	
MB 160-257624/1-A	Method Blank	Total/NA	Water	PrecSep_0	

TestAmerica Cedar Falls



# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: MW2**

**Date Collected: 06/14/16 10:12**

**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-1**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		20	131833	06/21/16 14:52	AJG	TAL CF
Total/NA	Analysis	9056A		5	131686	06/20/16 14:12	AJG	TAL CF
Total/NA	Prep	3010A			131618	06/21/16 06:56	JNR	TAL CF
Total/NA	Analysis	6010C		1	131773	06/21/16 19:52	OAD	TAL CF
Total/NA	Prep	3010A			131492	06/20/16 08:09	JNR	TAL CF
Total/NA	Analysis	6020A		1	133568	07/09/16 21:29	OAD	TAL CF
Total/NA	Prep	3010A			131492	06/20/16 08:09	JNR	TAL CF
Total/NA	Analysis	6020A		1	133747	07/11/16 22:25	OAD	TAL CF
Total/NA	Prep	7470A			131537	06/20/16 10:06	SAD	TAL CF
Total/NA	Analysis	7470A		1	131713	06/21/16 12:03	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	131353	06/17/16 08:46	SAS	TAL CF
Total/NA	Prep	PrecSep-21			257619	06/22/16 14:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	260529	07/14/16 06:48	RTM	TAL SL
Total/NA	Prep	PrecSep_0			257624	06/22/16 14:51	MCJ	TAL SL
Total/NA	Analysis	9320		1	259958	07/11/16 13:21	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	260580	07/14/16 18:10	RTM	TAL SL

**Client Sample ID: MW5**

**Date Collected: 06/14/16 15:28**

**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-2**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		50	131833	06/21/16 14:52	AJG	TAL CF
Total/NA	Analysis	9056A		5	131686	06/20/16 14:12	AJG	TAL CF
Total/NA	Prep	3010A			131618	06/21/16 06:56	JNR	TAL CF
Total/NA	Analysis	6010C		1	131773	06/21/16 19:54	OAD	TAL CF
Total/NA	Prep	3010A			131492	06/20/16 08:09	JNR	TAL CF
Total/NA	Analysis	6020A		1	133568	07/09/16 21:32	OAD	TAL CF
Total/NA	Prep	3010A			131492	06/20/16 08:09	JNR	TAL CF
Total/NA	Analysis	6020A		1	133747	07/11/16 22:28	OAD	TAL CF
Total/NA	Prep	7470A			131537	06/20/16 10:06	SAD	TAL CF
Total/NA	Analysis	7470A		1	131713	06/21/16 12:11	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	131353	06/17/16 08:46	SAS	TAL CF
Total/NA	Prep	PrecSep-21			257619	06/22/16 14:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	260529	07/14/16 06:48	RTM	TAL SL
Total/NA	Prep	PrecSep_0			257624	06/22/16 14:51	MCJ	TAL SL
Total/NA	Analysis	9320		1	259958	07/11/16 13:21	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	260580	07/14/16 18:10	RTM	TAL SL

TestAmerica Cedar Falls



# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: MW6**  
**Date Collected: 06/14/16 12:48**  
**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-3**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	131686	06/20/16 14:12	AJG	TAL CF
Total/NA	Prep	3010A			131618	06/21/16 06:56	JNR	TAL CF
Total/NA	Analysis	6010C		1	131773	06/21/16 20:02	OAD	TAL CF
Total/NA	Prep	3010A			131492	06/20/16 08:09	JNR	TAL CF
Total/NA	Analysis	6020A		1	133568	07/09/16 21:35	OAD	TAL CF
Total/NA	Prep	3010A			131492	06/20/16 08:09	JNR	TAL CF
Total/NA	Analysis	6020A		1	133747	07/11/16 22:34	OAD	TAL CF
Total/NA	Prep	7470A			131537	06/20/16 10:06	SAD	TAL CF
Total/NA	Analysis	7470A		1	131713	06/21/16 12:13	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	131353	06/17/16 08:46	SAS	TAL CF
Total/NA	Prep	PrecSep-21			257619	06/22/16 14:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	260529	07/14/16 06:48	RTM	TAL SL
Total/NA	Prep	PrecSep_0			257624	06/22/16 14:51	MCJ	TAL SL
Total/NA	Analysis	9320		1	259958	07/11/16 13:21	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	260580	07/14/16 18:10	RTM	TAL SL

**Client Sample ID: MW8**  
**Date Collected: 06/14/16 13:21**  
**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-4**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		20	131833	06/21/16 14:52	AJG	TAL CF
Total/NA	Analysis	9056A		5	131686	06/20/16 14:12	AJG	TAL CF
Total/NA	Prep	3010A			131618	06/21/16 06:56	JNR	TAL CF
Total/NA	Analysis	6010C		1	131773	06/21/16 20:04	OAD	TAL CF
Total/NA	Prep	3010A			131492	06/20/16 08:09	JNR	TAL CF
Total/NA	Analysis	6020A		1	133568	07/09/16 21:38	OAD	TAL CF
Total/NA	Prep	3010A			131492	06/20/16 08:09	JNR	TAL CF
Total/NA	Analysis	6020A		1	133747	07/11/16 22:37	OAD	TAL CF
Total/NA	Prep	7470A			131537	06/20/16 10:06	SAD	TAL CF
Total/NA	Analysis	7470A		1	131713	06/21/16 12:14	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	131353	06/17/16 08:46	SAS	TAL CF
Total/NA	Prep	PrecSep-21			257619	06/22/16 14:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	260529	07/14/16 06:48	RTM	TAL SL
Total/NA	Prep	PrecSep_0			257624	06/22/16 14:51	MCJ	TAL SL
Total/NA	Analysis	9320		1	259958	07/11/16 13:21	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	260580	07/14/16 18:10	RTM	TAL SL

TestAmerica Cedar Falls

# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: MW9**

**Date Collected: 06/14/16 10:24**

**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-5**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	131686	06/20/16 14:12	AJG	TAL CF
Total/NA	Prep	3010A			131618	06/21/16 06:56	JNR	TAL CF
Total/NA	Analysis	6010C		1	131773	06/21/16 20:06	OAD	TAL CF
Total/NA	Prep	3010A			131492	06/20/16 08:09	JNR	TAL CF
Total/NA	Analysis	6020A		1	133568	07/09/16 21:41	OAD	TAL CF
Total/NA	Prep	3010A			131492	06/20/16 08:09	JNR	TAL CF
Total/NA	Analysis	6020A		1	133747	07/11/16 22:50	OAD	TAL CF
Total/NA	Prep	7470A			131537	06/20/16 10:06	SAD	TAL CF
Total/NA	Analysis	7470A		1	131713	06/21/16 12:16	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	131353	06/17/16 08:46	SAS	TAL CF
Total/NA	Prep	PrecSep-21			257619	06/22/16 14:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	260529	07/14/16 06:48	RTM	TAL SL
Total/NA	Prep	PrecSep_0			257624	06/22/16 14:51	MCJ	TAL SL
Total/NA	Analysis	9320		1	259958	07/11/16 13:21	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	260580	07/14/16 18:10	RTM	TAL SL

**Client Sample ID: MW13**

**Date Collected: 06/14/16 11:35**

**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-6**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		20	131833	06/21/16 14:52	AJG	TAL CF
Total/NA	Analysis	9056A		5	131686	06/20/16 14:12	AJG	TAL CF
Total/NA	Prep	3010A			131618	06/21/16 06:56	JNR	TAL CF
Total/NA	Analysis	6010C		1	131773	06/21/16 20:12	OAD	TAL CF
Total/NA	Prep	3010A			131492	06/20/16 08:09	JNR	TAL CF
Total/NA	Analysis	6020A		1	133568	07/09/16 21:44	OAD	TAL CF
Total/NA	Prep	3010A			131492	06/20/16 08:09	JNR	TAL CF
Total/NA	Analysis	6020A		1	133747	07/11/16 22:53	OAD	TAL CF
Total/NA	Prep	7470A			131537	06/20/16 10:06	SAD	TAL CF
Total/NA	Analysis	7470A		1	131713	06/21/16 12:17	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	131353	06/17/16 08:46	SAS	TAL CF
Total/NA	Prep	PrecSep-21			257619	06/22/16 14:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	260529	07/14/16 06:49	RTM	TAL SL
Total/NA	Prep	PrecSep_0			257624	06/22/16 14:51	MCJ	TAL SL
Total/NA	Analysis	9320		1	259958	07/11/16 13:21	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	260580	07/14/16 18:10	RTM	TAL SL

TestAmerica Cedar Falls

# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: MW15**

**Date Collected: 06/14/16 12:15**

**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-7**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		20	131833	06/21/16 14:52	AJG	TAL CF
Total/NA	Analysis	9056A		5	131686	06/20/16 14:12	AJG	TAL CF
Total/NA	Prep	3010A			131618	06/21/16 06:56	JNR	TAL CF
Total/NA	Analysis	6010C		1	131773	06/21/16 20:14	OAD	TAL CF
Total/NA	Prep	3010A			131492	06/20/16 08:09	JNR	TAL CF
Total/NA	Analysis	6020A		1	133568	07/09/16 21:50	OAD	TAL CF
Total/NA	Prep	3010A			131492	06/20/16 08:09	JNR	TAL CF
Total/NA	Analysis	6020A		1	133747	07/11/16 22:59	OAD	TAL CF
Total/NA	Prep	7470A			131537	06/20/16 10:06	SAD	TAL CF
Total/NA	Analysis	7470A		1	131713	06/21/16 12:19	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	131353	06/17/16 08:46	SAS	TAL CF
Total/NA	Prep	PrecSep-21			257619	06/22/16 14:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	260529	07/14/16 06:49	RTM	TAL SL
Total/NA	Prep	PrecSep_0			257624	06/22/16 14:51	MCJ	TAL SL
Total/NA	Analysis	9320		1	259958	07/11/16 13:21	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	260580	07/14/16 18:10	RTM	TAL SL

**Client Sample ID: MW16**

**Date Collected: 06/14/16 10:50**

**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-8**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		20	131833	06/21/16 14:52	AJG	TAL CF
Total/NA	Analysis	9056A		5	131686	06/20/16 14:12	AJG	TAL CF
Total/NA	Prep	3010A			131618	06/21/16 06:56	JNR	TAL CF
Total/NA	Analysis	6010C		1	131773	06/21/16 20:16	OAD	TAL CF
Total/NA	Prep	3010A			131492	06/20/16 08:09	JNR	TAL CF
Total/NA	Analysis	6020A		1	133568	07/09/16 22:03	OAD	TAL CF
Total/NA	Prep	3010A			131492	06/20/16 08:09	JNR	TAL CF
Total/NA	Analysis	6020A		1	133747	07/11/16 23:02	OAD	TAL CF
Total/NA	Prep	7470A			131537	06/20/16 10:06	SAD	TAL CF
Total/NA	Analysis	7470A		1	131713	06/21/16 12:21	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	131353	06/17/16 08:46	SAS	TAL CF
Total/NA	Prep	PrecSep-21			257619	06/22/16 14:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	260529	07/14/16 06:49	RTM	TAL SL
Total/NA	Prep	PrecSep_0			257624	06/22/16 14:51	MCJ	TAL SL
Total/NA	Analysis	9320		1	259958	07/11/16 13:21	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	260580	07/14/16 18:10	RTM	TAL SL

TestAmerica Cedar Falls

# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: MW17**

**Date Collected: 06/14/16 14:51**

**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-9**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	131686	06/20/16 14:12	AJG	TAL CF
Total/NA	Analysis	9056A		50	131928	06/22/16 08:06	SAD	TAL CF
Total/NA	Prep	3010A			131618	06/21/16 06:56	JNR	TAL CF
Total/NA	Analysis	6010C		1	131773	06/21/16 20:18	OAD	TAL CF
Total/NA	Prep	3010A			131492	06/20/16 08:09	JNR	TAL CF
Total/NA	Analysis	6020A		1	133568	07/09/16 22:06	OAD	TAL CF
Total/NA	Prep	3010A			131492	06/20/16 08:09	JNR	TAL CF
Total/NA	Analysis	6020A		1	133747	07/11/16 23:05	OAD	TAL CF
Total/NA	Prep	7470A			131537	06/20/16 10:06	SAD	TAL CF
Total/NA	Analysis	7470A		1	131713	06/21/16 12:22	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	131353	06/17/16 08:46	SAS	TAL CF
Total/NA	Prep	PrecSep-21			257619	06/22/16 14:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	260529	07/14/16 06:49	RTM	TAL SL
Total/NA	Prep	PrecSep_0			257624	06/22/16 14:51	MCJ	TAL SL
Total/NA	Analysis	9320		1	259958	07/11/16 13:20	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	260580	07/14/16 18:10	RTM	TAL SL

**Client Sample ID: MW18**

**Date Collected: 06/14/16 09:16**

**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-10**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	131686	06/20/16 14:12	AJG	TAL CF
Total/NA	Prep	3010A			131618	06/21/16 06:56	JNR	TAL CF
Total/NA	Analysis	6010C		1	131773	06/21/16 20:21	OAD	TAL CF
Total/NA	Prep	3010A			131492	06/20/16 08:09	JNR	TAL CF
Total/NA	Analysis	6020A		1	133568	07/09/16 22:09	OAD	TAL CF
Total/NA	Prep	3010A			131492	06/20/16 08:09	JNR	TAL CF
Total/NA	Analysis	6020A		1	133747	07/11/16 23:08	OAD	TAL CF
Total/NA	Prep	7470A			131537	06/20/16 10:06	SAD	TAL CF
Total/NA	Analysis	7470A		1	131713	06/21/16 12:24	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	131353	06/17/16 08:46	SAS	TAL CF
Total/NA	Prep	PrecSep-21			257619	06/22/16 14:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	260529	07/14/16 06:49	RTM	TAL SL
Total/NA	Prep	PrecSep_0			257624	06/22/16 14:51	MCJ	TAL SL
Total/NA	Analysis	9320		1	259958	07/11/16 13:20	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	260580	07/14/16 18:10	RTM	TAL SL

TestAmerica Cedar Falls

# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: MW19**

**Date Collected: 06/14/16 09:46**

**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-11**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	131686	06/20/16 14:12	AJG	TAL CF
Total/NA	Prep	3010A			131618	06/21/16 06:56	JNR	TAL CF
Total/NA	Analysis	6010C		1	131773	06/21/16 20:23	OAD	TAL CF
Total/NA	Prep	3010A			131492	06/20/16 08:09	JNR	TAL CF
Total/NA	Analysis	6020A		1	133568	07/09/16 22:12	OAD	TAL CF
Total/NA	Prep	3010A			131492	06/20/16 08:09	JNR	TAL CF
Total/NA	Analysis	6020A		1	133747	07/11/16 23:11	OAD	TAL CF
Total/NA	Prep	7470A			131537	06/20/16 10:06	SAD	TAL CF
Total/NA	Analysis	7470A		1	131713	06/21/16 12:28	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	131353	06/17/16 08:46	SAS	TAL CF
Total/NA	Prep	PrecSep-21			257619	06/22/16 14:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	260529	07/14/16 06:49	RTM	TAL SL
Total/NA	Prep	PrecSep_0			257624	06/22/16 14:51	MCJ	TAL SL
Total/NA	Analysis	9320		1	259958	07/11/16 13:20	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	260580	07/14/16 18:10	RTM	TAL SL

**Client Sample ID: MW20**

**Date Collected: 06/14/16 13:49**

**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-12**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		20	131833	06/21/16 14:52	AJG	TAL CF
Total/NA	Analysis	9056A		5	131686	06/20/16 14:12	AJG	TAL CF
Total/NA	Prep	3010A			131618	06/21/16 06:56	JNR	TAL CF
Total/NA	Analysis	6010C		1	131773	06/21/16 20:27	OAD	TAL CF
Total/NA	Prep	3010A			131492	06/20/16 08:09	JNR	TAL CF
Total/NA	Analysis	6020A		1	133568	07/09/16 22:15	OAD	TAL CF
Total/NA	Prep	3010A			131492	06/20/16 08:09	JNR	TAL CF
Total/NA	Analysis	6020A		1	133747	07/11/16 23:14	OAD	TAL CF
Total/NA	Prep	7470A			131537	06/20/16 10:06	SAD	TAL CF
Total/NA	Analysis	7470A		1	131713	06/21/16 12:30	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	131353	06/17/16 08:46	SAS	TAL CF
Total/NA	Prep	PrecSep-21			257619	06/22/16 14:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	260529	07/14/16 06:49	RTM	TAL SL
Total/NA	Prep	PrecSep_0			257624	06/22/16 14:51	MCJ	TAL SL
Total/NA	Analysis	9320		1	259958	07/11/16 13:20	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	260580	07/14/16 18:10	RTM	TAL SL

TestAmerica Cedar Falls

# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

**Client Sample ID: DUP-1**

**Date Collected: 06/14/16 13:51**

**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-13**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		20	131833	06/21/16 14:52	AJG	TAL CF
Total/NA	Analysis	9056A		5	131686	06/20/16 14:12	AJG	TAL CF
Total/NA	Prep	3010A			131618	06/21/16 06:56	JNR	TAL CF
Total/NA	Analysis	6010C		1	131773	06/21/16 20:29	OAD	TAL CF
Total/NA	Prep	3010A			131492	06/20/16 08:09	JNR	TAL CF
Total/NA	Analysis	6020A		1	133568	07/09/16 22:18	OAD	TAL CF
Total/NA	Prep	3010A			131492	06/20/16 08:09	JNR	TAL CF
Total/NA	Analysis	6020A		1	133747	07/11/16 23:18	OAD	TAL CF
Total/NA	Prep	7470A			131537	06/20/16 10:06	SAD	TAL CF
Total/NA	Analysis	7470A		1	131713	06/21/16 12:32	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	131353	06/17/16 08:46	SAS	TAL CF
Total/NA	Prep	PrecSep-21			257619	06/22/16 14:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	260529	07/14/16 06:49	RTM	TAL SL
Total/NA	Prep	PrecSep_0			257624	06/22/16 14:51	MCJ	TAL SL
Total/NA	Analysis	9320		1	259958	07/11/16 13:20	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	260580	07/14/16 18:10	RTM	TAL SL

**Client Sample ID: DUP-2**

**Date Collected: 06/14/16 15:30**

**Date Received: 06/16/16 09:25**

**Lab Sample ID: 310-82986-14**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		50	131833	06/21/16 14:52	AJG	TAL CF
Total/NA	Analysis	9056A		5	131686	06/20/16 14:12	AJG	TAL CF
Total/NA	Prep	3010A			131618	06/21/16 06:56	JNR	TAL CF
Total/NA	Analysis	6010C		1	131773	06/21/16 20:31	OAD	TAL CF
Total/NA	Prep	3010A			131492	06/20/16 08:09	JNR	TAL CF
Total/NA	Analysis	6020A		1	133568	07/09/16 22:21	OAD	TAL CF
Total/NA	Prep	3010A			131492	06/20/16 08:09	JNR	TAL CF
Total/NA	Analysis	6020A		1	133747	07/11/16 23:30	OAD	TAL CF
Total/NA	Prep	7470A			131537	06/20/16 10:06	SAD	TAL CF
Total/NA	Analysis	7470A		1	131713	06/21/16 12:33	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	131353	06/17/16 08:46	SAS	TAL CF
Total/NA	Prep	PrecSep-21			257619	06/22/16 14:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	260529	07/14/16 06:50	RTM	TAL SL
Total/NA	Prep	PrecSep_0			257624	06/22/16 14:51	MCJ	TAL SL
Total/NA	Analysis	9320		1	259958	07/11/16 13:19	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	260580	07/14/16 18:10	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

TestAmerica Cedar Falls

# Certification Summary

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

## 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: North Omaha Station

TestAmerica Job ID: 310-82986-1

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



**Chain of Custody Record**

<b>Client Information</b>		Sampler: <u>Brad Sojka</u>		Lab PM: <u>Hayes, Shawn M</u>	
Client Contact: <u>Brad Sojka</u>		Phone: <u>402-636-2515</u>		E-Mail: <u>shawn.hayes@testamericainc.com</u>	
Company: <u>Omaha Public Power District</u>		Address: <u>444 South 16th Street Mall 9E/EP1</u>		City: <u>Omaha</u>	
State: <u>NE</u>		Zip: <u>68102-2247</u>		Phone: <u>402-636-2515(Tel)</u>	
Email: <u>bsojka@oppd.com</u>		Project Name: <u>North Omaha Station CCR</u>		Site: <u>31007560</u>	
Due Date Requested:		TAT Requested (days):		PO #:	
WO #:		TestAmerica Project #:		SSOW#:	
<b>Sample Identification</b>		<b>Sample Date</b>		<b>Sample Time</b>	
<b>Sample Type</b> (C=Comp, G=grab)		<b>Sample Code</b>		<b>Matrix</b> (W=water, S=solid, O=waste/oli, B=Tissue, A=Air)	
MW2		6/14/16		G GW	
MW5		1528		G GW	
MW6		1248		G GW	
MW8		1321		G GW	
MW9		1024		G GW	
MW13		1135		G GW	
MW15		1215		G GW	
MW16		1050		G GW	
MW17		1451		G GW	
MW18		0916		G GW	
MW19		0946		G GW	
<b>Possible Hazard Identification</b>		<input type="checkbox"/> Non-Hazard		<input type="checkbox"/> Flammable	
		<input type="checkbox"/> Skin Irritant		<input type="checkbox"/> Poison B	
		<input type="checkbox"/> Unknown		<input type="checkbox"/> Radiological	
		<input type="checkbox"/> Deliverable Requested: I, II, III, IV, Other (specify)			
<b>Empty Kit Relinquished by:</b>		Date: <u>6/15/16</u>		Time: <u>0900</u>	
Relinquished by: <u>[Signature]</u>		Company: <u>Company</u>		Date/Time: <u>6-16-16</u>	
Relinquished by:		Company:		Date/Time:	
Relinquished by:		Company:		Date/Time:	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	
<b>Analysis Requested</b>		Carrier Tracking No(s):		COC No:	
Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Total Number of Containers	
9315_Ra226_9320_Ra228_Combined Ra226 and Ra228		6010C Lithium, 6020A CCR List, 7470A Mercury		2540C TDS, 9056A Chloride, Fluoride, Sulfate	
D N		D N		D N	
<b>Special Instructions/Note:</b>		Preservation Codes:		Special Instructions/Note:	
		M - HCL 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)			
		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 Other:			
<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b>		<input type="checkbox"/> Return To Client		<input type="checkbox"/> Disposal By Lab	
		<input type="checkbox"/> Archive For		Months	
<b>Special Instructions/QC Requirements:</b>		Method of Shipment:		Date/Time: <u>6-16-16</u>	
		Received by: <u>[Signature]</u>		Company: <u>Company</u>	
		Received by:		Date/Time:	
		Received by:		Date/Time:	

### Chain of Custody Record

**Client Information**  
 Client Contact: Brad Sojka  
 Phone: 402-636-2515  
 E-Mail: shawn.hayes@testamericainc.com

**Sampler:** Brad Sojka  
**Lab PM:** Hayes, Shawn M  
**Carrier Tracking No(s):**

**COC No:**  
**Page:**  
**Job #:**

**Company:** Omaha Public Power District  
**Address:** 444 South 16th Street Mall 9E/EP1  
**City:** Omaha  
**State:** NE  
**Zip:** 68102-2247  
**Phone:** 402-636-2515(Tel)  
**Email:** bsojka@oppd.com  
**Project Name:** North Omaha Station CCR  
**Site:**

**Due Date Requested:**  
**TAT Requested (days):**  
**PO #:**  
**WO #:**  
**TestAmerica Project #:** 31007560  
**SSOW#:**

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, B=tissue, A=air)	Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Analysis Requested		Total Number of containers	Special Instructions/Note:
					D	N	D	N	D	N		
MW20	6/14/16	1349	G	GW								
DUP-1	↓	1351	G	GW								
DUP-2	↓	1530	G	GW								

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological  
 Deliverable Requested: I, II, III, IV, Other (specify)

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

**Empty Kit Relinquished by:** [Signature] **Date:** 6/15/16

**Relinquished by:** [Signature] **Company:** Company

**Relinquished by:** [Signature] **Date/Time:** 6/15/16 0900 **Company:** Company

**Relinquished by:** [Signature] **Date/Time:** **Company:** Company

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

**Received by:** [Signature] **Date/Time:** 6/15/16 1225 **Company:** Company

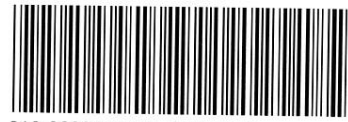
**Received by:** [Signature] **Date/Time:** **Company:** Company

**Received by:** **Date/Time:** **Company:** Company

**Cooler Temperature(s) °C and Other Remarks:**







**Cooler/Sample Receipt and Temperature Log Form**

<b>Client Information</b>	
Client: <u>Omaha Public Power District</u>	
City/State:	Project: <u>North Omaha Station</u>
<b>Receipt Information</b>	
Date/Time Received: <u>6-16-16 9:25</u>	Received By: <u>GL</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler ID: <u>G-27</u></i>
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler # _____ of <u>3</u></i>
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler custody seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</i>
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No</i>
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Which VOA samples are in cooler? ↓</i>
<b>Temperature Record</b>	
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE	
Temperature Blank?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: <u>G</u>	Correction Factor (°C): <u>+0.2</u>
Uncorrected Temp (°C): <u>2.4</u>	Corrected Temp (°C): <u>2.6</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) <i>If yes: Is there evidence that the chilling process began?</i> <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	

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Place COC scanning label here

**Cooler/Sample Receipt and Temperature Log Form**

<b>Client Information</b>	
Client: <u>Omaha Public Power District</u>	
City/State:	Project: <u>North Omaha Station</u>
<b>Receipt Information</b>	
Date/Time Received: <u>6-16-16 9:25</u>	Received By: <u>GL</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler ID: <u>BB-99</u></i>
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler # <u>2</u> of <u>3</u></i>
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler custody seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</i>
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No</i>
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Which VOA samples are in cooler? ↓</i>
<b>Temperature Record</b>	
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE	
Temperature Blank?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: <u>G</u>	Correction Factor (°C): <u>+0.2</u>
Uncorrected Temp (°C): <u>2.3</u>	Corrected Temp (°C): <u>2.5</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) <i>If yes: Is there evidence that the chilling process began?</i> <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	

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Place COC scanning label here

**Cooler/Sample Receipt and Temperature Log Form**

<b>Client Information</b>	
Client: <u>Omaha Public Power District</u>	
City/State:	Project: <u>North Omaha Station</u>
<b>Receipt Information</b>	
Date/Time Received: <u>6-16-16 9:25</u>	Received By: <u>GL</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler ID: <u>TI-0</u></i>
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler # <u>   </u> of <u>3</u></i>
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler custody seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</i>
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No</i>
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Which VOA samples are in cooler? ↓</i>
<b>Temperature Record</b>	
Coolant:	<input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE
Temperature Blank?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: <u>G</u>	Correction Factor (°C): <u>+0.2</u>
Uncorrected Temp (°C): <u>1.8</u>	Corrected Temp (°C): <u>2.0</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) <i>If yes: Is there evidence that the chilling process began?</i> <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	

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Temperature readings: \_\_\_\_\_

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u> pH	<u>Preservative</u> Added (mls)	<u>Lot #</u>
MW2	310-82986-A-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-82986-B-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-82986-D-1	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW5	310-82986-A-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW5	310-82986-B-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW5	310-82986-D-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW6	310-82986-A-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW6	310-82986-B-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW6	310-82986-D-3	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW8	310-82986-A-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW8	310-82986-B-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW8	310-82986-D-4	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW9	310-82986-A-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-82986-B-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-82986-D-5	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW13	310-82986-A-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-82986-B-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-82986-D-6	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW15	310-82986-A-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW15	310-82986-B-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW15	310-82986-D-7	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW16	310-82986-A-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW16	310-82986-B-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW16	310-82986-D-8	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW17	310-82986-A-9	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW17	310-82986-B-9	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW17	310-82986-D-9	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW18	310-82986-A-10	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW18	310-82986-B-10	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW18	310-82986-D-10	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW19	310-82986-A-11	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW19	310-82986-B-11	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW19	310-82986-D-11	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW20	310-82986-A-12	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW20	310-82986-B-12	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW20	310-82986-D-12	Plastic 250ml - with Nitric Acid	<2	_____	_____
DUP-1	310-82986-A-13	Plastic 1 liter - Nitric Acid	<2	_____	_____

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u> pH	<u>Preservative</u> Added (mls)	<u>Lot #</u>
DUP-1	310-82986-B-13	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-1	310-82986-D-13	Plastic 250ml - with Nitric Acid	<2	_____	_____
DUP-2	310-82986-A-14	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-2	310-82986-B-14	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-2	310-82986-D-14	Plastic 250ml - with Nitric Acid	<2	_____	_____

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## Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-82986-1

**Login Number: 82986**

**List Source: TestAmerica Cedar Falls**

**List Number: 1**

**Creator: Worthy, Ashley L**

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



# Tracer/Carrier Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

## 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)
310-82986-1	MW2	80.3
310-82986-2	MW5	80.6
310-82986-3	MW6	84.6
310-82986-4	MW8	84.6
310-82986-5	MW9	83.5
310-82986-6	MW13	82.9
310-82986-7	MW15	85.5
310-82986-8	MW16	85.5
310-82986-9	MW17	82.9
310-82986-10	MW18	88.3
310-82986-11	MW19	91.5
310-82986-12	MW20	85.8
310-82986-13	DUP-1	84.0
310-82986-14	DUP-2	82.1

### 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 160-257619/2-A	Lab Control Sample	92.6
LCSD 160-257619/3-A	Lab Control Sample Dup	90.0
MB 160-257619/1-A	Method Blank	82.1

### 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)
310-82986-1	MW2	80.3	91.2
310-82986-2	MW5	80.6	90.1
310-82986-3	MW6	84.6	86.7
310-82986-4	MW8	84.6	89.7
310-82986-5	MW9	83.5	88.6
310-82986-6	MW13	82.9	93.1
310-82986-7	MW15	85.5	90.5
310-82986-8	MW16	85.5	92.0
310-82986-9	MW17	82.9	89.7
310-82986-10	MW18	88.3	90.5
310-82986-11	MW19	91.5	90.1
310-82986-12	MW20	85.8	89.0
310-82986-13	DUP-1	84.0	88.2

TestAmerica Cedar Falls

# Tracer/Carrier Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-82986-1

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

Matrix: Ground Water

Prep Type: Total/NA

### Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
310-82986-14	DUP-2	82.1	93.8

#### 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 160-257624/2-A	Lab Control Sample	92.6	90.5
LCSD 160-257624/3-A	Lab Control Sample Dup	90.0	93.5
MB 160-257624/1-A	Method Blank	82.1	88.6

#### Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Cedar Falls

704 Enterprise Drive

Cedar Falls, IA 50613

Tel: (319)277-2401

TestAmerica Job ID: 310-88798-1

Client Project/Site: North Omaha Station 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:

9/13/2016 4:29:15 PM

Shawn Hayes, Project Manager II

(319)277-2401

[shawn.hayes@testamericainc.com](mailto:shawn.hayes@testamericainc.com)

### LINKS

Review your project  
results through

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[www.testamericainc.com](http://www.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: North Omaha Station CCR

TestAmerica Job ID: 310-88798-1

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**Job ID: 310-88798-1**

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**Laboratory: TestAmerica Cedar Falls**

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## Narrative

**Job Narrative**  
**310-88798-1**

### 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 0.7° C and 2.1° 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.

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# Sample Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-88798-1	MW2	Ground Water	09/02/16 11:16	09/08/16 09:25
310-88798-2	DUP-1	Ground Water	09/02/16 10:45	09/08/16 09:25
310-88798-3	MW9	Ground Water	09/02/16 10:12	09/08/16 09:25
310-88798-4	MW13	Ground Water	09/02/16 11:54	09/08/16 09:25
310-88798-5	MW15	Ground Water	09/02/16 12:18	09/08/16 09:25
310-88798-6	MW16	Ground Water	09/02/16 10:43	09/08/16 09:25
310-88798-7	MW17	Ground Water	09/02/16 12:55	09/08/16 09:25
310-88798-8	MW18	Ground Water	09/02/16 08:55	09/08/16 09:25
310-88798-9	MW19	Ground Water	09/02/16 09:34	09/08/16 09:25

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# Detection Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-1

## Client Sample ID: MW2

## Lab Sample ID: 310-88798-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	24.9		5.00		mg/L	5		9056A	Total/NA
Sulfate	503		50.0		mg/L	50		9056A	Total/NA
Arsenic	0.220		0.00200		mg/L	1		6020A	Total/NA
Barium	0.104		0.00200		mg/L	1		6020A	Total/NA
Boron	1.22		0.200		mg/L	1		6020A	Total/NA
Calcium	197		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000619		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	2890		60.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: DUP-1

## Lab Sample ID: 310-88798-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	61.8		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.817		0.500		mg/L	5		9056A	Total/NA
Sulfate	266		50.0		mg/L	50		9056A	Total/NA
Lithium	0.0510		0.0500		mg/L	1		6010C	Total/NA
Arsenic	0.00204		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0825		0.00200		mg/L	1		6020A	Total/NA
Boron	0.310		0.200		mg/L	1		6020A	Total/NA
Calcium	145		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.00138		0.000500		mg/L	1		6020A	Total/NA
Lead	0.000606		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.0187		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1060		60.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW9

## Lab Sample ID: 310-88798-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	146		5.00		mg/L	5		9056A	Total/NA
Sulfate	19.9		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.00397		0.00200		mg/L	1		6020A	Total/NA
Barium	0.538		0.00200		mg/L	1		6020A	Total/NA
Calcium	122		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.00103		0.000500		mg/L	1		6020A	Total/NA
Lead	0.00289		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	766		30.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW13

## Lab Sample ID: 310-88798-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.06		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.652		0.500		mg/L	5		9056A	Total/NA
Sulfate	458		50.0		mg/L	50		9056A	Total/NA
Arsenic	0.142		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0825		0.00200		mg/L	1		6020A	Total/NA
Boron	2.02		0.200		mg/L	1		6020A	Total/NA
Calcium	116		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.945		0.00200		mg/L	1		6020A	Total/NA
Selenium	0.0313		0.00500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1170		60.0		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Cedar Falls

# Detection Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-1

## Client Sample ID: MW15

## Lab Sample ID: 310-88798-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.52		1.00		mg/L	1		9056A	Total/NA
Fluoride	0.278		0.100		mg/L	1		9056A	Total/NA
Sulfate	625		50.0		mg/L	50		9056A	Total/NA
Antimony	0.00150		0.00100		mg/L	1		6020A	Total/NA
Barium	0.0660		0.00200		mg/L	1		6020A	Total/NA
Boron	3.36		1.00		mg/L	5		6020A	Total/NA
Calcium	220		0.200		mg/L	1		6020A	Total/NA
Chromium	0.00548		0.00500		mg/L	1		6020A	Total/NA
Molybdenum	0.319		0.00200		mg/L	1		6020A	Total/NA
Selenium	0.0867		0.00500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1460		60.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW16

## Lab Sample ID: 310-88798-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	57.3		5.00		mg/L	5		9056A	Total/NA
Sulfate	277		50.0		mg/L	50		9056A	Total/NA
Arsenic	0.00233		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0837		0.00200		mg/L	1		6020A	Total/NA
Boron	0.333		0.200		mg/L	1		6020A	Total/NA
Calcium	143		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.00126		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.0262		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1160		60.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW17

## Lab Sample ID: 310-88798-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	43.0		5.00		mg/L	5		9056A	Total/NA
Sulfate	807		50.0		mg/L	50		9056A	Total/NA
Lithium	0.116		0.0500		mg/L	1		6010C	Total/NA
Arsenic	0.0152		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0424		0.00200		mg/L	1		6020A	Total/NA
Boron	0.637		0.200		mg/L	1		6020A	Total/NA
Calcium	320		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.0134		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	2660		150		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW18

## Lab Sample ID: 310-88798-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.307		0.00200		mg/L	1		6020A	Total/NA
Calcium	73.4		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	460		30.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW19

## Lab Sample ID: 310-88798-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	21.5		5.00		mg/L	5		9056A	Total/NA
Barium	0.325		0.00200		mg/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Cedar Falls



# Detection Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-1

**Client Sample ID: MW19 (Continued)**

**Lab Sample ID: 310-88798-9**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	82.8		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	492		30.0		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Cedar Falls

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# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-1

**Client Sample ID: MW2**  
**Date Collected: 09/02/16 11:16**  
**Date Received: 09/08/16 09:25**

**Lab Sample ID: 310-88798-1**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>24.9</b>		5.00		mg/L			09/09/16 11:58	5
Fluoride	<0.500		0.500		mg/L			09/09/16 11:58	5
<b>Sulfate</b>	<b>503</b>		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 18:52	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:34	1
<b>Arsenic</b>	<b>0.220</b>		0.00200		mg/L		09/09/16 10:00	09/09/16 17:34	1
<b>Barium</b>	<b>0.104</b>		0.00200		mg/L		09/09/16 10:00	09/09/16 17:34	1
Beryllium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:34	1
<b>Boron</b>	<b>1.22</b>		0.200		mg/L		09/09/16 10:00	09/13/16 11:58	1
Cadmium	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 17:34	1
<b>Calcium</b>	<b>197</b>		0.200		mg/L		09/09/16 10:00	09/09/16 17:34	1
Chromium	<0.00500		0.00500		mg/L		09/09/16 10:00	09/09/16 17:34	1
<b>Cobalt</b>	<b>0.000619</b>		0.000500		mg/L		09/09/16 10:00	09/09/16 17:34	1
Lead	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 17:34	1
Molybdenum	<0.00200		0.00200		mg/L		09/09/16 10:00	09/09/16 17:34	1
Selenium	<0.00500		0.00500		mg/L		09/09/16 10:00	09/09/16 17:34	1
Thallium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:34	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		09/09/16 11:15	09/12/16 10:33	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>2890</b>		60.0		mg/L			09/08/16 16:35	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-1

**Client Sample ID: DUP-1**

**Date Collected: 09/02/16 10:45**

**Date Received: 09/08/16 09:25**

**Lab Sample ID: 310-88798-2**

**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	61.8		5.00		mg/L			09/09/16 11:58	5
Fluoride	0.817		0.500		mg/L			09/09/16 11:58	5
Sulfate	266		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	0.0510		0.0500		mg/L		09/09/16 10:00	09/09/16 18:54	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 17:37	1
Arsenic	0.00204		0.00200		mg/L		09/09/16 10:00	09/09/16 17:37	1
Barium	0.0825		0.00200		mg/L		09/09/16 10:00	09/09/16 17:37	1
Beryllium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:37	1
Boron	0.310		0.200		mg/L		09/09/16 10:00	09/13/16 12:01	1
Cadmium	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 17:37	1
Calcium	145		0.200		mg/L		09/09/16 10:00	09/09/16 17:37	1
Chromium	<0.00500		0.00500		mg/L		09/09/16 10:00	09/09/16 17:37	1
Cobalt	0.00138		0.000500		mg/L		09/09/16 10:00	09/09/16 17:37	1
Lead	0.000606		0.000500		mg/L		09/09/16 10:00	09/09/16 17:37	1
Molybdenum	0.0187		0.00200		mg/L		09/09/16 10:00	09/09/16 17:37	1
Selenium	<0.00500		0.00500		mg/L		09/09/16 10:00	09/09/16 17:37	1
Thallium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:37	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		09/09/16 11:15	09/12/16 10:35	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1060		60.0		mg/L			09/08/16 16:35	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-1

**Client Sample ID: MW9**  
**Date Collected: 09/02/16 10:12**  
**Date Received: 09/08/16 09:25**

**Lab Sample ID: 310-88798-3**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>146</b>		5.00		mg/L			09/09/16 11:58	5
Fluoride	<0.500		0.500		mg/L			09/09/16 11:58	5
<b>Sulfate</b>	<b>19.9</b>		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 18:56	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 17:40	1
<b>Arsenic</b>	<b>0.00397</b>		0.00200		mg/L		09/09/16 10:00	09/09/16 17:40	1
<b>Barium</b>	<b>0.538</b>		0.00200		mg/L		09/09/16 10:00	09/09/16 17:40	1
Beryllium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:40	1
Boron	<0.200		0.200		mg/L		09/09/16 10:00	09/13/16 12:04	1
Cadmium	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 17:40	1
<b>Calcium</b>	<b>122</b>		0.200		mg/L		09/09/16 10:00	09/09/16 17:40	1
Chromium	<0.00500		0.00500		mg/L		09/09/16 10:00	09/09/16 17:40	1
<b>Cobalt</b>	<b>0.00103</b>		0.000500		mg/L		09/09/16 10:00	09/09/16 17:40	1
<b>Lead</b>	<b>0.00289</b>		0.000500		mg/L		09/09/16 10:00	09/09/16 17:40	1
Molybdenum	<0.00200		0.00200		mg/L		09/09/16 10:00	09/09/16 17:40	1
Selenium	<0.00500		0.00500		mg/L		09/09/16 10:00	09/09/16 17:40	1
Thallium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:40	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		09/09/16 11:15	09/12/16 10:37	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>766</b>		30.0		mg/L			09/08/16 16:35	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-1

**Client Sample ID: MW13**

**Date Collected: 09/02/16 11:54**

**Date Received: 09/08/16 09:25**

**Lab Sample ID: 310-88798-4**

**Matrix: Ground Water**

**Method: 9056A - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.06		5.00		mg/L			09/09/16 11:58	5
Fluoride	0.652		0.500		mg/L			09/09/16 11:58	5
Sulfate	458		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 18:58	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:56	1
Arsenic	0.142		0.00200		mg/L		09/09/16 10:00	09/09/16 17:56	1
Barium	0.0825		0.00200		mg/L		09/09/16 10:00	09/09/16 17:56	1
Beryllium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:56	1
Boron	2.02		0.200		mg/L		09/09/16 10:00	09/13/16 12:10	1
Cadmium	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 17:56	1
Calcium	116		0.200		mg/L		09/09/16 10:00	09/09/16 17:56	1
Chromium	<0.00500		0.00500		mg/L		09/09/16 10:00	09/09/16 17:56	1
Cobalt	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 17:56	1
Lead	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 17:56	1
Molybdenum	0.945		0.00200		mg/L		09/09/16 10:00	09/09/16 17:56	1
Selenium	0.0313		0.00500		mg/L		09/09/16 10:00	09/09/16 17:56	1
Thallium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:56	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		09/09/16 11:15	09/12/16 10:38	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1170		60.0		mg/L			09/08/16 16:35	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-1

**Client Sample ID: MW15**

**Date Collected: 09/02/16 12:18**

**Date Received: 09/08/16 09:25**

**Lab Sample ID: 310-88798-5**

**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.52		1.00		mg/L			09/09/16 11:58	1
Fluoride	0.278		0.100		mg/L			09/09/16 11:58	1
Sulfate	625		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 19:06	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00150		0.00100		mg/L		09/09/16 10:00	09/09/16 17:59	1
Arsenic	<0.00200		0.00200		mg/L		09/09/16 10:00	09/09/16 17:59	1
Barium	0.0660		0.00200		mg/L		09/09/16 10:00	09/09/16 17:59	1
Beryllium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:59	1
Boron	3.36		1.00		mg/L		09/09/16 10:00	09/13/16 12:13	5
Cadmium	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 17:59	1
Calcium	220		0.200		mg/L		09/09/16 10:00	09/09/16 17:59	1
Chromium	0.00548		0.00500		mg/L		09/09/16 10:00	09/09/16 17:59	1
Cobalt	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 17:59	1
Lead	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 17:59	1
Molybdenum	0.319		0.00200		mg/L		09/09/16 10:00	09/09/16 17:59	1
Selenium	0.0867		0.00500		mg/L		09/09/16 10:00	09/09/16 17:59	1
Thallium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 17:59	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		09/09/16 11:15	09/12/16 10:40	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1460		60.0		mg/L			09/08/16 16:35	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-1

**Client Sample ID: MW16**  
**Date Collected: 09/02/16 10:43**  
**Date Received: 09/08/16 09:25**

**Lab Sample ID: 310-88798-6**  
**Matrix: Ground Water**

**Method: 9056A - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>57.3</b>		5.00		mg/L			09/09/16 11:58	5
Fluoride	<0.500		0.500		mg/L			09/09/16 11:58	5
<b>Sulfate</b>	<b>277</b>		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 19:09	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 18:02	1
<b>Arsenic</b>	<b>0.00233</b>		0.00200		mg/L		09/09/16 10:00	09/09/16 18:02	1
<b>Barium</b>	<b>0.0837</b>		0.00200		mg/L		09/09/16 10:00	09/09/16 18:02	1
Beryllium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 18:02	1
<b>Boron</b>	<b>0.333</b>		0.200		mg/L		09/09/16 10:00	09/13/16 12:16	1
Cadmium	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 18:02	1
<b>Calcium</b>	<b>143</b>		0.200		mg/L		09/09/16 10:00	09/09/16 18:02	1
Chromium	<0.00500		0.00500		mg/L		09/09/16 10:00	09/09/16 18:02	1
<b>Cobalt</b>	<b>0.00126</b>		0.000500		mg/L		09/09/16 10:00	09/09/16 18:02	1
Lead	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 18:02	1
<b>Molybdenum</b>	<b>0.0262</b>		0.00200		mg/L		09/09/16 10:00	09/09/16 18:02	1
Selenium	<0.00500		0.00500		mg/L		09/09/16 10:00	09/09/16 18:02	1
Thallium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 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		09/09/16 11:15	09/12/16 10:45	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>1160</b>		60.0		mg/L			09/08/16 16:35	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-1

**Client Sample ID: MW17**

**Date Collected: 09/02/16 12:55**

**Date Received: 09/08/16 09:25**

**Lab Sample ID: 310-88798-7**

**Matrix: Ground Water**

**Method: 9056A - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>43.0</b>		5.00		mg/L			09/09/16 11:58	5
Fluoride	<0.500		0.500		mg/L			09/09/16 11:58	5
<b>Sulfate</b>	<b>807</b>		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
<b>Lithium</b>	<b>0.116</b>		0.0500		mg/L		09/09/16 10:00	09/09/16 19:11	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 18:05	1
<b>Arsenic</b>	<b>0.0152</b>		0.00200		mg/L		09/09/16 10:00	09/09/16 18:05	1
<b>Barium</b>	<b>0.0424</b>		0.00200		mg/L		09/09/16 10:00	09/09/16 18:05	1
Beryllium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 18:05	1
<b>Boron</b>	<b>0.637</b>		0.200		mg/L		09/09/16 10:00	09/13/16 12:19	1
Cadmium	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 18:05	1
<b>Calcium</b>	<b>320</b>		0.200		mg/L		09/09/16 10:00	09/09/16 18:05	1
Chromium	<0.00500		0.00500		mg/L		09/09/16 10:00	09/09/16 18:05	1
<b>Cobalt</b>	<b>0.0134</b>		0.000500		mg/L		09/09/16 10:00	09/09/16 18:05	1
Lead	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 18:05	1
Molybdenum	<0.00200		0.00200		mg/L		09/09/16 10:00	09/09/16 18:05	1
Selenium	<0.00500		0.00500		mg/L		09/09/16 10:00	09/09/16 18:05	1
Thallium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 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		09/09/16 11:15	09/12/16 10:46	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>2660</b>		150		mg/L			09/08/16 16:35	1



# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-1

**Client Sample ID: MW18**

**Date Collected: 09/02/16 08:55**

**Date Received: 09/08/16 09:25**

**Lab Sample ID: 310-88798-8**

**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			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	<0.0500		0.0500		mg/L		09/09/16 10:00	09/09/16 19:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 18:08	1
Arsenic	<0.00200		0.00200		mg/L		09/09/16 10:00	09/09/16 18:08	1
<b>Barium</b>	<b>0.307</b>		0.00200		mg/L		09/09/16 10:00	09/09/16 18:08	1
Beryllium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 18:08	1
Boron	<0.200		0.200		mg/L		09/09/16 10:00	09/13/16 12:31	1
Cadmium	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 18:08	1
<b>Calcium</b>	<b>73.4</b>		0.200		mg/L		09/09/16 10:00	09/09/16 18:08	1
Chromium	<0.00500		0.00500		mg/L		09/09/16 10:00	09/09/16 18:08	1
Cobalt	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 18:08	1
Lead	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 18:08	1
Molybdenum	<0.00200		0.00200		mg/L		09/09/16 10:00	09/09/16 18:08	1
Selenium	<0.00500		0.00500		mg/L		09/09/16 10:00	09/09/16 18:08	1
Thallium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 18:08	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 10:48	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>460</b>		30.0		mg/L			09/08/16 16:35	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-1

**Client Sample ID: MW19**

**Date Collected: 09/02/16 09:34**

**Date Received: 09/08/16 09:25**

**Lab Sample ID: 310-88798-9**

**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
<b>Sulfate</b>	<b>21.5</b>		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 19:15	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 18:11	1
Arsenic	<0.00200		0.00200		mg/L		09/09/16 10:00	09/09/16 18:11	1
<b>Barium</b>	<b>0.325</b>		0.00200		mg/L		09/09/16 10:00	09/09/16 18:11	1
Beryllium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 18:11	1
Boron	<0.200		0.200		mg/L		09/09/16 10:00	09/13/16 12:34	1
Cadmium	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 18:11	1
<b>Calcium</b>	<b>82.8</b>		0.200		mg/L		09/09/16 10:00	09/09/16 18:11	1
Chromium	<0.00500		0.00500		mg/L		09/09/16 10:00	09/09/16 18:11	1
Cobalt	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 18:11	1
Lead	<0.000500		0.000500		mg/L		09/09/16 10:00	09/09/16 18:11	1
Molybdenum	<0.00200		0.00200		mg/L		09/09/16 10:00	09/09/16 18:11	1
Selenium	<0.00500		0.00500		mg/L		09/09/16 10:00	09/09/16 18:11	1
Thallium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 18:11	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		09/09/16 11:15	09/12/16 10:50	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>492</b>		30.0		mg/L			09/08/16 16:35	1

# Definitions/Glossary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-1

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)

# QC Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-1

## 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: 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

TestAmerica Cedar Falls

# QC Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-1

## Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 310-88798-4 DU  
Matrix: Ground Water  
Analysis Batch: 140888

Client Sample ID: MW13  
Prep Type: Total/NA  
Prep Batch: 140652

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Lithium	<0.0500		<0.0500		mg/L		NC	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
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
Thallium	<0.00100		0.00100		mg/L		09/09/16 10:00	09/09/16 16:44	1

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	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
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
Thallium	0.0160	0.01572		mg/L		98	80 - 120

TestAmerica Cedar Falls

# QC Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-1

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

**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	Limits
Boron	0.880	0.8819		mg/L		100	80 - 120

**Lab Sample ID: 310-88798-3 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 140862**

**Client Sample ID: MW9**  
**Prep Type: Total/NA**  
**Prep Batch: 140650**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	<0.00100		<0.00100		mg/L		NC	20
Arsenic	0.00397		0.004072		mg/L		3	20
Barium	0.538		0.4938		mg/L		9	20
Beryllium	<0.00100		<0.00100		mg/L		NC	20
Cadmium	<0.000500		<0.000500		mg/L		NC	20
Calcium	122		109.3		mg/L		11	20
Chromium	<0.00500		<0.00500		mg/L		NC	20
Cobalt	0.00103		0.001010		mg/L		2	20
Lead	0.00289		0.002802		mg/L		3	20
Molybdenum	<0.00200		<0.00200		mg/L		NC	20
Selenium	<0.00500		<0.00500		mg/L		NC	20
Thallium	<0.00100		<0.00100		mg/L		NC	20

**Lab Sample ID: 310-88798-3 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 141122**

**Client Sample ID: MW9**  
**Prep Type: Total/NA**  
**Prep Batch: 140650**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Boron	<0.200		<0.200		mg/L		NC	20

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 310-140777/1-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	Limits
Mercury	0.00167	0.001428		mg/L		86	80 - 120

TestAmerica Cedar Falls

# QC Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-1

## 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: 310-88798-2 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 140679**

**Client Sample ID: DUP-1**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	1060		1052		mg/L		0.8	20

# QC Association Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-1

## HPLC/IC

### Analysis Batch: 140842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-88798-1	MW2	Total/NA	Ground Water	9056A	
310-88798-2	DUP-1	Total/NA	Ground Water	9056A	
310-88798-3	MW9	Total/NA	Ground Water	9056A	
310-88798-4	MW13	Total/NA	Ground Water	9056A	
310-88798-5	MW15	Total/NA	Ground Water	9056A	
310-88798-6	MW16	Total/NA	Ground Water	9056A	
310-88798-7	MW17	Total/NA	Ground Water	9056A	
310-88798-8	MW18	Total/NA	Ground Water	9056A	
310-88798-9	MW19	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	

### Analysis Batch: 141108

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-88798-1	MW2	Total/NA	Ground Water	9056A	
310-88798-2	DUP-1	Total/NA	Ground Water	9056A	
310-88798-4	MW13	Total/NA	Ground Water	9056A	
310-88798-5	MW15	Total/NA	Ground Water	9056A	
310-88798-6	MW16	Total/NA	Ground Water	9056A	
310-88798-7	MW17	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
310-88798-1	MW2	Total/NA	Ground Water	3010A	
310-88798-2	DUP-1	Total/NA	Ground Water	3010A	
310-88798-3	MW9	Total/NA	Ground Water	3010A	
310-88798-4	MW13	Total/NA	Ground Water	3010A	
310-88798-5	MW15	Total/NA	Ground Water	3010A	
310-88798-6	MW16	Total/NA	Ground Water	3010A	
310-88798-7	MW17	Total/NA	Ground Water	3010A	
310-88798-8	MW18	Total/NA	Ground Water	3010A	
310-88798-9	MW19	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	
310-88798-3 DU	MW9	Total/NA	Ground Water	3010A	

### Prep Batch: 140652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-88798-1	MW2	Total/NA	Ground Water	3010A	
310-88798-2	DUP-1	Total/NA	Ground Water	3010A	
310-88798-3	MW9	Total/NA	Ground Water	3010A	
310-88798-4	MW13	Total/NA	Ground Water	3010A	
310-88798-5	MW15	Total/NA	Ground Water	3010A	
310-88798-6	MW16	Total/NA	Ground Water	3010A	
310-88798-7	MW17	Total/NA	Ground Water	3010A	
310-88798-8	MW18	Total/NA	Ground Water	3010A	

TestAmerica Cedar Falls



# QC Association Summary

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-1

## Metals (Continued)

### Prep Batch: 140652 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-88798-9	MW19	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	
310-88798-4 DU	MW13	Total/NA	Ground Water	3010A	

### Prep Batch: 140777

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-88798-1	MW2	Total/NA	Ground Water	7470A	
310-88798-2	DUP-1	Total/NA	Ground Water	7470A	
310-88798-3	MW9	Total/NA	Ground Water	7470A	
310-88798-4	MW13	Total/NA	Ground Water	7470A	
310-88798-5	MW15	Total/NA	Ground Water	7470A	
310-88798-6	MW16	Total/NA	Ground Water	7470A	
310-88798-7	MW17	Total/NA	Ground Water	7470A	
310-88798-8	MW18	Total/NA	Ground Water	7470A	
310-88798-9	MW19	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
310-88798-1	MW2	Total/NA	Ground Water	6020A	140650
310-88798-2	DUP-1	Total/NA	Ground Water	6020A	140650
310-88798-3	MW9	Total/NA	Ground Water	6020A	140650
310-88798-4	MW13	Total/NA	Ground Water	6020A	140650
310-88798-5	MW15	Total/NA	Ground Water	6020A	140650
310-88798-6	MW16	Total/NA	Ground Water	6020A	140650
310-88798-7	MW17	Total/NA	Ground Water	6020A	140650
310-88798-8	MW18	Total/NA	Ground Water	6020A	140650
310-88798-9	MW19	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
310-88798-3 DU	MW9	Total/NA	Ground Water	6020A	140650

### Analysis Batch: 140888

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-88798-1	MW2	Total/NA	Ground Water	6010C	140652
310-88798-2	DUP-1	Total/NA	Ground Water	6010C	140652
310-88798-3	MW9	Total/NA	Ground Water	6010C	140652
310-88798-4	MW13	Total/NA	Ground Water	6010C	140652
310-88798-5	MW15	Total/NA	Ground Water	6010C	140652
310-88798-6	MW16	Total/NA	Ground Water	6010C	140652
310-88798-7	MW17	Total/NA	Ground Water	6010C	140652
310-88798-8	MW18	Total/NA	Ground Water	6010C	140652
310-88798-9	MW19	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
310-88798-4 DU	MW13	Total/NA	Ground Water	6010C	140652

TestAmerica Cedar Falls

# QC Association Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-1

## Metals (Continued)

### Analysis Batch: 140956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-88798-1	MW2	Total/NA	Ground Water	7470A	140777
310-88798-2	DUP-1	Total/NA	Ground Water	7470A	140777
310-88798-3	MW9	Total/NA	Ground Water	7470A	140777
310-88798-4	MW13	Total/NA	Ground Water	7470A	140777
310-88798-5	MW15	Total/NA	Ground Water	7470A	140777
310-88798-6	MW16	Total/NA	Ground Water	7470A	140777
310-88798-7	MW17	Total/NA	Ground Water	7470A	140777
310-88798-8	MW18	Total/NA	Ground Water	7470A	140777
310-88798-9	MW19	Total/NA	Ground Water	7470A	140777
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
310-88798-1	MW2	Total/NA	Ground Water	6020A	140650
310-88798-2	DUP-1	Total/NA	Ground Water	6020A	140650
310-88798-3	MW9	Total/NA	Ground Water	6020A	140650
310-88798-4	MW13	Total/NA	Ground Water	6020A	140650
310-88798-5	MW15	Total/NA	Ground Water	6020A	140650
310-88798-6	MW16	Total/NA	Ground Water	6020A	140650
310-88798-7	MW17	Total/NA	Ground Water	6020A	140650
310-88798-8	MW18	Total/NA	Ground Water	6020A	140650
310-88798-9	MW19	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
310-88798-3 DU	MW9	Total/NA	Ground Water	6020A	140650

## General Chemistry

### Analysis Batch: 140679

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-88798-1	MW2	Total/NA	Ground Water	SM 2540C	
310-88798-2	DUP-1	Total/NA	Ground Water	SM 2540C	
310-88798-3	MW9	Total/NA	Ground Water	SM 2540C	
310-88798-4	MW13	Total/NA	Ground Water	SM 2540C	
310-88798-5	MW15	Total/NA	Ground Water	SM 2540C	
310-88798-6	MW16	Total/NA	Ground Water	SM 2540C	
310-88798-7	MW17	Total/NA	Ground Water	SM 2540C	
310-88798-8	MW18	Total/NA	Ground Water	SM 2540C	
310-88798-9	MW19	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	
310-88798-2 DU	DUP-1	Total/NA	Ground Water	SM 2540C	

TestAmerica Cedar Falls

# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-1

**Client Sample ID: MW2**  
**Date Collected: 09/02/16 11:16**  
**Date Received: 09/08/16 09:25**

**Lab Sample ID: 310-88798-1**  
**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 18:52	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 17:34	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 11:58	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 10:33	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	140679	09/08/16 16:35	SAS	TAL CF

**Client Sample ID: DUP-1**  
**Date Collected: 09/02/16 10:45**  
**Date Received: 09/08/16 09:25**

**Lab Sample ID: 310-88798-2**  
**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 18:54	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 17:37	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 12:01	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 10:35	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	140679	09/08/16 16:35	SAS	TAL CF

**Client Sample ID: MW9**  
**Date Collected: 09/02/16 10:12**  
**Date Received: 09/08/16 09:25**

**Lab Sample ID: 310-88798-3**  
**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 18:56	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 17:40	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 12:04	OAD	TAL CF
Total/NA	Prep	7470A			140777	09/09/16 11:15	SAD	TAL CF

TestAmerica Cedar Falls

# Lab Chronicle

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-1

**Client Sample ID: MW9**  
**Date Collected: 09/02/16 10:12**  
**Date Received: 09/08/16 09:25**

**Lab Sample ID: 310-88798-3**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7470A		1	140956	09/12/16 10:37	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	140679	09/08/16 16:35	SAS	TAL CF

**Client Sample ID: MW13**  
**Date Collected: 09/02/16 11:54**  
**Date Received: 09/08/16 09:25**

**Lab Sample ID: 310-88798-4**  
**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 18:58	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 17:56	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 12:10	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 10:38	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	140679	09/08/16 16:35	SAS	TAL CF

**Client Sample ID: MW15**  
**Date Collected: 09/02/16 12:18**  
**Date Received: 09/08/16 09:25**

**Lab Sample ID: 310-88798-5**  
**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		1	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 19:06	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 17:59	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 12:13	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 10:40	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	140679	09/08/16 16:35	SAS	TAL CF

TestAmerica Cedar Falls

# Lab Chronicle

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-1

**Client Sample ID: MW16**

**Date Collected: 09/02/16 10:43**

**Date Received: 09/08/16 09:25**

**Lab Sample ID: 310-88798-6**

**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 19:09	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 18:02	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 12:16	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 10:45	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	140679	09/08/16 16:35	SAS	TAL CF

**Client Sample ID: MW17**

**Date Collected: 09/02/16 12:55**

**Date Received: 09/08/16 09:25**

**Lab Sample ID: 310-88798-7**

**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 19:11	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 18:05	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 12:19	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 10:46	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	140679	09/08/16 16:35	SAS	TAL CF

**Client Sample ID: MW18**

**Date Collected: 09/02/16 08:55**

**Date Received: 09/08/16 09:25**

**Lab Sample ID: 310-88798-8**

**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 19:13	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 18:08	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 12:31	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 10:48	SAD	TAL CF

TestAmerica Cedar Falls

# Lab Chronicle

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	140679	09/08/16 16:35	SAS	TAL CF

**Client Sample ID: MW19**

**Lab Sample ID: 310-88798-9**

**Date Collected: 09/02/16 09:34**

**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	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 19:15	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 18:11	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 12:34	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 10:50	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: North Omaha Station CCR

TestAmerica Job ID: 310-88798-1

## 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.

TestAmerica Cedar Falls

# Method Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-1

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







**Cooler/Sample Receipt and Temperature Record**

<b>Client Information</b>	
Client: <u>Omaha Public Power</u>	
City/State:	Project: <u>North Omaha Station</u>
<b>Receipt Information</b>	
Date/Time Received: <u>9-08-16 925</u>	Received By: <u>GL</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler ID: <u>I-9</u></i>
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler # <u>1</u> of <u>2</u></i>
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No</i>
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No</i>
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Which VOA samples are in cooler? ↓</i>
<b>Temperature Record</b>	
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE	
Temperature Blank?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: <u>G</u>	Correction Factor (°C): <u>-0.1</u>
Uncorrected Temp (°C): <u>2.2</u>	Corrected Temp (°C): <u>2.1</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) <i>If yes: Is there evidence that the chilling process began?</i> <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	



Place COC scanning label here

**Cooler/Sample Receipt and Temperature Log Form**

<b>Client Information</b>	
Client: <u>Omaha Public Power</u>	
City/State:	Project: <u>North Omaha Station</u>
<b>Receipt Information</b>	
Date/Time Received: <u>9-08-16 925</u>	Received By: <u>GL</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler ID: <u>K-4</u></i>
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler # <u>2</u> of <u>2</u></i>
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No</i>
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No</i>
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Which VOA samples are in cooler? ↓</i>
<b>Temperature Record</b>	
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE	
Temperature Blank?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: <u>G</u>	Correction Factor (°C): <u>-0.1</u>
Uncorrected Temp (°C): <u>0.8</u>	Corrected Temp (°C): <u>0.7</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) <i>If yes: Is there evidence that the chilling process began?</i> <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	

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**Chain of Custody Record**

<b>Client Information</b>		Sampler: <u>Brad Sojka</u>		Lab PM: <u>Hayes, Shawn M</u>		Carrier Tracking No(s):		COC No:	
Client Contact: <u>Brad Sojka</u>		Phone: <u>502-630-2515</u>		E-Mail: <u>shawn.hayes@testamericainc.com</u>		Page:		Job #:	
Company: <u>Omaha Public Power District</u>		Address: <u>444 South 16th Street Mall 9E/EP1</u>		City: <u>Omaha</u>		State, Zip: <u>NE, 68102-2247</u>		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 Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 Z - other (specify)	
Due Date Requested:		TAT Requested (days):		PO #:		WO #:		Analysis Requested	
TestAmerica Project #: <u>31007560</u>		SSOW#:		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		9315_Raz26, 9320_Raz28, Combined Raz26 and Raz28	
Sample Identification		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (Wet, Solid, Chilled, Other)	
MW2		9/2/16		1116		G		GW	
MW5 - Dup				1045		G		GW	
MW6						G		GW	
MW8						G		GW	
MW9				1012		G		GW	
MW13				1154		G		GW	
MW15				1218		G		GW	
MW16				1043		G		GW	
MW17				1255		G		GW	
MW18				0855		G		GW	
MW19				0934		G		GW	
Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Return To Client		Disposal By Lab		Archive For	
Deliverable Requested: I, II, III, IV, Other (specify)		Poison B		Unknown		Radiological		Months	
Empty Kit Relinquished by:		Date/Time:		Date/Time:		Date/Time:		Date/Time:	
Relinquished by: <u>[Signature]</u>		9/7/16 1230		Company		Company		Company	
Relinquished by:		Date/Time:		Date/Time:		Date/Time:		Date/Time:	
Relinquished by:		Date/Time:		Company		Company		Company	
Custody Seals Intact: <u>Δ Yes Δ No</u>		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		Received by: <u>[Signature]</u>		Date/Time: <u>9.8.16 9:25</u>	
Company		Company		Company		Company		Company	



Temperature readings: \_\_\_\_\_

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container pH</u>	<u>Preservative Added (mls)</u>	<u>Lot #</u>
MW2	310-88798-A-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-88798-B-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-88798-C-1	Plastic 250ml - with Nitric Acid	<2	_____	_____
DUP-1	310-88798-A-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-1	310-88798-B-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-1	310-88798-C-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW9	310-88798-A-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-88798-B-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-88798-C-3	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW13	310-88798-A-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-88798-B-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-88798-C-4	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW15	310-88798-A-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW15	310-88798-B-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW15	310-88798-C-5	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW16	310-88798-A-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW16	310-88798-B-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW16	310-88798-C-6	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW17	310-88798-A-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW17	310-88798-B-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW17	310-88798-C-7	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW18	310-88798-A-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW18	310-88798-B-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW18	310-88798-C-8	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW19	310-88798-A-9	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW19	310-88798-B-9	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW19	310-88798-C-9	Plastic 250ml - with Nitric Acid	<2	_____	_____



# Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-88798-1

**Login Number: 88798**  
**List Number: 1**  
**Creator: Worthy, Ashley L**

**List Source: TestAmerica Cedar Falls**

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



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Cedar Falls

704 Enterprise Drive

Cedar Falls, IA 50613

Tel: (319)277-2401

TestAmerica Job ID: 310-88798-2

Client Project/Site: North Omaha Station 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:

10/7/2016 4:06:46 PM

Shawn Hayes, Project Manager II

(319)277-2401

[shawn.hayes@testamericainc.com](mailto:shawn.hayes@testamericainc.com)

### LINKS

Review your project  
results through

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Have a Question?



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[www.testamericainc.com](http://www.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: North Omaha Station CCR

TestAmerica Job ID: 310-88798-2

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**Job ID: 310-88798-2**

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**Laboratory: TestAmerica Cedar Falls**

## Narrative

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**Job Narrative**  
**310-88798-2**

## 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 0.7° C and 2.1° C.

## RAD

Method(s) PrecSep\_0: Radium-228 Prep Batch 160-202:

The following sample was run at a reduced aliquot due to the sample being cloudy and having a discoloration: MW9 (310-88798-3).

Method(s) PrecSep-21: Radium-226 Prep Batch 160-269199:

The following sample was run at a reduced aliquot due to the sample being cloudy and having a discoloration: MW9 (310-88798-3).

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: North Omaha Station CCR

TestAmerica Job ID: 310-88798-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-88798-1	MW2	Ground Water	09/02/16 11:16	09/08/16 09:25
310-88798-2	DUP-1	Ground Water	09/02/16 10:45	09/08/16 09:25
310-88798-3	MW9	Ground Water	09/02/16 10:12	09/08/16 09:25
310-88798-4	MW13	Ground Water	09/02/16 11:54	09/08/16 09:25
310-88798-5	MW15	Ground Water	09/02/16 12:18	09/08/16 09:25
310-88798-6	MW16	Ground Water	09/02/16 10:43	09/08/16 09:25
310-88798-7	MW17	Ground Water	09/02/16 12:55	09/08/16 09:25
310-88798-8	MW18	Ground Water	09/02/16 08:55	09/08/16 09:25
310-88798-9	MW19	Ground Water	09/02/16 09:34	09/08/16 09:25



# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-2

**Client Sample ID: MW2**  
**Date Collected: 09/02/16 11:16**  
**Date Received: 09/08/16 09:25**

**Lab Sample ID: 310-88798-1**  
**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	0.201		0.0764	0.0785	1.00	0.0937	pCi/L	09/12/16 18:45	10/04/16 07:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		40 - 110					09/12/16 18:45	10/04/16 07:30	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0993	U	0.261	0.261	1.00	0.448	pCi/L	09/12/16 20:19	09/26/16 13:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		40 - 110					09/12/16 20:19	09/26/16 13:45	1
Y Carrier	92.3		40 - 110					09/12/16 20:19	09/26/16 13:45	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	0.300	U	0.272	0.273	5.00	0.448	pCi/L		10/06/16 01:29	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-2

**Client Sample ID: DUP-1**

**Lab Sample ID: 310-88798-2**

Date Collected: 09/02/16 10:45

Matrix: Ground Water

Date Received: 09/08/16 09:25

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.188		0.0688	0.0708	1.00	0.0755	pCi/L	09/12/16 18:45	10/04/16 07:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110					09/12/16 18:45	10/04/16 07:30	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.188	U	0.257	0.258	1.00	0.429	pCi/L	09/12/16 20:19	09/26/16 13:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110					09/12/16 20:19	09/26/16 13:45	1
Y Carrier	97.2		40 - 110					09/12/16 20:19	09/26/16 13:45	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	0.376	U	0.266	0.267	5.00	0.429	pCi/L		10/06/16 01:29	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-2

**Client Sample ID: MW9**

**Lab Sample ID: 310-88798-3**

Date Collected: 09/02/16 10:12

Matrix: Ground Water

Date Received: 09/08/16 09:25

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.778		0.201	0.213	1.00	0.197	pCi/L	09/12/16 18:45	10/04/16 07:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.8		40 - 110					09/12/16 18:45	10/04/16 07:30	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.23		0.587	0.598	1.00	0.845	pCi/L	09/12/16 20:19	09/26/16 13:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.8		40 - 110					09/12/16 20:19	09/26/16 13:45	1
Y Carrier	90.8		40 - 110					09/12/16 20:19	09/26/16 13:45	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	2.01		0.620	0.634	5.00	0.845	pCi/L		10/06/16 01:29	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-2

**Client Sample ID: MW13**

**Lab Sample ID: 310-88798-4**

**Date Collected: 09/02/16 11:54**

**Matrix: Ground Water**

**Date Received: 09/08/16 09:25**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0658	U	0.0475	0.0479	1.00	0.0683	pCi/L	09/12/16 18:45	10/04/16 07:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		40 - 110					09/12/16 18:45	10/04/16 07:30	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	0.285	0.287	1.00	0.463	pCi/L	09/12/16 20:19	09/26/16 13:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		40 - 110					09/12/16 20:19	09/26/16 13:44	1
Y Carrier	90.5		40 - 110					09/12/16 20:19	09/26/16 13:44	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	0.362	U	0.289	0.291	5.00	0.463	pCi/L		10/06/16 01:29	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-2

**Client Sample ID: MW15**

**Lab Sample ID: 310-88798-5**

Date Collected: 09/02/16 12:18

Matrix: Ground Water

Date Received: 09/08/16 09:25

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0903		0.0520	0.0527	1.00	0.0688	pCi/L	09/12/16 18:45	10/04/16 07:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.6		40 - 110					09/12/16 18:45	10/04/16 07:30	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0464	U	0.239	0.239	1.00	0.436	pCi/L	09/12/16 20:19	09/26/16 13:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.6		40 - 110					09/12/16 20:19	09/26/16 13:44	1
Y Carrier	91.6		40 - 110					09/12/16 20:19	09/26/16 13:44	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	0.0439	U	0.245	0.245	5.00	0.436	pCi/L		10/06/16 01:29	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-2

**Client Sample ID: MW16**

**Lab Sample ID: 310-88798-6**

**Date Collected: 09/02/16 10:43**

**Matrix: Ground Water**

**Date Received: 09/08/16 09:25**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.190		0.0687	0.0708	1.00	0.0767	pCi/L	09/12/16 18:45	10/04/16 07:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					09/12/16 18:45	10/04/16 07:31	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0300	U	0.207	0.207	1.00	0.367	pCi/L	09/12/16 20:19	09/26/16 13:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					09/12/16 20:19	09/26/16 13:44	1
Y Carrier	92.3		40 - 110					09/12/16 20:19	09/26/16 13:44	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	0.220	U	0.218	0.219	5.00	0.367	pCi/L		10/06/16 01:29	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-2

**Client Sample ID: MW17**

**Lab Sample ID: 310-88798-7**

Date Collected: 09/02/16 12:55

Matrix: Ground Water

Date Received: 09/08/16 09:25

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.128		0.0620	0.0630	1.00	0.0787	pCi/L	09/12/16 18:45	10/04/16 07:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.3		40 - 110					09/12/16 18:45	10/04/16 07:31	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.523		0.258	0.262	1.00	0.374	pCi/L	09/12/16 20:19	09/26/16 13:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.3		40 - 110					09/12/16 20:19	09/26/16 13:44	1
Y Carrier	93.1		40 - 110					09/12/16 20:19	09/26/16 13:44	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	0.651		0.265	0.270	5.00	0.374	pCi/L		10/06/16 01:29	1



# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-2

**Client Sample ID: MW18**

**Lab Sample ID: 310-88798-8**

**Date Collected: 09/02/16 08:55**

**Matrix: Ground Water**

**Date Received: 09/08/16 09:25**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.466		0.0978	0.106	1.00	0.0758	pCi/L	09/12/16 18:45	10/04/16 07:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.0		40 - 110					09/12/16 18:45	10/04/16 07:31	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.348	U	0.244	0.246	1.00	0.377	pCi/L	09/12/16 20:19	09/26/16 13:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.0		40 - 110					09/12/16 20:19	09/26/16 13:44	1
Y Carrier	88.6		40 - 110					09/12/16 20:19	09/26/16 13:44	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	0.814		0.263	0.268	5.00	0.377	pCi/L		10/06/16 01:29	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-2

**Client Sample ID: MW19**

**Lab Sample ID: 310-88798-9**

**Date Collected: 09/02/16 09:34**

**Matrix: Ground Water**

**Date Received: 09/08/16 09:25**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.603		0.115	0.127	1.00	0.0908	pCi/L	09/12/16 18:45	10/04/16 07:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.3		40 - 110					09/12/16 18:45	10/04/16 07:31	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.947		0.326	0.337	1.00	0.440	pCi/L	09/12/16 20:19	09/26/16 13:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.3		40 - 110					09/12/16 20:19	09/26/16 13:44	1
Y Carrier	89.3		40 - 110					09/12/16 20:19	09/26/16 13:44	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	1.55		0.346	0.360	5.00	0.440	pCi/L		10/06/16 01:29	1

# Definitions/Glossary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-2

## 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)

# QC Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-2

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

Lab Sample ID: MB 160-269199/1-A

Matrix: Water

Analysis Batch: 273103

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 269199

Analyte	MB	MB	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert.	Uncert.						
Radium-226	0.1102		0.0695	0.0702	1.00	0.101	pCi/L	09/12/16 18:45	10/04/16 07:29	1
Carrier	MB	MB	Limits		Prepared	Analyzed	Dil Fac			
	%Yield	Qualifier								
Ba Carrier	81.2		40 - 110		09/12/16 18:45	10/04/16 07:29	1			

Lab Sample ID: LCS 160-269199/2-A

Matrix: Water

Analysis Batch: 273103

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 269199

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.1	14.50		1.40	1.00	0.0997	pCi/L	131	68 - 137
Carrier	LCS	LCS	Limits		Prepared	Analyzed	Dil Fac		
	%Yield	Qualifier							
Ba Carrier	83.5		40 - 110						

Lab Sample ID: LCSD 160-269199/3-A

Matrix: Water

Analysis Batch: 273103

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 269199

Analyte	Spike Added	LCSD Result	LCSD Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
				Uncert. (2σ+/-)							
Radium-226	11.1	13.55		1.31	1.00	0.0914	pCi/L	122	68 - 137	0.35	1
Carrier	LCSD	LCSD	Limits		Prepared	Analyzed	Dil Fac				
	%Yield	Qualifier									
Ba Carrier	86.9		40 - 110								

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

Lab Sample ID: MB 160-269202/1-A

Matrix: Water

Analysis Batch: 271802

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 269202

Analyte	MB	MB	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert.	Uncert.						
Radium-228	0.1678	U	0.288	0.289	1.00	0.487	pCi/L	09/12/16 20:19	09/26/16 13:45	1
Carrier	MB	MB	Limits		Prepared	Analyzed	Dil Fac			
	%Yield	Qualifier								
Ba Carrier	81.2		40 - 110		09/12/16 20:19	09/26/16 13:45	1			
Y Carrier	87.9		40 - 110		09/12/16 20:19	09/26/16 13:45	1			

TestAmerica Cedar Falls

# QC Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-2

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

**Lab Sample ID: LCS 160-269202/2-A**

**Matrix: Water**

**Analysis Batch: 271802**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 269202**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.5	18.14		1.94	1.00	0.495	pCi/L	125	56 - 140
<b>Carrier</b>		<b>LCS %Yield</b>	<b>LCS Qualifier</b>	<b>Limits</b>					
Ba Carrier		83.5		40 - 110					
Y Carrier		88.2		40 - 110					

**Lab Sample ID: LCSD 160-269202/3-A**

**Matrix: Water**

**Analysis Batch: 271802**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 269202**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	14.5	17.52		1.87	1.00	0.440	pCi/L	121	56 - 140	0.16	1
<b>Carrier</b>		<b>LCSD %Yield</b>	<b>LCSD Qualifier</b>	<b>Limits</b>							
Ba Carrier		86.9		40 - 110							
Y Carrier		89.0		40 - 110							

# QC Association Summary

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-2

## Rad

### Prep Batch: 269199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-88798-1	MW2	Total/NA	Ground Water	PrecSep-21	
310-88798-2	DUP-1	Total/NA	Ground Water	PrecSep-21	
310-88798-3	MW9	Total/NA	Ground Water	PrecSep-21	
310-88798-4	MW13	Total/NA	Ground Water	PrecSep-21	
310-88798-5	MW15	Total/NA	Ground Water	PrecSep-21	
310-88798-6	MW16	Total/NA	Ground Water	PrecSep-21	
310-88798-7	MW17	Total/NA	Ground Water	PrecSep-21	
310-88798-8	MW18	Total/NA	Ground Water	PrecSep-21	
310-88798-9	MW19	Total/NA	Ground Water	PrecSep-21	
MB 160-269199/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-269199/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-269199/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

### Prep Batch: 269202

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-88798-1	MW2	Total/NA	Ground Water	PrecSep_0	
310-88798-2	DUP-1	Total/NA	Ground Water	PrecSep_0	
310-88798-3	MW9	Total/NA	Ground Water	PrecSep_0	
310-88798-4	MW13	Total/NA	Ground Water	PrecSep_0	
310-88798-5	MW15	Total/NA	Ground Water	PrecSep_0	
310-88798-6	MW16	Total/NA	Ground Water	PrecSep_0	
310-88798-7	MW17	Total/NA	Ground Water	PrecSep_0	
310-88798-8	MW18	Total/NA	Ground Water	PrecSep_0	
310-88798-9	MW19	Total/NA	Ground Water	PrecSep_0	
MB 160-269202/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-269202/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-269202/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

# Lab Chronicle

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-2

## Client Sample ID: MW2

Lab Sample ID: 310-88798-1

Date Collected: 09/02/16 11:16

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			269199	09/12/16 18:45	BME	TAL SL
Total/NA	Analysis	9315		1	273103	10/04/16 07:30	RTM	TAL SL
Total/NA	Prep	PrecSep_0			269202	09/12/16 20:19	BME	TAL SL
Total/NA	Analysis	9320		1	271802	09/26/16 13:45	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	273355	10/06/16 01:29	ALS	TAL SL

## Client Sample ID: DUP-1

Lab Sample ID: 310-88798-2

Date Collected: 09/02/16 10:45

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			269199	09/12/16 18:45	BME	TAL SL
Total/NA	Analysis	9315		1	273103	10/04/16 07:30	RTM	TAL SL
Total/NA	Prep	PrecSep_0			269202	09/12/16 20:19	BME	TAL SL
Total/NA	Analysis	9320		1	271802	09/26/16 13:45	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	273355	10/06/16 01:29	ALS	TAL SL

## Client Sample ID: MW9

Lab Sample ID: 310-88798-3

Date Collected: 09/02/16 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			269199	09/12/16 18:45	BME	TAL SL
Total/NA	Analysis	9315		1	273103	10/04/16 07:30	RTM	TAL SL
Total/NA	Prep	PrecSep_0			269202	09/12/16 20:19	BME	TAL SL
Total/NA	Analysis	9320		1	271802	09/26/16 13:45	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	273355	10/06/16 01:29	ALS	TAL SL

## Client Sample ID: MW13

Lab Sample ID: 310-88798-4

Date Collected: 09/02/16 11:54

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			269199	09/12/16 18:45	BME	TAL SL
Total/NA	Analysis	9315		1	273103	10/04/16 07:30	RTM	TAL SL
Total/NA	Prep	PrecSep_0			269202	09/12/16 20:19	BME	TAL SL
Total/NA	Analysis	9320		1	271802	09/26/16 13:44	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	273355	10/06/16 01:29	ALS	TAL SL

# Lab Chronicle

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-2

## Client Sample ID: MW15

Lab Sample ID: 310-88798-5

Date Collected: 09/02/16 12:18

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			269199	09/12/16 18:45	BME	TAL SL
Total/NA	Analysis	9315		1	273103	10/04/16 07:30	RTM	TAL SL
Total/NA	Prep	PrecSep_0			269202	09/12/16 20:19	BME	TAL SL
Total/NA	Analysis	9320		1	271802	09/26/16 13:44	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	273355	10/06/16 01:29	ALS	TAL SL

## Client Sample ID: MW16

Lab Sample ID: 310-88798-6

Date Collected: 09/02/16 10:43

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			269199	09/12/16 18:45	BME	TAL SL
Total/NA	Analysis	9315		1	273103	10/04/16 07:31	RTM	TAL SL
Total/NA	Prep	PrecSep_0			269202	09/12/16 20:19	BME	TAL SL
Total/NA	Analysis	9320		1	271802	09/26/16 13:44	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	273355	10/06/16 01:29	ALS	TAL SL

## Client Sample ID: MW17

Lab Sample ID: 310-88798-7

Date Collected: 09/02/16 12:55

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			269199	09/12/16 18:45	BME	TAL SL
Total/NA	Analysis	9315		1	273103	10/04/16 07:31	RTM	TAL SL
Total/NA	Prep	PrecSep_0			269202	09/12/16 20:19	BME	TAL SL
Total/NA	Analysis	9320		1	271802	09/26/16 13:44	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	273355	10/06/16 01:29	ALS	TAL SL

## Client Sample ID: MW18

Lab Sample ID: 310-88798-8

Date Collected: 09/02/16 08:55

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			269199	09/12/16 18:45	BME	TAL SL
Total/NA	Analysis	9315		1	273103	10/04/16 07:31	RTM	TAL SL
Total/NA	Prep	PrecSep_0			269202	09/12/16 20:19	BME	TAL SL
Total/NA	Analysis	9320		1	271802	09/26/16 13:44	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	273355	10/06/16 01:29	ALS	TAL SL



# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-2

**Client Sample ID: MW19**

**Lab Sample ID: 310-88798-9**

**Date Collected: 09/02/16 09:34**

**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			269199	09/12/16 18:45	BME	TAL SL
Total/NA	Analysis	9315		1	273103	10/04/16 07:31	RTM	TAL SL
Total/NA	Prep	PrecSep_0			269202	09/12/16 20:19	BME	TAL SL
Total/NA	Analysis	9320		1	271802	09/26/16 13:44	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	273355	10/06/16 01:29	ALS	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: North Omaha Station CCR

TestAmerica Job ID: 310-88798-2

## 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	10-31-16 *
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	09-30-17
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: North Omaha Station CCR

TestAmerica Job ID: 310-88798-2

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





**Cooler/Sample Receipt and Temperature Record**

<b>Client Information</b>	
Client: <u>Omaha Public Power</u>	
City/State:	Project: <u>North Omaha Station</u>
<b>Receipt Information</b>	
Date/Time Received: <u>9-08-16 925</u>	Received By: <u>GL</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler ID: <u>I-9</u></i>
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler # <u>1</u> of <u>2</u></i>
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No</i>
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No</i>
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Which VOA samples are in cooler? ↓</i>
<b>Temperature Record</b>	
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE	
Temperature Blank?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: <u>G</u>	Correction Factor (°C): <u>-0.1</u>
Uncorrected Temp (°C): <u>2.2</u>	Corrected Temp (°C): <u>2.1</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) <i>If yes: Is there evidence that the chilling process began?</i> <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	





Place COC scanning label here

**Cooler/Sample Receipt and Temperature Log Form**

<b>Client Information</b>	
Client: <u>Omaha Public Power</u>	
City/State:	Project: <u>North Omaha Station</u>
<b>Receipt Information</b>	
Date/Time Received: <u>9-08-16 925</u>	Received By: <u>GL</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler ID: <u>K-4</u></i>
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler # <u>2</u> of <u>2</u></i>
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No</i>
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No</i>
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Which VOA samples are in cooler? ↓</i>
<b>Temperature Record</b>	
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE	
Temperature Blank?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: <u>G</u>	Correction Factor (°C): <u>-0.1</u>
Uncorrected Temp (°C): <u>0.8</u>	Corrected Temp (°C): <u>0.7</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) <i>If yes: Is there evidence that the chilling process began?</i> <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	

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**Chain of Custody Record**

<b>Client Information</b>		Lab PM: Hayes, Shawn M		Carrier Tracking No(s):	
Client Contact: Brad Sojka		E-Mail: shawn.hayes@testamericainc.com		COC No:	
Company: Omaha Public Power District		Address: 444 South 16th Street Mall 9E/EP1		Page:	
City: Omaha		State, Zip: NE, 68102-2247		Job #:	
Phone: 402-636-2515 (Tel)		PO #:		Preservation Codes:	
Email: bsojka@oppd.com		WO #:		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 Other:	
Project Name: North Omaha Station CCR		TestAmerica Project #: 31007560		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 Z - other (specify)	
Site:		SSOW#:		Special Instructions/Note:	

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Wet, Solid, Chilled, Other)	Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Analysis Requested		Total Number of Containers
					Preservation Code:	BT-Tissue, AvAir	D	N	D	N	
MW2	9/2/16	1116	G	GW	X	X	X	X			
MW5 - Dup		1045	G	GW	X	X	X	X			
MW6			G	GW	X	X	X	X			
MW8			G	GW	X	X	X	X			
MW9		1012	G	GW	X	X	X	X			
MW13		1154	G	GW	X	X	X	X			
MW15		1218	G	GW	X	X	X	X			
MW16		1043	G	GW	X	X	X	X			
MW17		1255	G	GW	X	X	X	X			
MW18		0855	G	GW	X	X	X	X			
MW19		0934	G	GW	X	X	X	X			

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

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

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

Special Instructions/OC Requirements:

**Empty Kit Relinquished by:** \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: 9/7/16 1230 Company: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_

Custody Seals Intact: \_\_\_\_\_ Custody Seal No.: \_\_\_\_\_  
 Δ Yes Δ No

Received by: \_\_\_\_\_ Date/Time: 9.8.16 925 Company: TA  
 Received by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_  
 Received by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_

Method of Shipment: \_\_\_\_\_

Cooler Temperature(s) °C and Other Remarks:

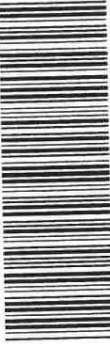




Temperature readings: \_\_\_\_\_

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container pH</u>	<u>Preservative Added (mls)</u>	<u>Lot #</u>
MW2	310-88798-A-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-88798-B-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-88798-C-1	Plastic 250ml - with Nitric Acid	<2	_____	_____
DUP-1	310-88798-A-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-1	310-88798-B-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-1	310-88798-C-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW9	310-88798-A-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-88798-B-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-88798-C-3	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW13	310-88798-A-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-88798-B-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-88798-C-4	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW15	310-88798-A-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW15	310-88798-B-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW15	310-88798-C-5	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW16	310-88798-A-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW16	310-88798-B-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW16	310-88798-C-6	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW17	310-88798-A-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW17	310-88798-B-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW17	310-88798-C-7	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW18	310-88798-A-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW18	310-88798-B-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW18	310-88798-C-8	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW19	310-88798-A-9	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW19	310-88798-B-9	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW19	310-88798-C-9	Plastic 250ml - with Nitric Acid	<2	_____	_____

Chain of Custody Record



<b>Client Information (Sub Contract Lab)</b> Client Contact: <u>Hayes, Shawn M</u> Shipping/Receiving: <u>shawn.hayes@testamericainc.com</u> Company: <u>TestAmerica Laboratories, Inc.</u> Address: <u>13715 Rider Trail North,</u> City: <u>Earth City</u> State, Zip: <u>MO, 63045</u> Phone: <u>314-298-8566(Tel) 314-298-8757(Fax)</u> Email: _____ Project Name: <u>North Omaha Station CCR</u> Site: <u>310 OPPD North Omaha Station</u>		Sampler: _____ Lab PIV: <u>Hayes, Shawn M</u> Phone: _____ E-Mail: <u>shawn.hayes@testamericainc.com</u>		No: <u>7423.1</u> Page: <u>Page 1 of 1</u> Job #: <u>310-88798-2</u>				
Due Date Requested: <u>10/6/2016</u> TAT Requested (days): _____		Analysis Requested: _____						
PO #: _____ WO #: _____ Project #: <u>31007560</u> SOW#: _____		Preservation Codes: 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 X - EDTA Y - EDA Z - other (specify) _____ Other: _____						
Sample Identification - Client ID (Lab ID)		Total Number of Containers: _____						
MW2 (310-88798-1)	Sample Date: <u>9/2/16</u> Sample Time: <u>11:16 Central</u>	Sample Type (C=Comp, G=grab) Preservation Code: _____	Matrix (W=water, S=solid, O=swab, BT=Tissue, AA=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Standard Target List	9320_Ra228/PrecSep_0 Standard Target List	Special Instructions/Note: _____
DUP-1 (310-88798-2)	9/2/16 10:45 Central	Water	Water	X	X	X	X	2
MW9 (310-88798-3)	9/2/16 10:12 Central	Water	Water	X	X	X	X	2
MW13 (310-88798-4)	9/2/16 11:54 Central	Water	Water	X	X	X	X	2
MW15 (310-88798-5)	9/2/16 12:18 Central	Water	Water	X	X	X	X	2
MW16 (310-88798-6)	9/2/16 10:43 Central	Water	Water	X	X	X	X	2
MW17 (310-88798-7)	9/2/16 12:55 Central	Water	Water	X	X	X	X	2
MW18 (310-88798-8)	9/2/16 08:55 Central	Water	Water	X	X	X	X	2
MW19 (310-88798-9)	9/2/16 09:34 Central	Water	Water	X	X	X	X	2
<b>Possible Hazard Identification</b> Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) _____		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months						
Empty Kit Relinquished by: _____ Relinquished by: <u>T. O'Neil</u> Relinquished by: _____ Relinquished by: _____		Special Instructions/QC Requirements: _____						
Date: <u>9/2/16</u> / <u>1533</u>		Method of Shipment: _____						
Date/Time: <u>9/2/16</u> / <u>1533</u>		Received by: <u>Robert O'Neil</u>						
Date/Time: _____		Received by: _____						
Date/Time: _____		Received by: _____						
Custody Seal No.: _____ Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks: _____						





## Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-88798-2

**Login Number: 88798**

**List Source: TestAmerica Cedar Falls**

**List Number: 1**

**Creator: Worthy, Ashley L**

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



## Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-88798-2

**Login Number: 88798**

**List Number: 2**

**Creator: Clarke, Jill C**

**List Source: TestAmerica St. Louis**

**List Creation: 09/09/16 02:29 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: North Omaha Station CCR

TestAmerica Job ID: 310-88798-2

## 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)	
310-88798-1	MW2	90.3	
310-88798-2	DUP-1	89.2	
310-88798-3	MW9	79.8	
310-88798-4	MW13	89.5	
310-88798-5	MW15	88.6	
310-88798-6	MW16	93.2	
310-88798-7	MW17	86.3	
310-88798-8	MW18	90.0	
310-88798-9	MW19	86.3	

**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 160-269199/2-A	Lab Control Sample	83.5	
LCS 160-269199/3-A	Lab Control Sample Dup	86.9	
MB 160-269199/1-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)	
Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
310-88798-1	MW2	90.3	92.3
310-88798-2	DUP-1	89.2	97.2
310-88798-3	MW9	79.8	90.8
310-88798-4	MW13	89.5	90.5
310-88798-5	MW15	88.6	91.6
310-88798-6	MW16	93.2	92.3
310-88798-7	MW17	86.3	93.1
310-88798-8	MW18	90.0	88.6
310-88798-9	MW19	86.3	89.3

**Tracer/Carrier Legend**  
 Ba = Ba Carrier  
 Y = Y Carrier

# Tracer/Carrier Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-88798-2

## 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 160-269202/2-A	Lab Control Sample	83.5	88.2
LCSD 160-269202/3-A	Lab Control Sample Dup	86.9	89.0
MB 160-269202/1-A	Method Blank	81.2	87.9

#### Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

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# 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: 310-94955-1  
Client Project/Site: North Omaha Station  
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:  
12/8/2016 2:00:41 PM

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

### LINKS

Review your project  
results through  
**Total Access**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.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: North Omaha Station

TestAmerica Job ID: 310-94955-1

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**Job ID: 310-94955-1**

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**Laboratory: TestAmerica Cedar Falls**

## Narrative

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**Job Narrative**  
**310-94955-1**

## Comments

No additional comments.

## Receipt

The samples were received on 12/1/2016 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were -0.6° C, 1.0° C and 1.6° C.

## Metals

Method(s) 7470A: The laboratory control sample (LCS) for preparation batch 310-150520 recovered outside control limits for the following analyte: Mercury. This analyte was biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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

## General Chemistry

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

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# Sample Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-94955-1	MW2	Ground Water	11/28/16 11:38	12/01/16 09:30
310-94955-2	MW5	Ground Water	11/29/16 10:39	12/01/16 09:30
310-94955-3	MW6	Ground Water	11/28/16 14:19	12/01/16 09:30
310-94955-4	MW8	Ground Water	11/29/16 08:32	12/01/16 09:30
310-94955-5	MW9	Ground Water	11/28/16 10:22	12/01/16 09:30
310-94955-6	MW13	Ground Water	11/28/16 12:39	12/01/16 09:30
310-94955-7	MW15	Ground Water	11/28/16 13:38	12/01/16 09:30
310-94955-8	MW16	Ground Water	11/28/16 11:12	12/01/16 09:30
310-94955-9	MW17	Ground Water	11/29/16 09:19	12/01/16 09:30
310-94955-10	MW18	Ground Water	11/28/16 08:57	12/01/16 09:30
310-94955-11	MW19	Ground Water	11/28/16 09:37	12/01/16 09:30
310-94955-12	DUP-1	Ground Water	11/28/16 11:40	12/01/16 09:30
310-94955-13	DUP-2	Ground Water	11/28/16 13:40	12/01/16 09:30



# Detection Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-1

## Client Sample ID: MW2

## Lab Sample ID: 310-94955-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	24.4		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.318		0.100		mg/L	1		9056A	Total/NA
Sulfate	650		20.0		mg/L	20		9056A	Total/NA
Arsenic	0.204		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0952		0.00200		mg/L	1		6020A	Total/NA
Boron	1.31		0.200		mg/L	1		6020A	Total/NA
Calcium	262		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000559		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1420		60.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW5

## Lab Sample ID: 310-94955-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	44.3		5.00		mg/L	5		9056A	Total/NA
Sulfate	1340		50.0		mg/L	50		9056A	Total/NA
Lithium	0.0894		0.0500		mg/L	1		6010C	Total/NA
Arsenic	0.0564		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0491		0.00200		mg/L	1		6020A	Total/NA
Boron	0.565		0.200		mg/L	1		6020A	Total/NA
Calcium	443		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	3150		150		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW6

## Lab Sample ID: 310-94955-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	272		10.0		mg/L	10		9056A	Total/NA
Sulfate	366		10.0		mg/L	10		9056A	Total/NA
Arsenic	0.0133		0.00200		mg/L	1		6020A	Total/NA
Barium	0.166		0.00200		mg/L	1		6020A	Total/NA
Boron	0.468		0.200		mg/L	1		6020A	Total/NA
Calcium	314		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.00640		0.000500		mg/L	1		6020A	Total/NA
Lead	0.00139		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.0696		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1730		150		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW8

## Lab Sample ID: 310-94955-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.38		5.00		mg/L	5		9056A	Total/NA
Sulfate	589		20.0		mg/L	20		9056A	Total/NA
Arsenic	0.0210		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0954		0.00200		mg/L	1		6020A	Total/NA
Boron	1.04		0.200		mg/L	1		6020A	Total/NA
Calcium	143		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000516		0.000500		mg/L	1		6020A	Total/NA
Lead	0.00190		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.0994		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	956		30.0		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Cedar Falls

# Detection Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-1

## Client Sample ID: MW9

## Lab Sample ID: 310-94955-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	177		5.00		mg/L	5		9056A	Total/NA
Sulfate	35.4		5.00		mg/L	5		9056A	Total/NA
Lithium	0.0533		0.0500		mg/L	1		6010C	Total/NA
Arsenic	0.00572		0.00200		mg/L	1		6020A	Total/NA
Barium	0.536		0.00200		mg/L	1		6020A	Total/NA
Calcium	166		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.00159		0.000500		mg/L	1		6020A	Total/NA
Lead	0.00499		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	790		30.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW13

## Lab Sample ID: 310-94955-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	11.3		5.00		mg/L	5		9056A	Total/NA
Fluoride	2.55		0.500		mg/L	5		9056A	Total/NA
Sulfate	583		20.0		mg/L	20		9056A	Total/NA
Arsenic	0.154		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0959		0.00200		mg/L	1		6020A	Total/NA
Boron	2.21		0.200		mg/L	1		6020A	Total/NA
Calcium	155		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.837		0.00200		mg/L	1		6020A	Total/NA
Selenium	0.0248		0.00500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1140		60.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW15

## Lab Sample ID: 310-94955-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	28.2		5.00		mg/L	5		9056A	Total/NA
Fluoride	3.48		0.500		mg/L	5		9056A	Total/NA
Sulfate	886		50.0		mg/L	50		9056A	Total/NA
Antimony	0.00166		0.00100		mg/L	1		6020A	Total/NA
Barium	0.0523		0.00200		mg/L	1		6020A	Total/NA
Boron	2.87		0.200		mg/L	1		6020A	Total/NA
Calcium	285		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.402		0.00200		mg/L	1		6020A	Total/NA
Selenium	0.0896		0.00500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1500		60.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW16

## Lab Sample ID: 310-94955-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	60.7		5.00		mg/L	5		9056A	Total/NA
Sulfate	357		10.0		mg/L	10		9056A	Total/NA
Lithium	0.0501		0.0500		mg/L	1		6010C	Total/NA
Barium	0.0794		0.00200		mg/L	1		6020A	Total/NA
Boron	0.312		0.200		mg/L	1		6020A	Total/NA
Calcium	184		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000925		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.0193		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1040		30.0		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Cedar Falls

# Detection Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-1

## Client Sample ID: MW17

## Lab Sample ID: 310-94955-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	49.7		5.00		mg/L	5		9056A	Total/NA
Sulfate	1080		50.0		mg/L	50		9056A	Total/NA
Lithium	0.116		0.0500		mg/L	1		6010C	Total/NA
Arsenic	0.00691		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0356		0.00200		mg/L	1		6020A	Total/NA
Boron	0.644		0.200		mg/L	1		6020A	Total/NA
Calcium	390		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.00829		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00219		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	2640		150		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW18

## Lab Sample ID: 310-94955-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.306		0.00200		mg/L	1		6020A	Total/NA
Calcium	97.6		0.200		mg/L	1		6020A	Total/NA
Lead	0.000577		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	628		30.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW19

## Lab Sample ID: 310-94955-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.02		5.00		mg/L	5		9056A	Total/NA
Sulfate	20.7		5.00		mg/L	5		9056A	Total/NA
Barium	0.317		0.00200		mg/L	1		6020A	Total/NA
Calcium	110		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	484		30.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: DUP-1

## Lab Sample ID: 310-94955-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	31.6		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.308		0.100		mg/L	1		9056A	Total/NA
Sulfate	610		20.0		mg/L	20		9056A	Total/NA
Arsenic	0.230		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0974		0.00200		mg/L	1		6020A	Total/NA
Boron	1.21		0.200		mg/L	1		6020A	Total/NA
Calcium	251		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000561		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1350		60.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: DUP-2

## Lab Sample ID: 310-94955-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	31.6		5.00		mg/L	5		9056A	Total/NA
Fluoride	5.01		0.500		mg/L	5		9056A	Total/NA
Sulfate	860		50.0		mg/L	50		9056A	Total/NA
Antimony	0.00177		0.00100		mg/L	1		6020A	Total/NA
Arsenic	0.00245		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0499		0.00200		mg/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Cedar Falls

# Detection Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-1

**Client Sample ID: DUP-2 (Continued)**

**Lab Sample ID: 310-94955-13**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.84		0.200		mg/L	1		6020A	Total/NA
Calcium	276		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.400		0.00200		mg/L	1		6020A	Total/NA
Selenium	0.0857		0.00500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1440		60.0		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Cedar Falls



# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-1

**Client Sample ID: MW2**  
**Date Collected: 11/28/16 11:38**  
**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-1**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24.4		5.00		mg/L			12/05/16 22:56	5
Fluoride	0.318		0.100		mg/L			12/07/16 13:18	1
Sulfate	650		20.0		mg/L			12/05/16 23:25	20

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		12/05/16 07:34	12/05/16 18:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 18:58	1
Arsenic	0.204		0.00200		mg/L		12/02/16 10:00	12/02/16 18:58	1
Barium	0.0952		0.00200		mg/L		12/02/16 10:00	12/02/16 18:58	1
Beryllium	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 18:58	1
Boron	1.31		0.200		mg/L		12/02/16 10:00	12/02/16 18:58	1
Cadmium	<0.000500		0.000500		mg/L		12/02/16 10:00	12/02/16 18:58	1
Calcium	262		0.200		mg/L		12/02/16 10:00	12/02/16 18:58	1
Chromium	<0.00500		0.00500		mg/L		12/02/16 10:00	12/02/16 18:58	1
Cobalt	0.000559		0.000500		mg/L		12/02/16 10:00	12/02/16 18:58	1
Lead	<0.000500		0.000500		mg/L		12/02/16 10:00	12/02/16 18:58	1
Molybdenum	<0.00200		0.00200		mg/L		12/02/16 10:00	12/02/16 18:58	1
Selenium	<0.00500		0.00500		mg/L		12/02/16 10:00	12/02/16 18:58	1
Thallium	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 18:58	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200	*	0.000200		mg/L		12/05/16 09:38	12/06/16 13:31	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1420		60.0		mg/L			12/01/16 14:13	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-1

**Client Sample ID: MW5**  
**Date Collected: 11/29/16 10:39**  
**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-2**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>44.3</b>		5.00		mg/L			12/05/16 23:55	5
Fluoride	<0.500		0.500		mg/L			12/05/16 23:55	5
<b>Sulfate</b>	<b>1340</b>		50.0		mg/L			12/06/16 00:25	50

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Lithium</b>	<b>0.0894</b>		0.0500		mg/L		12/05/16 07:34	12/05/16 18:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 19:01	1
<b>Arsenic</b>	<b>0.0564</b>		0.00200		mg/L		12/02/16 10:00	12/02/16 19:01	1
<b>Barium</b>	<b>0.0491</b>		0.00200		mg/L		12/02/16 10:00	12/02/16 19:01	1
Beryllium	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 19:01	1
<b>Boron</b>	<b>0.565</b>		0.200		mg/L		12/02/16 10:00	12/02/16 19:01	1
Cadmium	<0.000500		0.000500		mg/L		12/02/16 10:00	12/02/16 19:01	1
<b>Calcium</b>	<b>443</b>		0.200		mg/L		12/02/16 10:00	12/02/16 19:01	1
Chromium	<0.00500		0.00500		mg/L		12/02/16 10:00	12/02/16 19:01	1
Cobalt	<0.000500		0.000500		mg/L		12/02/16 10:00	12/02/16 19:01	1
Lead	<0.000500		0.000500		mg/L		12/02/16 10:00	12/02/16 19:01	1
Molybdenum	<0.00200		0.00200		mg/L		12/02/16 10:00	12/02/16 19:01	1
Selenium	<0.00500		0.00500		mg/L		12/02/16 10:00	12/02/16 19:01	1
Thallium	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 19:01	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200	*	0.000200		mg/L		12/05/16 09:38	12/06/16 13:32	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>3150</b>		150		mg/L			12/01/16 14:13	1

# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-1

**Client Sample ID: MW6**  
**Date Collected: 11/28/16 14:19**  
**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-3**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>272</b>		10.0		mg/L			12/06/16 01:24	10
Fluoride	<0.500		0.500		mg/L			12/06/16 00:55	5
<b>Sulfate</b>	<b>366</b>		10.0		mg/L			12/06/16 01:24	10

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		12/05/16 07:34	12/05/16 18:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 19:05	1
<b>Arsenic</b>	<b>0.0133</b>		0.00200		mg/L		12/02/16 10:00	12/02/16 19:05	1
<b>Barium</b>	<b>0.166</b>		0.00200		mg/L		12/02/16 10:00	12/02/16 19:05	1
Beryllium	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 19:05	1
<b>Boron</b>	<b>0.468</b>		0.200		mg/L		12/02/16 10:00	12/02/16 19:05	1
Cadmium	<0.000500		0.000500		mg/L		12/02/16 10:00	12/02/16 19:05	1
<b>Calcium</b>	<b>314</b>		0.200		mg/L		12/02/16 10:00	12/02/16 19:05	1
Chromium	<0.00500		0.00500		mg/L		12/02/16 10:00	12/02/16 19:05	1
<b>Cobalt</b>	<b>0.00640</b>		0.000500		mg/L		12/02/16 10:00	12/02/16 19:05	1
<b>Lead</b>	<b>0.00139</b>		0.000500		mg/L		12/02/16 10:00	12/02/16 19:05	1
<b>Molybdenum</b>	<b>0.0696</b>		0.00200		mg/L		12/02/16 10:00	12/02/16 19:05	1
Selenium	<0.00500		0.00500		mg/L		12/02/16 10:00	12/02/16 19:05	1
Thallium	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 19:05	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200	*	0.000200		mg/L		12/05/16 09:38	12/06/16 13:34	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>1730</b>		150		mg/L			12/01/16 14:13	1

# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-1

**Client Sample ID: MW8**  
**Date Collected: 11/29/16 08:32**  
**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-4**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>9.38</b>		5.00		mg/L			12/06/16 01:54	5
Fluoride	<0.500		0.500		mg/L			12/06/16 01:54	5
<b>Sulfate</b>	<b>589</b>		20.0		mg/L			12/06/16 02:24	20

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		12/05/16 07:34	12/05/16 18:34	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 19:08	1
<b>Arsenic</b>	<b>0.0210</b>		0.00200		mg/L		12/02/16 10:00	12/02/16 19:08	1
<b>Barium</b>	<b>0.0954</b>		0.00200		mg/L		12/02/16 10:00	12/02/16 19:08	1
Beryllium	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 19:08	1
<b>Boron</b>	<b>1.04</b>		0.200		mg/L		12/02/16 10:00	12/02/16 19:08	1
Cadmium	<0.000500		0.000500		mg/L		12/02/16 10:00	12/02/16 19:08	1
<b>Calcium</b>	<b>143</b>		0.200		mg/L		12/02/16 10:00	12/02/16 19:08	1
Chromium	<0.00500		0.00500		mg/L		12/02/16 10:00	12/02/16 19:08	1
<b>Cobalt</b>	<b>0.000516</b>		0.000500		mg/L		12/02/16 10:00	12/02/16 19:08	1
<b>Lead</b>	<b>0.00190</b>		0.000500		mg/L		12/02/16 10:00	12/02/16 19:08	1
<b>Molybdenum</b>	<b>0.0994</b>		0.00200		mg/L		12/02/16 10:00	12/02/16 19:08	1
Selenium	<0.00500		0.00500		mg/L		12/02/16 10:00	12/02/16 19:08	1
Thallium	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 19:08	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200	*	0.000200		mg/L		12/05/16 09:38	12/06/16 13:36	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>956</b>		30.0		mg/L			12/01/16 14:13	1



# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-1

**Client Sample ID: MW9**  
**Date Collected: 11/28/16 10:22**  
**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-5**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>177</b>		5.00		mg/L			12/06/16 02:54	5
Fluoride	<0.500		0.500		mg/L			12/06/16 02:54	5
<b>Sulfate</b>	<b>35.4</b>		5.00		mg/L			12/06/16 02:54	5

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Lithium</b>	<b>0.0533</b>		0.0500		mg/L		12/05/16 07:34	12/05/16 18:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 19:11	1
<b>Arsenic</b>	<b>0.00572</b>		0.00200		mg/L		12/02/16 10:00	12/02/16 19:11	1
<b>Barium</b>	<b>0.536</b>		0.00200		mg/L		12/02/16 10:00	12/02/16 19:11	1
Beryllium	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 19:11	1
Boron	<0.200		0.200		mg/L		12/02/16 10:00	12/02/16 19:11	1
Cadmium	<0.000500		0.000500		mg/L		12/02/16 10:00	12/02/16 19:11	1
<b>Calcium</b>	<b>166</b>		0.200		mg/L		12/02/16 10:00	12/02/16 19:11	1
Chromium	<0.00500		0.00500		mg/L		12/02/16 10:00	12/02/16 19:11	1
<b>Cobalt</b>	<b>0.00159</b>		0.000500		mg/L		12/02/16 10:00	12/02/16 19:11	1
<b>Lead</b>	<b>0.00499</b>		0.000500		mg/L		12/02/16 10:00	12/02/16 19:11	1
Molybdenum	<0.00200		0.00200		mg/L		12/02/16 10:00	12/02/16 19:11	1
Selenium	<0.00500		0.00500		mg/L		12/02/16 10:00	12/02/16 19:11	1
Thallium	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 19:11	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200	*	0.000200		mg/L		12/05/16 09:38	12/06/16 13:37	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>790</b>		30.0		mg/L			12/01/16 14:13	1

# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-1

**Client Sample ID: MW13**

**Date Collected: 11/28/16 12:39**

**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-6**

**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			12/06/16 04:23	5
Fluoride	2.55		0.500		mg/L			12/06/16 04:23	5
Sulfate	583		20.0		mg/L			12/06/16 04:52	20

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		12/05/16 07:34	12/05/16 18:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 19:17	1
Arsenic	0.154		0.00200		mg/L		12/02/16 10:00	12/02/16 19:17	1
Barium	0.0959		0.00200		mg/L		12/02/16 10:00	12/02/16 19:17	1
Beryllium	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 19:17	1
Boron	2.21		0.200		mg/L		12/02/16 10:00	12/02/16 19:17	1
Cadmium	<0.000500		0.000500		mg/L		12/02/16 10:00	12/02/16 19:17	1
Calcium	155		0.200		mg/L		12/02/16 10:00	12/02/16 19:17	1
Chromium	<0.00500		0.00500		mg/L		12/02/16 10:00	12/02/16 19:17	1
Cobalt	<0.000500		0.000500		mg/L		12/02/16 10:00	12/02/16 19:17	1
Lead	<0.000500		0.000500		mg/L		12/02/16 10:00	12/02/16 19:17	1
Molybdenum	0.837		0.00200		mg/L		12/02/16 10:00	12/02/16 19:17	1
Selenium	0.0248		0.00500		mg/L		12/02/16 10:00	12/02/16 19:17	1
Thallium	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 19:17	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200	*	0.000200		mg/L		12/05/16 09:38	12/06/16 13:39	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1140		60.0		mg/L			12/01/16 14:13	1

# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-1

**Client Sample ID: MW15**

**Date Collected: 11/28/16 13:38**

**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-7**

**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	28.2		5.00		mg/L			12/06/16 05:22	5
Fluoride	3.48		0.500		mg/L			12/06/16 05:22	5
Sulfate	886		50.0		mg/L			12/06/16 05:52	50

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		12/05/16 07:34	12/05/16 18:40	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00166		0.00100		mg/L		12/02/16 10:00	12/02/16 19:20	1
Arsenic	<0.00200		0.00200		mg/L		12/02/16 10:00	12/02/16 19:20	1
Barium	0.0523		0.00200		mg/L		12/02/16 10:00	12/02/16 19:20	1
Beryllium	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 19:20	1
Boron	2.87		0.200		mg/L		12/02/16 10:00	12/02/16 19:20	1
Cadmium	<0.000500		0.000500		mg/L		12/02/16 10:00	12/02/16 19:20	1
Calcium	285		0.200		mg/L		12/02/16 10:00	12/02/16 19:20	1
Chromium	<0.00500		0.00500		mg/L		12/02/16 10:00	12/02/16 19:20	1
Cobalt	<0.000500		0.000500		mg/L		12/02/16 10:00	12/02/16 19:20	1
Lead	<0.000500		0.000500		mg/L		12/02/16 10:00	12/02/16 19:20	1
Molybdenum	0.402		0.00200		mg/L		12/02/16 10:00	12/02/16 19:20	1
Selenium	0.0896		0.00500		mg/L		12/02/16 10:00	12/02/16 19:20	1
Thallium	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 19:20	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200	*	0.000200		mg/L		12/05/16 09:38	12/06/16 13:40	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1500		60.0		mg/L			12/01/16 14:13	1

# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-1

**Client Sample ID: MW16**

**Date Collected: 11/28/16 11:12**

**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-8**

**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>60.7</b>		5.00		mg/L			12/06/16 06:22	5
Fluoride	<0.500		0.500		mg/L			12/06/16 06:22	5
<b>Sulfate</b>	<b>357</b>		10.0		mg/L			12/06/16 06:51	10

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Lithium</b>	<b>0.0501</b>		0.0500		mg/L		12/05/16 07:34	12/05/16 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		12/02/16 10:00	12/02/16 19:33	1
Arsenic	<0.00200		0.00200		mg/L		12/02/16 10:00	12/02/16 19:33	1
<b>Barium</b>	<b>0.0794</b>		0.00200		mg/L		12/02/16 10:00	12/02/16 19:33	1
Beryllium	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 19:33	1
<b>Boron</b>	<b>0.312</b>		0.200		mg/L		12/02/16 10:00	12/02/16 19:33	1
Cadmium	<0.000500		0.000500		mg/L		12/02/16 10:00	12/02/16 19:33	1
<b>Calcium</b>	<b>184</b>		0.200		mg/L		12/02/16 10:00	12/02/16 19:33	1
Chromium	<0.00500		0.00500		mg/L		12/02/16 10:00	12/02/16 19:33	1
<b>Cobalt</b>	<b>0.000925</b>		0.000500		mg/L		12/02/16 10:00	12/02/16 19:33	1
Lead	<0.000500		0.000500		mg/L		12/02/16 10:00	12/02/16 19:33	1
<b>Molybdenum</b>	<b>0.0193</b>		0.00200		mg/L		12/02/16 10:00	12/02/16 19:33	1
Selenium	<0.00500		0.00500		mg/L		12/02/16 10:00	12/02/16 19:33	1
Thallium	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 19:33	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200	*	0.000200		mg/L		12/05/16 09:38	12/06/16 13:42	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>1040</b>		30.0		mg/L			12/01/16 14:13	1

# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-1

**Client Sample ID: MW17**

**Date Collected: 11/29/16 09:19**

**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-9**

**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>49.7</b>		5.00		mg/L			12/06/16 07:21	5
Fluoride	<0.500		0.500		mg/L			12/06/16 07:21	5
<b>Sulfate</b>	<b>1080</b>		50.0		mg/L			12/06/16 07:51	50

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Lithium</b>	<b>0.116</b>		0.0500		mg/L		12/05/16 07:34	12/05/16 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		12/02/16 10:00	12/02/16 19:36	1
<b>Arsenic</b>	<b>0.00691</b>		0.00200		mg/L		12/02/16 10:00	12/02/16 19:36	1
<b>Barium</b>	<b>0.0356</b>		0.00200		mg/L		12/02/16 10:00	12/02/16 19:36	1
Beryllium	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 19:36	1
<b>Boron</b>	<b>0.644</b>		0.200		mg/L		12/02/16 10:00	12/02/16 19:36	1
Cadmium	<0.000500		0.000500		mg/L		12/02/16 10:00	12/02/16 19:36	1
<b>Calcium</b>	<b>390</b>		0.200		mg/L		12/02/16 10:00	12/02/16 19:36	1
Chromium	<0.00500		0.00500		mg/L		12/02/16 10:00	12/02/16 19:36	1
<b>Cobalt</b>	<b>0.00829</b>		0.000500		mg/L		12/02/16 10:00	12/02/16 19:36	1
Lead	<0.000500		0.000500		mg/L		12/02/16 10:00	12/02/16 19:36	1
<b>Molybdenum</b>	<b>0.00219</b>		0.00200		mg/L		12/02/16 10:00	12/02/16 19:36	1
Selenium	<0.00500		0.00500		mg/L		12/02/16 10:00	12/02/16 19:36	1
Thallium	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 19:36	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200	*	0.000200		mg/L		12/05/16 09:38	12/06/16 13:44	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>2640</b>		150		mg/L			12/01/16 14:13	1

# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-1

**Client Sample ID: MW18**  
**Date Collected: 11/28/16 08:57**  
**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-10**  
**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			12/06/16 08:21	5
Fluoride	<0.500		0.500		mg/L			12/06/16 08:21	5
Sulfate	<5.00		5.00		mg/L			12/06/16 08:21	5

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		12/05/16 07:34	12/05/16 18:51	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 19:39	1
Arsenic	<0.00200		0.00200		mg/L		12/02/16 10:00	12/02/16 19:39	1
<b>Barium</b>	<b>0.306</b>		0.00200		mg/L		12/02/16 10:00	12/02/16 19:39	1
Beryllium	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 19:39	1
Boron	<0.200		0.200		mg/L		12/02/16 10:00	12/02/16 19:39	1
Cadmium	<0.000500		0.000500		mg/L		12/02/16 10:00	12/02/16 19:39	1
<b>Calcium</b>	<b>97.6</b>		0.200		mg/L		12/02/16 10:00	12/02/16 19:39	1
Chromium	<0.00500		0.00500		mg/L		12/02/16 10:00	12/02/16 19:39	1
Cobalt	<0.000500		0.000500		mg/L		12/02/16 10:00	12/02/16 19:39	1
<b>Lead</b>	<b>0.000577</b>		0.000500		mg/L		12/02/16 10:00	12/02/16 19:39	1
Molybdenum	<0.00200		0.00200		mg/L		12/02/16 10:00	12/02/16 19:39	1
Selenium	<0.00500		0.00500		mg/L		12/02/16 10:00	12/02/16 19:39	1
Thallium	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 19:39	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200	*	0.000200		mg/L		12/05/16 09:38	12/06/16 13:45	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>628</b>		30.0		mg/L			12/01/16 14:13	1

# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-1

**Client Sample ID: MW19**

**Date Collected: 11/28/16 09:37**

**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-11**

**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>6.02</b>		5.00		mg/L			12/06/16 08:50	5
Fluoride	<0.500		0.500		mg/L			12/06/16 08:50	5
<b>Sulfate</b>	<b>20.7</b>		5.00		mg/L			12/06/16 08:50	5

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		12/05/16 07:34	12/05/16 18:53	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 19:42	1
Arsenic	<0.00200		0.00200		mg/L		12/02/16 10:00	12/02/16 19:42	1
<b>Barium</b>	<b>0.317</b>		0.00200		mg/L		12/02/16 10:00	12/02/16 19:42	1
Beryllium	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 19:42	1
Boron	<0.200		0.200		mg/L		12/02/16 10:00	12/02/16 19:42	1
Cadmium	<0.000500		0.000500		mg/L		12/02/16 10:00	12/02/16 19:42	1
<b>Calcium</b>	<b>110</b>		0.200		mg/L		12/02/16 10:00	12/02/16 19:42	1
Chromium	<0.00500		0.00500		mg/L		12/02/16 10:00	12/02/16 19:42	1
Cobalt	<0.000500		0.000500		mg/L		12/02/16 10:00	12/02/16 19:42	1
Lead	<0.000500		0.000500		mg/L		12/02/16 10:00	12/02/16 19:42	1
Molybdenum	<0.00200		0.00200		mg/L		12/02/16 10:00	12/02/16 19:42	1
Selenium	<0.00500		0.00500		mg/L		12/02/16 10:00	12/02/16 19:42	1
Thallium	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 19:42	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200	*	0.000200		mg/L		12/05/16 09:38	12/06/16 13:50	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>484</b>		30.0		mg/L			12/01/16 14:13	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-1

**Client Sample ID: DUP-1**  
**Date Collected: 11/28/16 11:40**  
**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-12**  
**Matrix: Ground Water**

**Method: 9056A - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	31.6		5.00		mg/L			12/06/16 10:20	5
Fluoride	0.308		0.100		mg/L			12/07/16 13:34	1
Sulfate	610		20.0		mg/L			12/06/16 10:49	20

**Method: 6010C - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		12/05/16 07:34	12/05/16 18:57	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 19:45	1
Arsenic	0.230		0.00200		mg/L		12/02/16 10:00	12/02/16 19:45	1
Barium	0.0974		0.00200		mg/L		12/02/16 10:00	12/02/16 19:45	1
Beryllium	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 19:45	1
Boron	1.21		0.200		mg/L		12/02/16 10:00	12/02/16 19:45	1
Cadmium	<0.000500		0.000500		mg/L		12/02/16 10:00	12/02/16 19:45	1
Calcium	251		0.200		mg/L		12/02/16 10:00	12/02/16 19:45	1
Chromium	<0.00500		0.00500		mg/L		12/02/16 10:00	12/02/16 19:45	1
Cobalt	0.000561		0.000500		mg/L		12/02/16 10:00	12/02/16 19:45	1
Lead	<0.000500		0.000500		mg/L		12/02/16 10:00	12/02/16 19:45	1
Molybdenum	<0.00200		0.00200		mg/L		12/02/16 10:00	12/02/16 19:45	1
Selenium	<0.00500		0.00500		mg/L		12/02/16 10:00	12/02/16 19:45	1
Thallium	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 19:45	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200	*	0.000200		mg/L		12/05/16 09:38	12/06/16 13:52	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1350		60.0		mg/L			12/01/16 14:13	1



# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-1

**Client Sample ID: DUP-2**

**Date Collected: 11/28/16 13:40**

**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-13**

**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	31.6		5.00		mg/L			12/06/16 11:19	5
Fluoride	5.01		0.500		mg/L			12/06/16 11:19	5
Sulfate	860		50.0		mg/L			12/06/16 11:49	50

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		12/05/16 07:34	12/05/16 18:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00177		0.00100		mg/L		12/02/16 10:00	12/02/16 19:48	1
Arsenic	0.00245		0.00200		mg/L		12/02/16 10:00	12/02/16 19:48	1
Barium	0.0499		0.00200		mg/L		12/02/16 10:00	12/02/16 19:48	1
Beryllium	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 19:48	1
Boron	2.84		0.200		mg/L		12/02/16 10:00	12/02/16 19:48	1
Cadmium	<0.000500		0.000500		mg/L		12/02/16 10:00	12/02/16 19:48	1
Calcium	276		0.200		mg/L		12/02/16 10:00	12/02/16 19:48	1
Chromium	<0.00500		0.00500		mg/L		12/02/16 10:00	12/02/16 19:48	1
Cobalt	<0.000500		0.000500		mg/L		12/02/16 10:00	12/02/16 19:48	1
Lead	<0.000500		0.000500		mg/L		12/02/16 10:00	12/02/16 19:48	1
Molybdenum	0.400		0.00200		mg/L		12/02/16 10:00	12/02/16 19:48	1
Selenium	0.0857		0.00500		mg/L		12/02/16 10:00	12/02/16 19:48	1
Thallium	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 19:48	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200	*	0.000200		mg/L		12/05/16 09:38	12/06/16 13:53	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1440		60.0		mg/L			12/01/16 14:13	1

# Definitions/Glossary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-1

## Qualifiers

### Metals

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

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# QC Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-1

## Method: 9056A - Anions, Ion Chromatography

**Lab Sample ID: MB 310-150668/3**  
**Matrix: Water**  
**Analysis Batch: 150668**

**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			12/05/16 16:29	1
Fluoride	<0.100		0.100		mg/L			12/05/16 16:29	1
Sulfate	<1.00		1.00		mg/L			12/05/16 16:29	1

**Lab Sample ID: LCS 310-150668/4**  
**Matrix: Water**  
**Analysis Batch: 150668**

**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	7.258		mg/L		97	90 - 110
Fluoride	1.50	1.417		mg/L		94	90 - 110
Sulfate	7.50	7.753		mg/L		103	90 - 110

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 310-150465/1-A**  
**Matrix: Water**  
**Analysis Batch: 150611**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 150465**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		12/05/16 07:34	12/05/16 18:15	1

**Lab Sample ID: LCS 310-150465/2-A**  
**Matrix: Water**  
**Analysis Batch: 150611**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 150465**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	2.00	1.862		mg/L		93	80 - 120

**Lab Sample ID: 310-94955-1 MS**  
**Matrix: Ground Water**  
**Analysis Batch: 150611**

**Client Sample ID: MW2**  
**Prep Type: Total/NA**  
**Prep Batch: 150465**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	<0.0500		2.00	1.970		mg/L		96	75 - 125

**Lab Sample ID: 310-94955-1 MSD**  
**Matrix: Ground Water**  
**Analysis Batch: 150611**

**Client Sample ID: MW2**  
**Prep Type: Total/NA**  
**Prep Batch: 150465**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lithium	<0.0500		2.00	1.971		mg/L		97	75 - 125	0	20

**Lab Sample ID: 310-94955-11 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 150611**

**Client Sample ID: MW19**  
**Prep Type: Total/NA**  
**Prep Batch: 150465**

Analyte	Sample Result	Sample Qualifier	Spike Added	DU Result	DU Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lithium	<0.0500			<0.0500		mg/L				NC	20

TestAmerica Cedar Falls

# QC Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-1

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

**Lab Sample ID: MB 310-150254/1-A**  
**Matrix: Water**  
**Analysis Batch: 150468**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 150254**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 18:14	1
Arsenic	<0.00200		0.00200		mg/L		12/02/16 10:00	12/02/16 18:14	1
Barium	<0.00200		0.00200		mg/L		12/02/16 10:00	12/02/16 18:14	1
Beryllium	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 18:14	1
Boron	<0.200		0.200		mg/L		12/02/16 10:00	12/02/16 18:14	1
Cadmium	<0.000500		0.000500		mg/L		12/02/16 10:00	12/02/16 18:14	1
Calcium	<0.200		0.200		mg/L		12/02/16 10:00	12/02/16 18:14	1
Chromium	<0.00500		0.00500		mg/L		12/02/16 10:00	12/02/16 18:14	1
Cobalt	<0.000500		0.000500		mg/L		12/02/16 10:00	12/02/16 18:14	1
Lead	<0.000500		0.000500		mg/L		12/02/16 10:00	12/02/16 18:14	1
Molybdenum	<0.00200		0.00200		mg/L		12/02/16 10:00	12/02/16 18:14	1
Selenium	<0.00500		0.00500		mg/L		12/02/16 10:00	12/02/16 18:14	1
Thallium	<0.00100		0.00100		mg/L		12/02/16 10:00	12/02/16 18:14	1

**Lab Sample ID: LCS 310-150254/2-A**  
**Matrix: Water**  
**Analysis Batch: 150468**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 150254**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0200	0.02097		mg/L		105	80 - 120
Arsenic	0.0400	0.04420		mg/L		111	80 - 120
Barium	0.0400	0.04193		mg/L		105	80 - 120
Beryllium	0.0200	0.02130		mg/L		106	80 - 120
Boron	0.880	0.8186		mg/L		93	80 - 120
Cadmium	0.0200	0.02073		mg/L		104	80 - 120
Calcium	2.00	2.196		mg/L		110	80 - 120
Chromium	0.0400	0.04293		mg/L		107	80 - 120
Cobalt	0.0200	0.02061		mg/L		103	80 - 120
Lead	0.0200	0.02089		mg/L		104	80 - 120
Molybdenum	0.0400	0.04247		mg/L		106	80 - 120
Selenium	0.0400	0.04000		mg/L		100	80 - 120
Thallium	0.0160	0.01654		mg/L		103	80 - 120

**Lab Sample ID: 310-94955-5 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 150468**

**Client Sample ID: MW9**  
**Prep Type: Total/NA**  
**Prep Batch: 150254**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Antimony	<0.00100		<0.00100		mg/L		NC	20
Arsenic	0.00572		0.005568		mg/L		3	20
Barium	0.536		0.5206		mg/L		3	20
Beryllium	<0.00100		<0.00100		mg/L		NC	20
Boron	<0.200		<0.200		mg/L		NC	20
Cadmium	<0.000500		<0.000500		mg/L		NC	20
Calcium	166		165.3		mg/L		0.6	20
Chromium	<0.00500		<0.00500		mg/L		NC	20
Cobalt	0.00159		0.001569		mg/L		1	20
Lead	0.00499		0.004755		mg/L		5	20

TestAmerica Cedar Falls

# QC Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-1

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

**Lab Sample ID: 310-94955-5 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 150468**

**Client Sample ID: MW9**  
**Prep Type: Total/NA**  
**Prep Batch: 150254**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Molybdenum	<0.00200		<0.00200		mg/L		NC	20
Selenium	<0.00500		<0.00500		mg/L		NC	20
Thallium	<0.00100		<0.00100		mg/L		NC	20

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 310-150520/1-A**  
**Matrix: Water**  
**Analysis Batch: 150708**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 150520**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.000200		0.000200		mg/L		12/05/16 09:38	12/06/16 13:17	1

**Lab Sample ID: LCS 310-150520/2-A**  
**Matrix: Water**  
**Analysis Batch: 150708**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 150520**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Mercury	0.00167	0.002486	*	mg/L		149	80 - 120

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

**Lab Sample ID: MB 310-150253/1**  
**Matrix: Water**  
**Analysis Batch: 150253**

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Dissolved Solids	<30.0		30.0		mg/L			12/01/16 14:13	1

**Lab Sample ID: LCS 310-150253/2**  
**Matrix: Water**  
**Analysis Batch: 150253**

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

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Total Dissolved Solids	1000	1082		mg/L		108	90 - 110

**Lab Sample ID: 310-94955-1 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 150253**

**Client Sample ID: MW2**  
**Prep Type: Total/NA**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Total Dissolved Solids	1420		1480		mg/L		4	20

**Lab Sample ID: 310-94955-10 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 150253**

**Client Sample ID: MW18**  
**Prep Type: Total/NA**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Total Dissolved Solids	628		528.0		mg/L		17	20

TestAmerica Cedar Falls

# QC Association Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-1

## HPLC/IC

### Analysis Batch: 150668

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94955-1	MW2	Total/NA	Ground Water	9056A	
310-94955-1	MW2	Total/NA	Ground Water	9056A	
310-94955-1	MW2	Total/NA	Ground Water	9056A	
310-94955-2	MW5	Total/NA	Ground Water	9056A	
310-94955-2	MW5	Total/NA	Ground Water	9056A	
310-94955-3	MW6	Total/NA	Ground Water	9056A	
310-94955-3	MW6	Total/NA	Ground Water	9056A	
310-94955-4	MW8	Total/NA	Ground Water	9056A	
310-94955-4	MW8	Total/NA	Ground Water	9056A	
310-94955-5	MW9	Total/NA	Ground Water	9056A	
310-94955-6	MW13	Total/NA	Ground Water	9056A	
310-94955-6	MW13	Total/NA	Ground Water	9056A	
310-94955-7	MW15	Total/NA	Ground Water	9056A	
310-94955-7	MW15	Total/NA	Ground Water	9056A	
310-94955-8	MW16	Total/NA	Ground Water	9056A	
310-94955-8	MW16	Total/NA	Ground Water	9056A	
310-94955-9	MW17	Total/NA	Ground Water	9056A	
310-94955-9	MW17	Total/NA	Ground Water	9056A	
310-94955-10	MW18	Total/NA	Ground Water	9056A	
310-94955-11	MW19	Total/NA	Ground Water	9056A	
310-94955-12	DUP-1	Total/NA	Ground Water	9056A	
310-94955-12	DUP-1	Total/NA	Ground Water	9056A	
310-94955-12	DUP-1	Total/NA	Ground Water	9056A	
310-94955-13	DUP-2	Total/NA	Ground Water	9056A	
310-94955-13	DUP-2	Total/NA	Ground Water	9056A	
MB 310-150668/3	Method Blank	Total/NA	Water	9056A	
LCS 310-150668/4	Lab Control Sample	Total/NA	Water	9056A	

## Metals

### Prep Batch: 150254

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94955-1	MW2	Total/NA	Ground Water	3010A	
310-94955-2	MW5	Total/NA	Ground Water	3010A	
310-94955-3	MW6	Total/NA	Ground Water	3010A	
310-94955-4	MW8	Total/NA	Ground Water	3010A	
310-94955-5	MW9	Total/NA	Ground Water	3010A	
310-94955-6	MW13	Total/NA	Ground Water	3010A	
310-94955-7	MW15	Total/NA	Ground Water	3010A	
310-94955-8	MW16	Total/NA	Ground Water	3010A	
310-94955-9	MW17	Total/NA	Ground Water	3010A	
310-94955-10	MW18	Total/NA	Ground Water	3010A	
310-94955-11	MW19	Total/NA	Ground Water	3010A	
310-94955-12	DUP-1	Total/NA	Ground Water	3010A	
310-94955-13	DUP-2	Total/NA	Ground Water	3010A	
MB 310-150254/1-A	Method Blank	Total/NA	Water	3010A	
LCS 310-150254/2-A	Lab Control Sample	Total/NA	Water	3010A	
310-94955-5 DU	MW9	Total/NA	Ground Water	3010A	

TestAmerica Cedar Falls

# QC Association Summary

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-1

## Metals (Continued)

### Prep Batch: 150465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94955-1	MW2	Total/NA	Ground Water	3010A	
310-94955-2	MW5	Total/NA	Ground Water	3010A	
310-94955-3	MW6	Total/NA	Ground Water	3010A	
310-94955-4	MW8	Total/NA	Ground Water	3010A	
310-94955-5	MW9	Total/NA	Ground Water	3010A	
310-94955-6	MW13	Total/NA	Ground Water	3010A	
310-94955-7	MW15	Total/NA	Ground Water	3010A	
310-94955-8	MW16	Total/NA	Ground Water	3010A	
310-94955-9	MW17	Total/NA	Ground Water	3010A	
310-94955-10	MW18	Total/NA	Ground Water	3010A	
310-94955-11	MW19	Total/NA	Ground Water	3010A	
310-94955-12	DUP-1	Total/NA	Ground Water	3010A	
310-94955-13	DUP-2	Total/NA	Ground Water	3010A	
MB 310-150465/1-A	Method Blank	Total/NA	Water	3010A	
LCS 310-150465/2-A	Lab Control Sample	Total/NA	Water	3010A	
310-94955-1 MS	MW2	Total/NA	Ground Water	3010A	
310-94955-1 MSD	MW2	Total/NA	Ground Water	3010A	
310-94955-11 DU	MW19	Total/NA	Ground Water	3010A	

### Analysis Batch: 150468

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94955-1	MW2	Total/NA	Ground Water	6020A	150254
310-94955-2	MW5	Total/NA	Ground Water	6020A	150254
310-94955-3	MW6	Total/NA	Ground Water	6020A	150254
310-94955-4	MW8	Total/NA	Ground Water	6020A	150254
310-94955-5	MW9	Total/NA	Ground Water	6020A	150254
310-94955-6	MW13	Total/NA	Ground Water	6020A	150254
310-94955-7	MW15	Total/NA	Ground Water	6020A	150254
310-94955-8	MW16	Total/NA	Ground Water	6020A	150254
310-94955-9	MW17	Total/NA	Ground Water	6020A	150254
310-94955-10	MW18	Total/NA	Ground Water	6020A	150254
310-94955-11	MW19	Total/NA	Ground Water	6020A	150254
310-94955-12	DUP-1	Total/NA	Ground Water	6020A	150254
310-94955-13	DUP-2	Total/NA	Ground Water	6020A	150254
MB 310-150254/1-A	Method Blank	Total/NA	Water	6020A	150254
LCS 310-150254/2-A	Lab Control Sample	Total/NA	Water	6020A	150254
310-94955-5 DU	MW9	Total/NA	Ground Water	6020A	150254

### Prep Batch: 150520

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94955-1	MW2	Total/NA	Ground Water	7470A	
310-94955-2	MW5	Total/NA	Ground Water	7470A	
310-94955-3	MW6	Total/NA	Ground Water	7470A	
310-94955-4	MW8	Total/NA	Ground Water	7470A	
310-94955-5	MW9	Total/NA	Ground Water	7470A	
310-94955-6	MW13	Total/NA	Ground Water	7470A	
310-94955-7	MW15	Total/NA	Ground Water	7470A	
310-94955-8	MW16	Total/NA	Ground Water	7470A	
310-94955-9	MW17	Total/NA	Ground Water	7470A	
310-94955-10	MW18	Total/NA	Ground Water	7470A	
310-94955-11	MW19	Total/NA	Ground Water	7470A	

TestAmerica Cedar Falls

# QC Association Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-1

## Metals (Continued)

### Prep Batch: 150520 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94955-12	DUP-1	Total/NA	Ground Water	7470A	
310-94955-13	DUP-2	Total/NA	Ground Water	7470A	
MB 310-150520/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-150520/2-A	Lab Control Sample	Total/NA	Water	7470A	

### Analysis Batch: 150611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94955-1	MW2	Total/NA	Ground Water	6010C	150465
310-94955-2	MW5	Total/NA	Ground Water	6010C	150465
310-94955-3	MW6	Total/NA	Ground Water	6010C	150465
310-94955-4	MW8	Total/NA	Ground Water	6010C	150465
310-94955-5	MW9	Total/NA	Ground Water	6010C	150465
310-94955-6	MW13	Total/NA	Ground Water	6010C	150465
310-94955-7	MW15	Total/NA	Ground Water	6010C	150465
310-94955-8	MW16	Total/NA	Ground Water	6010C	150465
310-94955-9	MW17	Total/NA	Ground Water	6010C	150465
310-94955-10	MW18	Total/NA	Ground Water	6010C	150465
310-94955-11	MW19	Total/NA	Ground Water	6010C	150465
310-94955-12	DUP-1	Total/NA	Ground Water	6010C	150465
310-94955-13	DUP-2	Total/NA	Ground Water	6010C	150465
MB 310-150465/1-A	Method Blank	Total/NA	Water	6010C	150465
LCS 310-150465/2-A	Lab Control Sample	Total/NA	Water	6010C	150465
310-94955-1 MS	MW2	Total/NA	Ground Water	6010C	150465
310-94955-1 MSD	MW2	Total/NA	Ground Water	6010C	150465
310-94955-11 DU	MW19	Total/NA	Ground Water	6010C	150465

### Analysis Batch: 150708

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94955-1	MW2	Total/NA	Ground Water	7470A	150520
310-94955-2	MW5	Total/NA	Ground Water	7470A	150520
310-94955-3	MW6	Total/NA	Ground Water	7470A	150520
310-94955-4	MW8	Total/NA	Ground Water	7470A	150520
310-94955-5	MW9	Total/NA	Ground Water	7470A	150520
310-94955-6	MW13	Total/NA	Ground Water	7470A	150520
310-94955-7	MW15	Total/NA	Ground Water	7470A	150520
310-94955-8	MW16	Total/NA	Ground Water	7470A	150520
310-94955-9	MW17	Total/NA	Ground Water	7470A	150520
310-94955-10	MW18	Total/NA	Ground Water	7470A	150520
310-94955-11	MW19	Total/NA	Ground Water	7470A	150520
310-94955-12	DUP-1	Total/NA	Ground Water	7470A	150520
310-94955-13	DUP-2	Total/NA	Ground Water	7470A	150520
MB 310-150520/1-A	Method Blank	Total/NA	Water	7470A	150520
LCS 310-150520/2-A	Lab Control Sample	Total/NA	Water	7470A	150520

## General Chemistry

### Analysis Batch: 150253

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94955-1	MW2	Total/NA	Ground Water	SM 2540C	
310-94955-2	MW5	Total/NA	Ground Water	SM 2540C	

TestAmerica Cedar Falls



# QC Association Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-1

## General Chemistry (Continued)

### Analysis Batch: 150253 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94955-3	MW6	Total/NA	Ground Water	SM 2540C	
310-94955-4	MW8	Total/NA	Ground Water	SM 2540C	
310-94955-5	MW9	Total/NA	Ground Water	SM 2540C	
310-94955-6	MW13	Total/NA	Ground Water	SM 2540C	
310-94955-7	MW15	Total/NA	Ground Water	SM 2540C	
310-94955-8	MW16	Total/NA	Ground Water	SM 2540C	
310-94955-9	MW17	Total/NA	Ground Water	SM 2540C	
310-94955-10	MW18	Total/NA	Ground Water	SM 2540C	
310-94955-11	MW19	Total/NA	Ground Water	SM 2540C	
310-94955-12	DUP-1	Total/NA	Ground Water	SM 2540C	
310-94955-13	DUP-2	Total/NA	Ground Water	SM 2540C	
MB 310-150253/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-150253/2	Lab Control Sample	Total/NA	Water	SM 2540C	
310-94955-1 DU	MW2	Total/NA	Ground Water	SM 2540C	
310-94955-10 DU	MW18	Total/NA	Ground Water	SM 2540C	

# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-1

**Client Sample ID: MW2**  
**Date Collected: 11/28/16 11:38**  
**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-1**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	150668	12/05/16 22:56	AJG	TAL CF
Total/NA	Analysis	9056A		20	150668	12/05/16 23:25	AJG	TAL CF
Total/NA	Analysis	9056A		1	150668	12/07/16 13:18	AJG	TAL CF
Total/NA	Prep	3010A			150465	12/05/16 07:34	JNR	TAL CF
Total/NA	Analysis	6010C		1	150611	12/05/16 18:18	OAD	TAL CF
Total/NA	Prep	3010A			150254	12/02/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	150468	12/02/16 18:58	OAD	TAL CF
Total/NA	Prep	7470A			150520	12/05/16 09:38	SAD	TAL CF
Total/NA	Analysis	7470A		1	150708	12/06/16 13:31	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	150253	12/01/16 14:13	SAS	TAL CF

**Client Sample ID: MW5**  
**Date Collected: 11/29/16 10:39**  
**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-2**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	150668	12/05/16 23:55	AJG	TAL CF
Total/NA	Analysis	9056A		50	150668	12/06/16 00:25	AJG	TAL CF
Total/NA	Prep	3010A			150465	12/05/16 07:34	JNR	TAL CF
Total/NA	Analysis	6010C		1	150611	12/05/16 18:30	OAD	TAL CF
Total/NA	Prep	3010A			150254	12/02/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	150468	12/02/16 19:01	OAD	TAL CF
Total/NA	Prep	7470A			150520	12/05/16 09:38	SAD	TAL CF
Total/NA	Analysis	7470A		1	150708	12/06/16 13:32	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	150253	12/01/16 14:13	SAS	TAL CF

**Client Sample ID: MW6**  
**Date Collected: 11/28/16 14:19**  
**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-3**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	150668	12/06/16 00:55	AJG	TAL CF
Total/NA	Analysis	9056A		10	150668	12/06/16 01:24	AJG	TAL CF
Total/NA	Prep	3010A			150465	12/05/16 07:34	JNR	TAL CF
Total/NA	Analysis	6010C		1	150611	12/05/16 18:32	OAD	TAL CF
Total/NA	Prep	3010A			150254	12/02/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	150468	12/02/16 19:05	OAD	TAL CF
Total/NA	Prep	7470A			150520	12/05/16 09:38	SAD	TAL CF
Total/NA	Analysis	7470A		1	150708	12/06/16 13:34	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	150253	12/01/16 14:13	SAS	TAL CF

TestAmerica Cedar Falls

# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-1

## Client Sample ID: MW8

Date Collected: 11/29/16 08:32

Date Received: 12/01/16 09:30

## Lab Sample ID: 310-94955-4

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	150668	12/06/16 01:54	AJG	TAL CF
Total/NA	Analysis	9056A		20	150668	12/06/16 02:24	AJG	TAL CF
Total/NA	Prep	3010A			150465	12/05/16 07:34	JNR	TAL CF
Total/NA	Analysis	6010C		1	150611	12/05/16 18:34	OAD	TAL CF
Total/NA	Prep	3010A			150254	12/02/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	150468	12/02/16 19:08	OAD	TAL CF
Total/NA	Prep	7470A			150520	12/05/16 09:38	SAD	TAL CF
Total/NA	Analysis	7470A		1	150708	12/06/16 13:36	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	150253	12/01/16 14:13	SAS	TAL CF

## Client Sample ID: MW9

Date Collected: 11/28/16 10:22

Date Received: 12/01/16 09:30

## Lab Sample ID: 310-94955-5

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	150668	12/06/16 02:54	AJG	TAL CF
Total/NA	Prep	3010A			150465	12/05/16 07:34	JNR	TAL CF
Total/NA	Analysis	6010C		1	150611	12/05/16 18:36	OAD	TAL CF
Total/NA	Prep	3010A			150254	12/02/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	150468	12/02/16 19:11	OAD	TAL CF
Total/NA	Prep	7470A			150520	12/05/16 09:38	SAD	TAL CF
Total/NA	Analysis	7470A		1	150708	12/06/16 13:37	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	150253	12/01/16 14:13	SAS	TAL CF

## Client Sample ID: MW13

Date Collected: 11/28/16 12:39

Date Received: 12/01/16 09:30

## Lab Sample ID: 310-94955-6

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	150668	12/06/16 04:23	AJG	TAL CF
Total/NA	Analysis	9056A		20	150668	12/06/16 04:52	AJG	TAL CF
Total/NA	Prep	3010A			150465	12/05/16 07:34	JNR	TAL CF
Total/NA	Analysis	6010C		1	150611	12/05/16 18:38	OAD	TAL CF
Total/NA	Prep	3010A			150254	12/02/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	150468	12/02/16 19:17	OAD	TAL CF
Total/NA	Prep	7470A			150520	12/05/16 09:38	SAD	TAL CF
Total/NA	Analysis	7470A		1	150708	12/06/16 13:39	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	150253	12/01/16 14:13	SAS	TAL CF

TestAmerica Cedar Falls

# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-1

## Client Sample ID: MW15

Date Collected: 11/28/16 13:38

Date Received: 12/01/16 09:30

## Lab Sample ID: 310-94955-7

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	150668	12/06/16 05:22	AJG	TAL CF
Total/NA	Analysis	9056A		50	150668	12/06/16 05:52	AJG	TAL CF
Total/NA	Prep	3010A			150465	12/05/16 07:34	JNR	TAL CF
Total/NA	Analysis	6010C		1	150611	12/05/16 18:40	OAD	TAL CF
Total/NA	Prep	3010A			150254	12/02/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	150468	12/02/16 19:20	OAD	TAL CF
Total/NA	Prep	7470A			150520	12/05/16 09:38	SAD	TAL CF
Total/NA	Analysis	7470A		1	150708	12/06/16 13:40	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	150253	12/01/16 14:13	SAS	TAL CF

## Client Sample ID: MW16

Date Collected: 11/28/16 11:12

Date Received: 12/01/16 09:30

## Lab Sample ID: 310-94955-8

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	150668	12/06/16 06:22	AJG	TAL CF
Total/NA	Analysis	9056A		10	150668	12/06/16 06:51	AJG	TAL CF
Total/NA	Prep	3010A			150465	12/05/16 07:34	JNR	TAL CF
Total/NA	Analysis	6010C		1	150611	12/05/16 18:43	OAD	TAL CF
Total/NA	Prep	3010A			150254	12/02/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	150468	12/02/16 19:33	OAD	TAL CF
Total/NA	Prep	7470A			150520	12/05/16 09:38	SAD	TAL CF
Total/NA	Analysis	7470A		1	150708	12/06/16 13:42	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	150253	12/01/16 14:13	SAS	TAL CF

## Client Sample ID: MW17

Date Collected: 11/29/16 09:19

Date Received: 12/01/16 09:30

## Lab Sample ID: 310-94955-9

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	150668	12/06/16 07:21	AJG	TAL CF
Total/NA	Analysis	9056A		50	150668	12/06/16 07:51	AJG	TAL CF
Total/NA	Prep	3010A			150465	12/05/16 07:34	JNR	TAL CF
Total/NA	Analysis	6010C		1	150611	12/05/16 18:49	OAD	TAL CF
Total/NA	Prep	3010A			150254	12/02/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	150468	12/02/16 19:36	OAD	TAL CF
Total/NA	Prep	7470A			150520	12/05/16 09:38	SAD	TAL CF
Total/NA	Analysis	7470A		1	150708	12/06/16 13:44	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	150253	12/01/16 14:13	SAS	TAL CF

TestAmerica Cedar Falls

# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-1

**Client Sample ID: MW18**

**Date Collected: 11/28/16 08:57**

**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-10**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	150668	12/06/16 08:21	AJG	TAL CF
Total/NA	Prep	3010A			150465	12/05/16 07:34	JNR	TAL CF
Total/NA	Analysis	6010C		1	150611	12/05/16 18:51	OAD	TAL CF
Total/NA	Prep	3010A			150254	12/02/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	150468	12/02/16 19:39	OAD	TAL CF
Total/NA	Prep	7470A			150520	12/05/16 09:38	SAD	TAL CF
Total/NA	Analysis	7470A		1	150708	12/06/16 13:45	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	150253	12/01/16 14:13	SAS	TAL CF

**Client Sample ID: MW19**

**Date Collected: 11/28/16 09:37**

**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-11**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	150668	12/06/16 08:50	AJG	TAL CF
Total/NA	Prep	3010A			150465	12/05/16 07:34	JNR	TAL CF
Total/NA	Analysis	6010C		1	150611	12/05/16 18:53	OAD	TAL CF
Total/NA	Prep	3010A			150254	12/02/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	150468	12/02/16 19:42	OAD	TAL CF
Total/NA	Prep	7470A			150520	12/05/16 09:38	SAD	TAL CF
Total/NA	Analysis	7470A		1	150708	12/06/16 13:50	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	150253	12/01/16 14:13	SAS	TAL CF

**Client Sample ID: DUP-1**

**Date Collected: 11/28/16 11:40**

**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-12**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	150668	12/06/16 10:20	AJG	TAL CF
Total/NA	Analysis	9056A		20	150668	12/06/16 10:49	AJG	TAL CF
Total/NA	Analysis	9056A		1	150668	12/07/16 13:34	AJG	TAL CF
Total/NA	Prep	3010A			150465	12/05/16 07:34	JNR	TAL CF
Total/NA	Analysis	6010C		1	150611	12/05/16 18:57	OAD	TAL CF
Total/NA	Prep	3010A			150254	12/02/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	150468	12/02/16 19:45	OAD	TAL CF
Total/NA	Prep	7470A			150520	12/05/16 09:38	SAD	TAL CF
Total/NA	Analysis	7470A		1	150708	12/06/16 13:52	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	150253	12/01/16 14:13	SAS	TAL CF

TestAmerica Cedar Falls

# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-1

**Client Sample ID: DUP-2**

**Date Collected: 11/28/16 13:40**

**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-13**

**Matrix: Ground Water**

<b>Prep Type</b>	<b>Batch Type</b>	<b>Batch Method</b>	<b>Run</b>	<b>Dilution Factor</b>	<b>Batch Number</b>	<b>Prepared or Analyzed</b>	<b>Analyst</b>	<b>Lab</b>
Total/NA	Analysis	9056A		5	150668	12/06/16 11:19	AJG	TAL CF
Total/NA	Analysis	9056A		50	150668	12/06/16 11:49	AJG	TAL CF
Total/NA	Prep	3010A			150465	12/05/16 07:34	JNR	TAL CF
Total/NA	Analysis	6010C		1	150611	12/05/16 18:59	OAD	TAL CF
Total/NA	Prep	3010A			150254	12/02/16 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	150468	12/02/16 19:48	OAD	TAL CF
Total/NA	Prep	7470A			150520	12/05/16 09:38	SAD	TAL CF
Total/NA	Analysis	7470A		1	150708	12/06/16 13:53	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	150253	12/01/16 14:13	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: North Omaha Station

TestAmerica Job ID: 310-94955-1

## 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.

TestAmerica Cedar Falls

# Method Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-1

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







**Cooler/Sample Receipt and Temperature Log Form**

<b>Client Information</b>	
Client: <u>OPPO</u>	
City/State: <u>Omaha, NE</u>	Project: <u>North Omaha Station CLR</u>
<b>Receipt Information</b>	
Date/Time Received: <u>12.1.16 9:30</u>	Received By: <u>TA</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: Cooler ID: <u>AA-3</u>
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: Cooler # <u>1</u> of <u>3</u>
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: Cooler custody seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes: Which VOA samples are in cooler? ↓
<b>Temperature Record</b>	
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE	
Temperature Blank?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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:	Correction Factor (°C): <u>0.0</u>
Uncorrected Temp (°C): <u>-0.6</u>	Corrected Temp (°C): <u>-0.6</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	

1  
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**Cooler/Sample Receipt and Temperature Log Form**

<b>Client Information</b>	
Client: <u>OPD</u>	
City/State: <u>Omaha, NE</u>	Project: <u>North Omaha Station CLR</u>
<b>Receipt Information</b>	
Date/Time Received: <u>12.1.16</u> <u>9:30</u>	Received By: <u>To</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler ID: <u>P-1</u></i>
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler # <u>2</u> of <u>3</u></i>
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler custody seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</i>
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</i>
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Which VOA samples are in cooler? ↓</i>
<b>Temperature Record</b>	
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE	
Temperature Blank?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: _____	Correction Factor (°C): <u>0.0</u>
Uncorrected Temp (°C): <u>1.0</u>	Corrected Temp (°C): <u>1.0</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) <i>If yes: Is there evidence that the chilling process began?</i> <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	





**Cooler/Sample Receipt and Temperature Log Form**

<b>Client Information</b>	
Client: <u>OPPO</u>	
City/State: <u>Omaha, NE</u>	Project: <u>North Omaha station CCR-LF</u>
<b>Receipt Information</b>	
Date/Time Received: <u>12.1.16 9:30</u>	Received By: <u>To</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler ID: <u>N.7</u></i>
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler # <u>3</u> of <u>3</u></i>
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler custody seals intact?</i> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Sample custody seals intact?</i> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Which VOA samples are in cooler?</i> ↓
<b>Temperature Record</b>	
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE	
Temperature Blank?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: _____	Correction Factor (°C): <u>0.0</u>
Uncorrected Temp (°C): <u>1.6</u>	Corrected Temp (°C): <u>1.6</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) <i>If yes: Is there evidence that the chilling process began?</i> <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	



**Chain of Custody Record**

**TestAmerica Cedar Falls**

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

<b>Client Information</b> Client Contact: Brad Sojka Phone: 402-636-2515 E-Mail: shawn.hayes@testamericainc.com		Lab PM: Hayes, Shawn M E-Mail: shawn.hayes@testamericainc.com		Carrier Tracking No(s): Page: Job #:	
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: North Omaha Station CCR Site:		Due Date Requested: TAT Requested (days): PO #: WO #: TestAmerica Project #: SSO#:		Analysis Requested 9315_Ra226, 9320_Ra228, Combined Ra226 and Ra228 6010C Lithium, 6020A CCR List, 7470A Mercury 2540C TDS, 9056A Chloride, Fluoride, Sulfate	
<b>Sample Identification</b>		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)	
Sample ID MW2 MW5 MW6 MW8 MW9 MW13 MW15 MW16 MW17 MW18 MW19	Sample Date 11/28/16 11/29/16 11/28/16 11/29/16 11/28/16 11/28/16 11/28/16 11/29/16 11/28/16 11/28/16	Sample Time 1138 1039 1419 0832 1022 1239 1338 1112 0919 0857 0937	Sample Type (C=Comp, G=grab) G G G G G G G G G G	Matrix (W=water, S=solid, O=soil, T=tissue, A=air) GW GW GW GW GW GW GW GW GW GW	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 Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SZSO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 Z - other (specify)
Special Instructions/Note: Total Number of containers		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Special Instructions/QC Requirements: Method of Shipment:	
<b>Possible Hazard Identification</b> <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Deliverable Requested: I, II, III, IV, Other (specify)		Empty Kit Relinquished by:	
Relinquished by: <i>[Signature]</i> Date/Time: 11/30/16 1100		Relinquished by: Date/Time:		Relinquished by: Date/Time:	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	





**Chain of Custody Record**

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

<b>Client Information</b> Client Contact: Brad Sojka Phone: 402-636-2515 E-Mail: shawn.hayes@testamericainc.com		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 #: SOW#:		Analysis Requested 9315_Ra226, 9320_Ra228, Combined Ra226 and Ra228 6010C Lithium, 6020A CCR List, 7470A Mercury 2540C TDS, 9056A Chloride, Fluoride, Sulfate		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 Other:		Preservation Codes: 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 X - EDTA Z - other (specify)	
<b>Sample Identification</b> MW20 DUP-1 DUP-2		Sample Date 11/28/16 11/28/16 1340		Sample Time 1140 1340		Sample Type (C=Comp, G=grab) G G G	
Matrix (W=water, S=solid, O=swast/oi, BT=Tissue, AA=)		Preservation Code: GW GW GW		Field Filtered Sample (Yes or No) X X X		Perform MS/MSD (Yes or No) X X X	
Total Number of containers		Special Instructions/Note:		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Special Instructions/QC Requirements:	
<b>Possible Hazard Identification</b> <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Deliverable Requested: I, II, III, IV, Other (specify)		Method of Shipment:		Cooler Temperature(s) °C and Other Remarks:	
Empty Kit Relinquished by:		Date:		Received by:		Date/Time:	
Relinquished by:		Date/Time: 11/30/16 1100		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Received by:		Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Company:		Company:	



# Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-94955-1

**Login Number: 94955**

**List Source: TestAmerica Cedar Falls**

**List Number: 1**

**Creator: Worthy, Ashley L**

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



# 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: 310-94955-2  
Client Project/Site: North Omaha Station  
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:  
1/11/2017 11:47:38 AM

Shawn Hayes, Senior Project Manager  
(319)277-2401  
[shawn.hayes@testamericainc.com](mailto:shawn.hayes@testamericainc.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.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: North Omaha Station

TestAmerica Job ID: 310-94955-2

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**Job ID: 310-94955-2**

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**Laboratory: TestAmerica Cedar Falls**

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**Narrative**

**Job Narrative**  
**310-94955-2**

**Comments**

No additional comments.

**Receipt**

The samples were received on 12/1/2016 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were -0.6° C, 1.0° C and 1.6° C.

**RAD**

Method(s) PrecSep\_0: Radium-228 Prep Batch 160-282683:

The following samples were prepared at a reduced aliquot due to sediment and Cloudiness. MW9 (310-94955-5).

Method(s) PrecSep-21: Radium-226 Prep Batch 160-282672:

The following samples were prepared at a reduced aliquot due to sediment and Cloudiness. MW9 (310-94955-5).

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: North Omaha Station

TestAmerica Job ID: 310-94955-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-94955-1	MW2	Ground Water	11/28/16 11:38	12/01/16 09:30
310-94955-2	MW5	Ground Water	11/29/16 10:39	12/01/16 09:30
310-94955-3	MW6	Ground Water	11/28/16 14:19	12/01/16 09:30
310-94955-4	MW8	Ground Water	11/29/16 08:32	12/01/16 09:30
310-94955-5	MW9	Ground Water	11/28/16 10:22	12/01/16 09:30
310-94955-6	MW13	Ground Water	11/28/16 12:39	12/01/16 09:30
310-94955-7	MW15	Ground Water	11/28/16 13:38	12/01/16 09:30
310-94955-8	MW16	Ground Water	11/28/16 11:12	12/01/16 09:30
310-94955-9	MW17	Ground Water	11/29/16 09:19	12/01/16 09:30
310-94955-10	MW18	Ground Water	11/28/16 08:57	12/01/16 09:30
310-94955-11	MW19	Ground Water	11/28/16 09:37	12/01/16 09:30
310-94955-12	DUP-1	Ground Water	11/28/16 11:40	12/01/16 09:30
310-94955-13	DUP-2	Ground Water	11/28/16 13:40	12/01/16 09:30

# Detection Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-2

**Client Sample ID: MW2**

**Lab Sample ID: 310-94955-1**

No Detections.

**Client Sample ID: MW5**

**Lab Sample ID: 310-94955-2**

No Detections.

**Client Sample ID: MW6**

**Lab Sample ID: 310-94955-3**

No Detections.

**Client Sample ID: MW8**

**Lab Sample ID: 310-94955-4**

No Detections.

**Client Sample ID: MW9**

**Lab Sample ID: 310-94955-5**

No Detections.

**Client Sample ID: MW13**

**Lab Sample ID: 310-94955-6**

No Detections.

**Client Sample ID: MW15**

**Lab Sample ID: 310-94955-7**

No Detections.

**Client Sample ID: MW16**

**Lab Sample ID: 310-94955-8**

No Detections.

**Client Sample ID: MW17**

**Lab Sample ID: 310-94955-9**

No Detections.

**Client Sample ID: MW18**

**Lab Sample ID: 310-94955-10**

No Detections.

**Client Sample ID: MW19**

**Lab Sample ID: 310-94955-11**

No Detections.

**Client Sample ID: DUP-1**

**Lab Sample ID: 310-94955-12**

No Detections.

**Client Sample ID: DUP-2**

**Lab Sample ID: 310-94955-13**

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Cedar Falls



# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-2

**Client Sample ID: MW2**  
**Date Collected: 11/28/16 11:38**  
**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-1**  
**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	0.391		0.276	0.278	1.00	0.369	pCi/L	12/06/16 09:41	01/09/17 21:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	75.8		40 - 110					12/06/16 09:41	01/09/17 21:04	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.524		0.292	0.296	1.00	0.440	pCi/L	12/06/16 10:24	01/09/17 14:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	75.8		40 - 110					12/06/16 10:24	01/09/17 14:17	1
Y Carrier	96.8		40 - 110					12/06/16 10:24	01/09/17 14:17	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	0.914		0.401	0.406	5.00	0.440	pCi/L		01/10/17 18:34	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-2

**Client Sample ID: MW5**  
**Date Collected: 11/29/16 10:39**  
**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-2**  
**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	0.110	U	0.255	0.255	1.00	0.461	pCi/L	12/06/16 09:41	01/09/17 21:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.3		40 - 110					12/06/16 09:41	01/09/17 21:04	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.527		0.266	0.270	1.00	0.391	pCi/L	12/06/16 10:24	01/09/17 14:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.3		40 - 110					12/06/16 10:24	01/09/17 14:17	1
Y Carrier	95.7		40 - 110					12/06/16 10:24	01/09/17 14:17	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	0.637		0.368	0.372	5.00	0.461	pCi/L		01/10/17 18:34	1

# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-2

**Client Sample ID: MW6**  
**Date Collected: 11/28/16 14:19**  
**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-3**  
**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	0.300	U	0.255	0.257	1.00	0.383	pCi/L	12/06/16 09:41	01/09/17 21:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					12/06/16 09:41	01/09/17 21:07	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.353		0.212	0.215	1.00	0.321	pCi/L	12/06/16 10:24	01/09/17 14:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					12/06/16 10:24	01/09/17 14:17	1
Y Carrier	98.7		40 - 110					12/06/16 10:24	01/09/17 14:17	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	0.653		0.332	0.335	5.00	0.383	pCi/L		01/10/17 18:34	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-2

**Client Sample ID: MW8**  
**Date Collected: 11/29/16 08:32**  
**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-4**  
**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	0.400		0.276	0.278	1.00	0.379	pCi/L	12/06/16 09:41	01/09/17 21:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.0		40 - 110					12/06/16 09:41	01/09/17 21:04	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.165	U	0.244	0.245	1.00	0.409	pCi/L	12/06/16 10:24	01/09/17 14:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.0		40 - 110					12/06/16 10:24	01/09/17 14:17	1
Y Carrier	99.1		40 - 110					12/06/16 10:24	01/09/17 14:17	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	0.565		0.368	0.370	5.00	0.409	pCi/L		01/10/17 18:34	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-2

**Client Sample ID: MW9**  
**Date Collected: 11/28/16 10:22**  
**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-5**  
**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	0.745	U	0.553	0.557	1.00	0.774	pCi/L	12/06/16 09:41	01/09/17 21:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.1		40 - 110					12/06/16 09:41	01/09/17 21:04	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.17		0.540	0.551	1.00	0.776	pCi/L	12/06/16 10:24	01/09/17 14:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.1		40 - 110					12/06/16 10:24	01/09/17 14:17	1
Y Carrier	95.3		40 - 110					12/06/16 10:24	01/09/17 14:17	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	1.91		0.773	0.783	5.00	0.776	pCi/L		01/10/17 18:34	1



# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-2

**Client Sample ID: MW13**  
**Date Collected: 11/28/16 12:39**  
**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-6**  
**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	0.151	U	0.257	0.258	1.00	0.451	pCi/L	12/06/16 09:41	01/09/17 21:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	75.5		40 - 110					12/06/16 09:41	01/09/17 21:04	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.120	U	0.244	0.244	1.00	0.417	pCi/L	12/06/16 10:24	01/09/17 14:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	75.5		40 - 110					12/06/16 10:24	01/09/17 14:17	1
Y Carrier	98.3		40 - 110					12/06/16 10:24	01/09/17 14:17	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	0.270	U	0.355	0.355	5.00	0.451	pCi/L		01/10/17 18:34	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-2

**Client Sample ID: MW15**  
**Date Collected: 11/28/16 13:38**  
**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-7**  
**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	0.168	U	0.256	0.257	1.00	0.441	pCi/L	12/06/16 09:41	01/09/17 21:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.1		40 - 110					12/06/16 09:41	01/09/17 21:04	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.703		0.285	0.292	1.00	0.394	pCi/L	12/06/16 10:24	01/09/17 14:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.1		40 - 110					12/06/16 10:24	01/09/17 14:17	1
Y Carrier	95.0		40 - 110					12/06/16 10:24	01/09/17 14:17	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	0.871		0.383	0.389	5.00	0.441	pCi/L		01/10/17 18:34	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-2

**Client Sample ID: MW16**

**Date Collected: 11/28/16 11:12**

**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-8**

**Matrix: Ground Water**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.113	U	0.250	0.250	1.00	0.451	pCi/L	12/06/16 09:41	01/09/17 21:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.6		40 - 110					12/06/16 09:41	01/09/17 21:09	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.323	U	0.276	0.277	1.00	0.440	pCi/L	12/06/16 10:24	01/09/17 14:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.6		40 - 110					12/06/16 10:24	01/09/17 14:16	1
Y Carrier	87.1		40 - 110					12/06/16 10:24	01/09/17 14:16	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	0.436	U	0.372	0.374	5.00	0.451	pCi/L		01/10/17 18:34	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-2

**Client Sample ID: MW17**  
**Date Collected: 11/29/16 09:19**  
**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-9**  
**Matrix: Ground Water**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.141	U	0.268	0.269	1.00	0.474	pCi/L	12/06/16 09:41	01/09/17 21:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.8		40 - 110					12/06/16 09:41	01/09/17 21:09	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.338	U	0.258	0.259	1.00	0.405	pCi/L	12/06/16 10:24	01/09/17 14:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.8		40 - 110					12/06/16 10:24	01/09/17 14:16	1
Y Carrier	95.3		40 - 110					12/06/16 10:24	01/09/17 14:16	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
<b>Combined Radium 226 + 228</b>	<b>0.479</b>		0.372	0.373	5.00	0.474	pCi/L		01/10/17 18:34	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-2

**Client Sample ID: MW18**  
**Date Collected: 11/28/16 08:57**  
**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-10**  
**Matrix: Ground Water**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.764		0.347	0.354	1.00	0.397	pCi/L	12/06/16 09:41	01/09/17 21:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.0		40 - 110					12/06/16 09:41	01/09/17 21:09	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.797		0.327	0.335	1.00	0.475	pCi/L	12/06/16 10:24	01/09/17 14:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.0		40 - 110					12/06/16 10:24	01/09/17 14:16	1
Y Carrier	97.9		40 - 110					12/06/16 10:24	01/09/17 14:16	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	1.56		0.476	0.487	5.00	0.475	pCi/L		01/10/17 18:34	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-2

**Client Sample ID: MW19**

**Date Collected: 11/28/16 09:37**

**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-11**

**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	0.445		0.300	0.303	1.00	0.419	pCi/L	12/06/16 09:41	01/09/17 21:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.3		40 - 110					12/06/16 09:41	01/09/17 21:10	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.700		0.279	0.287	1.00	0.395	pCi/L	12/06/16 10:24	01/09/17 14:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.3		40 - 110					12/06/16 10:24	01/09/17 14:16	1
Y Carrier	96.8		40 - 110					12/06/16 10:24	01/09/17 14:16	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	1.14		0.410	0.417	5.00	0.419	pCi/L		01/10/17 18:34	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-2

**Client Sample ID: DUP-1**

**Lab Sample ID: 310-94955-12**

**Date Collected: 11/28/16 11:40**

**Matrix: Ground Water**

**Date Received: 12/01/16 09:30**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0354	U	0.233	0.233	1.00	0.486	pCi/L	12/06/16 09:41	01/09/17 21:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.2		40 - 110					12/06/16 09:41	01/09/17 21:10	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.610		0.299	0.304	1.00	0.441	pCi/L	12/06/16 10:24	01/09/17 14:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.2		40 - 110					12/06/16 10:24	01/09/17 14:16	1
Y Carrier	95.3		40 - 110					12/06/16 10:24	01/09/17 14:16	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	0.575		0.379	0.383	5.00	0.486	pCi/L		01/10/17 18:34	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-2

**Client Sample ID: DUP-2**

**Date Collected: 11/28/16 13:40**

**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-13**

**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	0.106	U	0.211	0.211	1.00	0.380	pCi/L	12/06/16 09:41	01/09/17 21:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.2		40 - 110					12/06/16 09:41	01/09/17 21:10	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.473		0.265	0.269	1.00	0.399	pCi/L	12/06/16 10:24	01/09/17 14:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.2		40 - 110					12/06/16 10:24	01/09/17 14:16	1
Y Carrier	95.3		40 - 110					12/06/16 10:24	01/09/17 14:16	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	0.579		0.339	0.342	5.00	0.399	pCi/L		01/10/17 18:34	1



# Definitions/Glossary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-2

## 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)

# QC Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-2

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

**Lab Sample ID: MB 160-282672/1-A**  
**Matrix: Water**  
**Analysis Batch: 287048**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 282672**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.005716	U	0.199	0.199	1.00	0.410	pCi/L	12/06/16 09:41	01/09/17 21:03	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.5		40 - 110					12/06/16 09:41	01/09/17 21:03	1

**Lab Sample ID: LCS 160-282672/2-A**  
**Matrix: Water**  
**Analysis Batch: 287274**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 282672**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.1	13.58		1.66	1.00	0.369	pCi/L	122	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	79.2		40 - 110						

**Lab Sample ID: LCSD 160-282672/3-A**  
**Matrix: Water**  
**Analysis Batch: 287048**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 282672**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	11.1	14.32		1.83	1.00	0.417	pCi/L	129	68 - 137	0.21	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	82.6		40 - 110								

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

**Lab Sample ID: MB 160-282683/1-A**  
**Matrix: Water**  
**Analysis Batch: 287066**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 282683**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.7652		0.345	0.352	1.00	0.510	pCi/L	12/06/16 10:24	01/09/17 14:00	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.5		40 - 110					12/06/16 10:24	01/09/17 14:00	1
Y Carrier	92.0		40 - 110					12/06/16 10:24	01/09/17 14:00	1

TestAmerica Cedar Falls

# QC Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-2

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

**Lab Sample ID: LCS 160-282683/2-A**  
**Matrix: Water**  
**Analysis Batch: 287066**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 282683**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.0	15.07		1.62	1.00	0.417	pCi/L	108	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	79.2		40 - 110
Y Carrier	99.4		40 - 110

**Lab Sample ID: LCSD 160-282683/3-A**  
**Matrix: Water**  
**Analysis Batch: 287066**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 282683**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	14.0	15.07		1.62	1.00	0.430	pCi/L	108	56 - 140	0	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	82.6		40 - 110
Y Carrier	98.3		40 - 110

# QC Association Summary

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-2

## Rad

### Prep Batch: 282672

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94955-1	MW2	Total/NA	Ground Water	PrecSep-21	
310-94955-2	MW5	Total/NA	Ground Water	PrecSep-21	
310-94955-3	MW6	Total/NA	Ground Water	PrecSep-21	
310-94955-4	MW8	Total/NA	Ground Water	PrecSep-21	
310-94955-5	MW9	Total/NA	Ground Water	PrecSep-21	
310-94955-6	MW13	Total/NA	Ground Water	PrecSep-21	
310-94955-7	MW15	Total/NA	Ground Water	PrecSep-21	
310-94955-8	MW16	Total/NA	Ground Water	PrecSep-21	
310-94955-9	MW17	Total/NA	Ground Water	PrecSep-21	
310-94955-10	MW18	Total/NA	Ground Water	PrecSep-21	
310-94955-11	MW19	Total/NA	Ground Water	PrecSep-21	
310-94955-12	DUP-1	Total/NA	Ground Water	PrecSep-21	
310-94955-13	DUP-2	Total/NA	Ground Water	PrecSep-21	
MB 160-282672/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-282672/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-282672/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

### Prep Batch: 282683

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-94955-1	MW2	Total/NA	Ground Water	PrecSep_0	
310-94955-2	MW5	Total/NA	Ground Water	PrecSep_0	
310-94955-3	MW6	Total/NA	Ground Water	PrecSep_0	
310-94955-4	MW8	Total/NA	Ground Water	PrecSep_0	
310-94955-5	MW9	Total/NA	Ground Water	PrecSep_0	
310-94955-6	MW13	Total/NA	Ground Water	PrecSep_0	
310-94955-7	MW15	Total/NA	Ground Water	PrecSep_0	
310-94955-8	MW16	Total/NA	Ground Water	PrecSep_0	
310-94955-9	MW17	Total/NA	Ground Water	PrecSep_0	
310-94955-10	MW18	Total/NA	Ground Water	PrecSep_0	
310-94955-11	MW19	Total/NA	Ground Water	PrecSep_0	
310-94955-12	DUP-1	Total/NA	Ground Water	PrecSep_0	
310-94955-13	DUP-2	Total/NA	Ground Water	PrecSep_0	
MB 160-282683/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-282683/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-282683/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-2

## Client Sample ID: MW2

Date Collected: 11/28/16 11:38

Date Received: 12/01/16 09:30

## Lab Sample ID: 310-94955-1

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			282672	12/06/16 09:41	AS	TAL SL
Total/NA	Analysis	9315		1	287048	01/09/17 21:04	RTM	TAL SL
Total/NA	Prep	PrecSep_0			282683	12/06/16 10:24	AS	TAL SL
Total/NA	Analysis	9320		1	287048	01/09/17 14:17	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	287301	01/10/17 18:34	RTM	TAL SL

## Client Sample ID: MW5

Date Collected: 11/29/16 10:39

Date Received: 12/01/16 09:30

## Lab Sample ID: 310-94955-2

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			282672	12/06/16 09:41	AS	TAL SL
Total/NA	Analysis	9315		1	287048	01/09/17 21:04	RTM	TAL SL
Total/NA	Prep	PrecSep_0			282683	12/06/16 10:24	AS	TAL SL
Total/NA	Analysis	9320		1	287048	01/09/17 14:17	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	287301	01/10/17 18:34	RTM	TAL SL

## Client Sample ID: MW6

Date Collected: 11/28/16 14:19

Date Received: 12/01/16 09:30

## Lab Sample ID: 310-94955-3

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			282672	12/06/16 09:41	AS	TAL SL
Total/NA	Analysis	9315		1	287048	01/09/17 21:07	RTM	TAL SL
Total/NA	Prep	PrecSep_0			282683	12/06/16 10:24	AS	TAL SL
Total/NA	Analysis	9320		1	287048	01/09/17 14:17	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	287301	01/10/17 18:34	RTM	TAL SL

## Client Sample ID: MW8

Date Collected: 11/29/16 08:32

Date Received: 12/01/16 09:30

## Lab Sample ID: 310-94955-4

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			282672	12/06/16 09:41	AS	TAL SL
Total/NA	Analysis	9315		1	287048	01/09/17 21:04	RTM	TAL SL
Total/NA	Prep	PrecSep_0			282683	12/06/16 10:24	AS	TAL SL
Total/NA	Analysis	9320		1	287048	01/09/17 14:17	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	287301	01/10/17 18:34	RTM	TAL SL

TestAmerica Cedar Falls

# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-2

## Client Sample ID: MW9

Date Collected: 11/28/16 10:22

Date Received: 12/01/16 09:30

## Lab Sample ID: 310-94955-5

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			282672	12/06/16 09:41	AS	TAL SL
Total/NA	Analysis	9315		1	287048	01/09/17 21:04	RTM	TAL SL
Total/NA	Prep	PrecSep_0			282683	12/06/16 10:24	AS	TAL SL
Total/NA	Analysis	9320		1	287048	01/09/17 14:17	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	287301	01/10/17 18:34	RTM	TAL SL

## Client Sample ID: MW13

Date Collected: 11/28/16 12:39

Date Received: 12/01/16 09:30

## Lab Sample ID: 310-94955-6

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			282672	12/06/16 09:41	AS	TAL SL
Total/NA	Analysis	9315		1	287048	01/09/17 21:04	RTM	TAL SL
Total/NA	Prep	PrecSep_0			282683	12/06/16 10:24	AS	TAL SL
Total/NA	Analysis	9320		1	287048	01/09/17 14:17	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	287301	01/10/17 18:34	RTM	TAL SL

## Client Sample ID: MW15

Date Collected: 11/28/16 13:38

Date Received: 12/01/16 09:30

## Lab Sample ID: 310-94955-7

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			282672	12/06/16 09:41	AS	TAL SL
Total/NA	Analysis	9315		1	287048	01/09/17 21:04	RTM	TAL SL
Total/NA	Prep	PrecSep_0			282683	12/06/16 10:24	AS	TAL SL
Total/NA	Analysis	9320		1	287048	01/09/17 14:17	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	287301	01/10/17 18:34	RTM	TAL SL

## Client Sample ID: MW16

Date Collected: 11/28/16 11:12

Date Received: 12/01/16 09:30

## Lab Sample ID: 310-94955-8

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			282672	12/06/16 09:41	AS	TAL SL
Total/NA	Analysis	9315		1	287049	01/09/17 21:09	RTM	TAL SL
Total/NA	Prep	PrecSep_0			282683	12/06/16 10:24	AS	TAL SL
Total/NA	Analysis	9320		1	287048	01/09/17 14:16	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	287301	01/10/17 18:34	RTM	TAL SL

TestAmerica Cedar Falls

# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-2

**Client Sample ID: MW17**

**Date Collected: 11/29/16 09:19**

**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-9**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			282672	12/06/16 09:41	AS	TAL SL
Total/NA	Analysis	9315		1	287049	01/09/17 21:09	RTM	TAL SL
Total/NA	Prep	PrecSep_0			282683	12/06/16 10:24	AS	TAL SL
Total/NA	Analysis	9320		1	287048	01/09/17 14:16	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	287301	01/10/17 18:34	RTM	TAL SL

**Client Sample ID: MW18**

**Date Collected: 11/28/16 08:57**

**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-10**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			282672	12/06/16 09:41	AS	TAL SL
Total/NA	Analysis	9315		1	287049	01/09/17 21:09	RTM	TAL SL
Total/NA	Prep	PrecSep_0			282683	12/06/16 10:24	AS	TAL SL
Total/NA	Analysis	9320		1	287048	01/09/17 14:16	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	287301	01/10/17 18:34	RTM	TAL SL

**Client Sample ID: MW19**

**Date Collected: 11/28/16 09:37**

**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-11**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			282672	12/06/16 09:41	AS	TAL SL
Total/NA	Analysis	9315		1	287049	01/09/17 21:10	RTM	TAL SL
Total/NA	Prep	PrecSep_0			282683	12/06/16 10:24	AS	TAL SL
Total/NA	Analysis	9320		1	287048	01/09/17 14:16	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	287301	01/10/17 18:34	RTM	TAL SL

**Client Sample ID: DUP-1**

**Date Collected: 11/28/16 11:40**

**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-12**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			282672	12/06/16 09:41	AS	TAL SL
Total/NA	Analysis	9315		1	287049	01/09/17 21:10	RTM	TAL SL
Total/NA	Prep	PrecSep_0			282683	12/06/16 10:24	AS	TAL SL
Total/NA	Analysis	9320		1	287048	01/09/17 14:16	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	287301	01/10/17 18:34	RTM	TAL SL

TestAmerica Cedar Falls

# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-2

**Client Sample ID: DUP-2**

**Date Collected: 11/28/16 13:40**

**Date Received: 12/01/16 09:30**

**Lab Sample ID: 310-94955-13**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			282672	12/06/16 09:41	AS	TAL SL
Total/NA	Analysis	9315		1	287049	01/09/17 21:10	RTM	TAL SL
Total/NA	Prep	PrecSep_0			282683	12/06/16 10:24	AS	TAL SL
Total/NA	Analysis	9320		1	287048	01/09/17 14:16	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	287301	01/10/17 18:34	RTM	TAL SL

#### Laboratory References:

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

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# Certification Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-2

## 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.

TestAmerica Cedar Falls

# Method Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-2

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





**Cooler/Sample Receipt and Temperature Log Form**

<b>Client Information</b>	
Client: <u>OIPD</u>	
City/State: <u>Omaha, NE</u>	Project: <u>North Omaha Station CLR</u>
<b>Receipt Information</b>	
Date/Time Received: <u>12.1.16</u> <u>9:30</u>	Received By: <u>JA</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: Cooler ID: <u>AA-3</u>
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: Cooler # <u>1</u> of <u>3</u>
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: Cooler custody seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes: Which VOA samples are in cooler? ↓
<b>Temperature Record</b>	
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE	
Temperature Blank?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: _____	Correction Factor (°C): <u>0.0</u>
Uncorrected Temp (°C): <u>-0.6</u>	Corrected Temp (°C): <u>-0.6</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	

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**Cooler/Sample Receipt and Temperature Log Form**

<b>Client Information</b>	
Client: <u>0110</u>	
City/State: <u>Omaha, NE</u>	Project: <u>North Omaha Station CLR</u>
<b>Receipt Information</b>	
Date/Time Received: <u>12.1.16</u> <u>9:30</u>	Received By: <u>TA</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: Cooler ID: <u>P-6</u>
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: Cooler # <u>2</u> of <u>3</u>
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: Cooler custody seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes: Which VOA samples are in cooler? ↓
<b>Temperature Record</b>	
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE	
Temperature Blank?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: _____	Correction Factor (°C): <u>0.0</u>
Uncorrected Temp (°C): <u>1.0</u>	Corrected Temp (°C): <u>1.0</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
Note: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	

**Cooler/Sample Receipt and Temperature Log Form**

<b>Client Information</b>	
Client: <u>0110</u>	
City/State: <u>Omaha, NE</u>	Project: <u>North Omaha Station CLR-LF</u>
<b>Receipt Information</b>	
Date/Time Received: <u>12.1.16</u> <u>9:30</u>	Received By: <u>To</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: Cooler ID: <u>N.7</u>
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: Cooler # <u>3</u> of <u>3</u>
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: Cooler custody seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes: Which VOA samples are in cooler? ↓
<b>Temperature Record</b>	
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE	
Temperature Blank?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: _____	Correction Factor (°C): <u>0.0</u>
Uncorrected Temp (°C): <u>1.6</u>	Corrected Temp (°C): <u>1.6</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	



### Chain of Custody Record

**TestAmerica Cedar Falls**

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

**Client Information**

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: bsoljka@oppd.com  
Project Name: North Omaha Station CCR  
Site:

Carrier Tracking No(s):  
Lab Pw: Hayes, Shawn M  
Phone: Brad Soljka  
E-Mail: shawn.hayes@testamericainc.com

Sampler: Brad Soljka  
Phone: 402-636-2515

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Or Water/Oil)	Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Analysis Requested		Total Number of Containers	Special Instructions/Note:
					Preservation Code:	Preservation Code:	D	N	D	N		
MW2	11/28/16	1138	G	GW	X		X					
MW5	11/29/16	1039	G	GW	X		X					
MW6	11/28/16	1419	G	GW	X		X					
MW8	11/29/16	0832	G	GW	X		X					
MW9	11/28/16	1022	G	GW	X		X					
MW13	11/28/16	1239	G	GW	X		X					
MW15	11/28/16	1338	G	GW	X		X					
MW16	11/28/16	1112	G	GW	X		X					
MW17	11/29/16	0919	G	GW	X		X					
MW18	11/28/16	0857	G	GW	X		X					
MW19	11/28/16	0937	G	GW	X		X					

**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
- Other:

**Preservation Codes:**

- 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)

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological  
 Deliverable Requested: I, II, III, IV, Other (specify)

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

Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:	
Relinquished by:	Company	Date/Time:	Company
Relinquished by:	Company	Date/Time:	Company
Relinquished by:	Company	Date/Time:	Company
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:	



# Chain of Custody Record

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

<b>Client Information</b> 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: North Omaha Station CCR Site:		<b>Carrier Tracking No(s):</b> Lab P/N: Hayes, Shawn M E-Mail: shawn.hayes@testamericainc.com Phone: 402-636-2515 Sampler: Brad Sojka	
<b>Analysis Requested</b> Due Date Requested: TAT Requested (days): PO #: WO #: TestAmerica Project #: SOW#:		2540C TDS, 9056A Chloride, Fluoride, Sulfate 6010C Lithium, 6020A CCR List, 7470A Mercury 9315 Ra226, 9320 Ra228, Combined Ra226 and Ra228 Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> D <input checked="" type="checkbox"/> N Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> D <input checked="" type="checkbox"/> N	
<b>Sample Identification</b> MW20 DUP-1 DUP-2		Total Number of containers Special Instructions/Note:	
<b>Possible Hazard Identification</b> <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month ) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Empty Kit Relinquished by: Relinquished by: <i>[Signature]</i> Relinquished by: Relinquished by:		Method of Shipment: Date/Time: 11/30/16 1100 Date/Time: 12/1/16 930 Date/Time:	
Relinquished by: Relinquished by: Relinquished by:		Company: <i>[Signature]</i> Company: <i>[Signature]</i> Company:	
Custody Seals Intact: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks:	





Temperature readings: \_\_\_\_\_

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container pH</u>	<u>Preservative Added (mls)</u>	<u>Lot #</u>
MW2	310-94955-A-1	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW2	310-94955-B-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-94955-C-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW5	310-94955-A-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW5	310-94955-B-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW5	310-94955-C-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW6	310-94955-A-3	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW6	310-94955-B-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW6	310-94955-C-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW8	310-94955-A-4	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW8	310-94955-B-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW8	310-94955-C-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-94955-A-5	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW9	310-94955-B-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-94955-C-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-94955-A-6	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW13	310-94955-B-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-94955-C-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW15	310-94955-A-7	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW15	310-94955-B-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW15	310-94955-C-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW16	310-94955-A-8	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW16	310-94955-B-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW16	310-94955-C-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW17	310-94955-A-9	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW17	310-94955-B-9	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW17	310-94955-C-9	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW18	310-94955-A-10	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW18	310-94955-B-10	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW18	310-94955-C-10	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW19	310-94955-A-11	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW19	310-94955-B-11	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW19	310-94955-C-11	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-1	310-94955-A-12	Plastic 250ml - with Nitric Acid	<2	_____	_____
DUP-1	310-94955-B-12	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-1	310-94955-C-12	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-2	310-94955-A-13	Plastic 250ml - with Nitric Acid	<2	_____	_____



<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container pH</u>	<u>Preservative Added (mls)</u>	<u>Lot #</u>
DUP-2	310-94955-B-13	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-2	310-94955-C-13	Plastic 1 liter - Nitric Acid	<2	_____	_____

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# Chain of Custody Record



<b>Client Information (Sub Contract Lab)</b> Client Contact: Hayes, Shawn M Shipping/Receiving: shawn.hayes@testamericainc.com Company: TestAmerica Laboratories, Inc. Address: 13715 Rider Trail North, Earth City, MO 63045 Phone: 314-298-8566(Tel) 314-298-8757(Fax) Email: [Redacted] Project Name: North Omaha Station CCR Site: 310 OPPD North Omaha Station		Lab FM: Hayes, Shawn M E-Mail: shawn.hayes@testamericainc.com State of Origin: Nebraska State of Origin: Nebraska Accreditations Required (See note):	
Due Date Requested: 12/30/2016 TAT Requested (days):		Job #: 310-94955-2 Page: Page 1 of 2 Job #: 310-94955-2	
Sample Date: 11/28/16 Sample Time: 11:38 Central Sample Date: 11/29/16 Sample Time: 10:39 Central Sample Date: 11/28/16 Sample Time: 14:19 Central Sample Date: 11/29/16 Sample Time: 08:32 Central Sample Date: 11/28/16 Sample Time: 10:22 Central Sample Date: 11/28/16 Sample Time: 12:39 Central Sample Date: 11/28/16 Sample Time: 13:38 Central Sample Date: 11/28/16 Sample Time: 11:12 Central Sample Date: 11/29/16 Sample Time: 09:19 Central		Field Filtered Sample (Yes or No): Perform MS/MSD (Yes or No): 9315_Ra228/PrecSep_21 Standard Target List 9320_Ra228/PrecSep_0 Standard Target List Ra228Ra228_GFPc	
Sample Identification - Client ID (Lab ID) MW2 (310-94955-1) MW5 (310-94955-2) MW6 (310-94955-3) MW8 (310-94955-4) MW9 (310-94955-5) MW13 (310-94955-6) MW15 (310-94955-7) MW16 (310-94955-8) MW17 (310-94955-9)		Matrix (W=water, S=solid, O=water/soil, B=soil, T=soil, A=air) Water Water Water Water Water Water Water Water Water Water	
Preservation Code: 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 - EDTA Other:		Analysis Requested Total Number of Containers: 2 Special Instructions/Note:	
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/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 compliance to TestAmerica Laboratories, Inc.			
<b>Possible Hazard Identification</b> Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 Empty Kit Relinquished by: Date:			
Relinquished by: [Signature] Date: 12/16/16 Company: [Redacted]		Relinquished by: [Signature] Date: 12/16/16 Company: [Redacted]	
Relinquished by: [Signature] Date: 12/16/16 Company: [Redacted]		Relinquished by: [Signature] Date: 12/16/16 Company: [Redacted]	
Custody Seals Intact: A Yes Δ No Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	





<b>Client Information (Sub Contract Lab)</b>		Sampler:	Lab PM	Carrier Tracking No(s)	COC No					
Client Contact:		Hayes, Shawn M	Hayes, Shawn M		310-8006-2					
Shipping/Receiving		E-Mail	shawn.hayes@testamericainc.com	State of Origin:	Page 2 of 2					
Company		Accreditations Required (See note):		Job #						
TestAmerica Laboratories, Inc.				310-94955-2						
Address		Due Date Requested:	Preservation Codes:							
13715 Rider Trail North,		12/30/2016	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 Other:							
City:		TAT Requested (days):	Analysis Requested							
Earth City										
State, Zip:										
MO, 63045										
Phone:										
314-298-8566(Tel) 314-298-8757(Fax)										
E-mail:										
Project Name:										
North Omaha Station CCR										
Site:										
310 OPPD North Omaha Station										
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=swab/wipe, BT=baseline, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra228/PrecSep_21 Standard Target List	9320_Ra228/PrecSep_0 Standard Target List	Total Number of Containers	Special Instructions/Note:
MW18 (310-94955-10)	11/28/16	08:57 Central		Water	X	X	X	X	2	
MW19 (310-94955-11)	11/28/16	09:37 Central		Water	X	X	X	X	2	
DUP-1 (310-94955-12)	11/28/16	11:40 Central		Water	X	X	X	X	2	
DUP-2 (310-94955-13)	11/28/16	13:40 Central		Water	X	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. I										
<b>Possible Hazard Identification</b>										
Unconfirmed										
Deliverable Requested: I, II, III, IV, Other (specify)										
Primary Deliverable Rank: 2										
Empty Kit Relinquished by:										
Relinquished by:										
Relinquished by:										
Relinquished by:										
Custody Seals Intact Δ Yes Δ No										
Custody Seal No.:										
Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)										
Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For <input type="checkbox"/> Months										
Special Instructions/QC Requirements:										
Received by:										
Received by:										
Received by:										
Cooler Temperature(s) °C and Other Remarks:										



## Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-94955-2

**Login Number: 94955**

**List Source: TestAmerica Cedar Falls**

**List Number: 1**

**Creator: Worthy, Ashley L**

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

## Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-94955-2

**Login Number: 94955**

**List Number: 2**

**Creator: Clarke, Jill C**

**List Source: TestAmerica St. Louis**

**List Creation: 12/03/16 09:05 AM**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	20.0, 20.0
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 <math><6\text{mm}</math> (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: North Omaha Station

TestAmerica Job ID: 310-94955-2

## 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)
310-94955-1	MW2	75.8
310-94955-2	MW5	82.3
310-94955-3	MW6	92.3
310-94955-4	MW8	88.0
310-94955-5	MW9	80.1
310-94955-6	MW13	75.5
310-94955-7	MW15	76.1
310-94955-8	MW16	78.6
310-94955-9	MW17	77.8
310-94955-10	MW18	84.0
310-94955-11	MW19	86.3
310-94955-12	DUP-1	77.2
310-94955-13	DUP-2	83.2

#### Tracer/Carrier Legend

Ba = Ba Carrier

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

Matrix: Water

Prep Type: Total/NA

### Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (40-110)
LCS 160-282672/2-A	Lab Control Sample	79.2
LCSD 160-282672/3-A	Lab Control Sample Dup	82.6
MB 160-282672/1-A	Method Blank	79.5

#### 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)
310-94955-1	MW2	75.8	96.8
310-94955-2	MW5	82.3	95.7
310-94955-3	MW6	92.3	98.7
310-94955-4	MW8	88.0	99.1
310-94955-5	MW9	80.1	95.3
310-94955-6	MW13	75.5	98.3
310-94955-7	MW15	76.1	95.0
310-94955-8	MW16	78.6	87.1
310-94955-9	MW17	77.8	95.3
310-94955-10	MW18	84.0	97.9
310-94955-11	MW19	86.3	96.8
310-94955-12	DUP-1	77.2	95.3
310-94955-13	DUP-2	83.2	95.3

TestAmerica Cedar Falls

# Tracer/Carrier Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-94955-2

## 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 160-282683/2-A	Lab Control Sample	79.2	99.4
LCSD 160-282683/3-A	Lab Control Sample Dup	82.6	98.3
MB 160-282683/1-A	Method Blank	79.5	92.0

## 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: 310-99845-1

Client Project/Site: North Omaha Station CCR

For:

Omaha Public Power District

Attn: Accounts Payable, 4E/EP-5

444 South 16th Street Mall

Omaha, Nebraska 68102-2247

Attn: Brad Sojka



Authorized for release by:

3/7/2017 1:21:44 PM

Shawn Hayes, Senior Project Manager

(319)277-2401

[shawn.hayes@testamericainc.com](mailto:shawn.hayes@testamericainc.com)

### LINKS

Review your project  
results through

TotalAccess

Have a Question?



Visit us at:

[www.testamericainc.com](http://www.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: North Omaha Station CCR

TestAmerica Job ID: 310-99845-1

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**Job ID: 310-99845-1**

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**Laboratory: TestAmerica Cedar Falls**

## Narrative

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**Job Narrative**  
**310-99845-1**

### Comments

No additional comments.

### Receipt

The samples were received on 2/21/2017 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.0° C and 3.7° 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.

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# Sample Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-99845-1	MW2	Ground Water	02/17/17 10:34	02/21/17 09:20
310-99845-2	MW9	Ground Water	02/17/17 09:34	02/21/17 09:20
310-99845-3	MW13	Ground Water	02/17/17 11:02	02/21/17 09:20
310-99845-4	MW15	Ground Water	02/17/17 11:46	02/21/17 09:20
310-99845-5	MW16	Ground Water	02/17/17 10:06	02/21/17 09:20
310-99845-6	MW17	Ground Water	02/17/17 12:22	02/21/17 09:20
310-99845-7	MW18	Ground Water	02/17/17 08:34	02/21/17 09:20
310-99845-8	MW19	Ground Water	02/17/17 09:04	02/21/17 09:20
310-99845-9	DUP-1	Ground Water	02/17/17 11:04	02/21/17 09:20



# Detection Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-1

## Client Sample ID: MW2

## Lab Sample ID: 310-99845-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	19.3		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.563		0.500		mg/L	5		9056A	Total/NA
Sulfate	915		50.0		mg/L	50		9056A	Total/NA
Arsenic	0.234		0.00200		mg/L	1		6020A	Total/NA
Barium	0.126		0.00200		mg/L	1		6020A	Total/NA
Boron	1.92		0.200		mg/L	1		6020A	Total/NA
Calcium	292		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000656		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	2120		300		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW9

## Lab Sample ID: 310-99845-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	120		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.585		0.500		mg/L	5		9056A	Total/NA
Sulfate	26.2		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.0118		0.00200		mg/L	1		6020A	Total/NA
Barium	0.383		0.00200		mg/L	1		6020A	Total/NA
Calcium	116		0.200		mg/L	1		6020A	Total/NA
Chromium	0.00555		0.00500		mg/L	1		6020A	Total/NA
Cobalt	0.00265		0.000500		mg/L	1		6020A	Total/NA
Lead	0.00419		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	640		60.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW13

## Lab Sample ID: 310-99845-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.35		5.00		mg/L	5		9056A	Total/NA
Sulfate	603		50.0		mg/L	50		9056A	Total/NA
Arsenic	0.112	F1	0.00200		mg/L	1		6020A	Total/NA
Barium	0.0946		0.00200		mg/L	1		6020A	Total/NA
Boron	2.02		0.200		mg/L	1		6020A	Total/NA
Calcium	153		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.817		0.00200		mg/L	1		6020A	Total/NA
Selenium	0.0345		0.00500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1320		150		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW15

## Lab Sample ID: 310-99845-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	16.8		5.00		mg/L	5		9056A	Total/NA
Sulfate	863		50.0		mg/L	50		9056A	Total/NA
Antimony	0.00204		0.00100		mg/L	1		6020A	Total/NA
Arsenic	0.00241		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0448		0.00200		mg/L	1		6020A	Total/NA
Boron	2.81		0.200		mg/L	1		6020A	Total/NA
Calcium	266		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.408		0.00200		mg/L	1		6020A	Total/NA
Selenium	0.105		0.00500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1370		60.0		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Cedar Falls

# Detection Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-1

## Client Sample ID: MW16

## Lab Sample ID: 310-99845-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	59.2		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.37		0.500		mg/L	5		9056A	Total/NA
Sulfate	374		20.0		mg/L	20		9056A	Total/NA
Lithium	0.0530		0.0500		mg/L	1		6010C	Total/NA
Barium	0.0857		0.00200		mg/L	1		6020A	Total/NA
Boron	0.433		0.200		mg/L	1		6020A	Total/NA
Calcium	181		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.00102		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.0164		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1410		150		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW17

## Lab Sample ID: 310-99845-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	62.6		5.00		mg/L	5		9056A	Total/NA
Fluoride	2.91		0.500		mg/L	5		9056A	Total/NA
Sulfate	1010		50.0		mg/L	50		9056A	Total/NA
Lithium	0.115		0.0500		mg/L	1		6010C	Total/NA
Arsenic	0.0219		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0406		0.00200		mg/L	1		6020A	Total/NA
Boron	0.700		0.200		mg/L	1		6020A	Total/NA
Calcium	380		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.0112		0.000500		mg/L	1		6020A	Total/NA
Lead	0.00710		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00214		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	2250		60.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW18

## Lab Sample ID: 310-99845-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.508		0.500		mg/L	5		9056A	Total/NA
Barium	0.314		0.00200		mg/L	1		6020A	Total/NA
Calcium	94.8		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	474		30.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW19

## Lab Sample ID: 310-99845-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.55		1.00		mg/L	1		9056A	Total/NA
Fluoride	0.418		0.100		mg/L	1		9056A	Total/NA
Sulfate	15.7		1.00		mg/L	1		9056A	Total/NA
Barium	0.281		0.00200		mg/L	1		6020A	Total/NA
Calcium	90.5		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	484		30.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: DUP-1

## Lab Sample ID: 310-99845-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.45		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.571		0.500		mg/L	5		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Cedar Falls

# Detection Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-1

**Client Sample ID: DUP-1 (Continued)**

**Lab Sample ID: 310-99845-9**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	584		20.0		mg/L	20		9056A	Total/NA
Arsenic	0.105		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0928		0.00200		mg/L	1		6020A	Total/NA
Boron	1.89		0.200		mg/L	1		6020A	Total/NA
Calcium	149		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.774		0.00200		mg/L	1		6020A	Total/NA
Selenium	0.0320		0.00500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1260		60.0		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Cedar Falls

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-1

**Client Sample ID: MW2**  
**Date Collected: 02/17/17 10:34**  
**Date Received: 02/21/17 09:20**

**Lab Sample ID: 310-99845-1**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19.3		5.00		mg/L			02/22/17 02:31	5
Fluoride	0.563		0.500		mg/L			02/22/17 02:31	5
Sulfate	915		50.0		mg/L			02/22/17 11:34	50

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		02/22/17 10:00	02/22/17 22:33	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		02/22/17 10:00	03/01/17 15:58	1
Arsenic	0.234		0.00200		mg/L		02/22/17 10:00	03/01/17 15:58	1
Barium	0.126		0.00200		mg/L		02/22/17 10:00	03/01/17 15:58	1
Beryllium	<0.00100		0.00100		mg/L		02/22/17 10:00	03/01/17 15:58	1
Boron	1.92		0.200		mg/L		02/22/17 10:00	03/01/17 15:58	1
Cadmium	<0.000500		0.000500		mg/L		02/22/17 10:00	03/01/17 15:58	1
Calcium	292		0.200		mg/L		02/22/17 10:00	03/01/17 15:58	1
Chromium	<0.00500		0.00500		mg/L		02/22/17 10:00	03/01/17 15:58	1
Cobalt	0.000656		0.000500		mg/L		02/22/17 10:00	03/01/17 15:58	1
Lead	<0.000500		0.000500		mg/L		02/22/17 10:00	03/01/17 15:58	1
Molybdenum	<0.00200		0.00200		mg/L		02/22/17 10:00	03/01/17 15:58	1
Selenium	<0.00500		0.00500		mg/L		02/22/17 10:00	03/01/17 15:58	1
Thallium	<0.00100		0.00100		mg/L		02/22/17 10:00	03/01/17 15:58	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		02/23/17 08:21	02/24/17 11:18	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	2120		300		mg/L			02/21/17 14:31	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-1

**Client Sample ID: MW9**  
**Date Collected: 02/17/17 09:34**  
**Date Received: 02/21/17 09:20**

**Lab Sample ID: 310-99845-2**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	120		5.00		mg/L			02/22/17 02:56	5
Fluoride	0.585		0.500		mg/L			02/22/17 02:56	5
Sulfate	26.2		5.00		mg/L			02/22/17 12:00	5

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		02/22/17 10:00	02/22/17 22:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		02/22/17 10:00	03/01/17 16:04	1
Arsenic	0.0118		0.00200		mg/L		02/22/17 10:00	03/01/17 16:04	1
Barium	0.383		0.00200		mg/L		02/22/17 10:00	03/01/17 16:04	1
Beryllium	<0.00100		0.00100		mg/L		02/22/17 10:00	03/01/17 16:04	1
Boron	<0.200		0.200		mg/L		02/22/17 10:00	03/01/17 16:04	1
Cadmium	<0.000500		0.000500		mg/L		02/22/17 10:00	03/01/17 16:04	1
Calcium	116		0.200		mg/L		02/22/17 10:00	03/01/17 16:04	1
Chromium	0.00555		0.00500		mg/L		02/22/17 10:00	03/01/17 16:04	1
Cobalt	0.00265		0.000500		mg/L		02/22/17 10:00	03/01/17 16:04	1
Lead	0.00419		0.000500		mg/L		02/22/17 10:00	03/01/17 16:04	1
Molybdenum	<0.00200		0.00200		mg/L		02/22/17 10:00	03/01/17 16:04	1
Selenium	<0.00500		0.00500		mg/L		02/22/17 10:00	03/01/17 16:04	1
Thallium	<0.00100		0.00100		mg/L		02/22/17 10:00	03/01/17 16:04	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		02/23/17 08:21	02/24/17 11:19	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	640		60.0		mg/L			02/21/17 14:31	1



# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-1

**Client Sample ID: MW13**  
**Date Collected: 02/17/17 11:02**  
**Date Received: 02/21/17 09:20**

**Lab Sample ID: 310-99845-3**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>6.35</b>		5.00		mg/L			02/22/17 03:23	5
Fluoride	<0.500		0.500		mg/L			02/22/17 03:23	5
<b>Sulfate</b>	<b>603</b>		50.0		mg/L			02/22/17 12:25	50

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		02/22/17 10:00	02/22/17 22:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		02/22/17 10:00	03/01/17 16:07	1
<b>Arsenic</b>	<b>0.112</b>	<b>F1</b>	0.00200		mg/L		02/22/17 10:00	03/01/17 16:07	1
<b>Barium</b>	<b>0.0946</b>		0.00200		mg/L		02/22/17 10:00	03/01/17 16:07	1
Beryllium	<0.00100		0.00100		mg/L		02/22/17 10:00	03/01/17 16:07	1
<b>Boron</b>	<b>2.02</b>		0.200		mg/L		02/22/17 10:00	03/01/17 16:07	1
Cadmium	<0.000500		0.000500		mg/L		02/22/17 10:00	03/01/17 16:07	1
<b>Calcium</b>	<b>153</b>		0.200		mg/L		02/22/17 10:00	03/01/17 16:07	1
Chromium	<0.00500		0.00500		mg/L		02/22/17 10:00	03/01/17 16:07	1
Cobalt	<0.000500		0.000500		mg/L		02/22/17 10:00	03/01/17 16:07	1
Lead	<0.000500		0.000500		mg/L		02/22/17 10:00	03/01/17 16:07	1
<b>Molybdenum</b>	<b>0.817</b>		0.00200		mg/L		02/22/17 10:00	03/01/17 16:07	1
<b>Selenium</b>	<b>0.0345</b>		0.00500		mg/L		02/22/17 10:00	03/01/17 16:07	1
Thallium	<0.00100		0.00100		mg/L		02/22/17 10:00	03/01/17 16:07	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		02/23/17 08:21	02/24/17 11:21	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>1320</b>		150		mg/L			02/21/17 14:31	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-1

**Client Sample ID: MW15**

**Date Collected: 02/17/17 11:46**

**Date Received: 02/21/17 09:20**

**Lab Sample ID: 310-99845-4**

**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>16.8</b>		5.00		mg/L			02/22/17 03:49	5
Fluoride	<0.500		0.500		mg/L			02/22/17 03:49	5
<b>Sulfate</b>	<b>863</b>		50.0		mg/L			02/22/17 12:51	50

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		02/22/17 10:00	02/22/17 22:51	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.00204</b>		0.00100		mg/L		02/22/17 10:00	03/01/17 16:19	1
<b>Arsenic</b>	<b>0.00241</b>		0.00200		mg/L		02/22/17 10:00	03/01/17 16:19	1
<b>Barium</b>	<b>0.0448</b>		0.00200		mg/L		02/22/17 10:00	03/01/17 16:19	1
Beryllium	<0.00100		0.00100		mg/L		02/22/17 10:00	03/01/17 16:19	1
<b>Boron</b>	<b>2.81</b>		0.200		mg/L		02/22/17 10:00	03/01/17 16:19	1
Cadmium	<0.000500		0.000500		mg/L		02/22/17 10:00	03/01/17 16:19	1
<b>Calcium</b>	<b>266</b>		0.200		mg/L		02/22/17 10:00	03/01/17 16:19	1
Chromium	<0.00500		0.00500		mg/L		02/22/17 10:00	03/01/17 16:19	1
Cobalt	<0.000500		0.000500		mg/L		02/22/17 10:00	03/01/17 16:19	1
Lead	<0.000500		0.000500		mg/L		02/22/17 10:00	03/01/17 16:19	1
<b>Molybdenum</b>	<b>0.408</b>		0.00200		mg/L		02/22/17 10:00	03/01/17 16:19	1
<b>Selenium</b>	<b>0.105</b>		0.00500		mg/L		02/22/17 10:00	03/01/17 16:19	1
Thallium	<0.00100		0.00100		mg/L		02/22/17 10:00	03/01/17 16:19	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		02/23/17 08:21	02/24/17 11:23	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>1370</b>		60.0		mg/L			02/21/17 14:31	1

# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-1

**Client Sample ID: MW16**

**Date Collected: 02/17/17 10:06**

**Date Received: 02/21/17 09:20**

**Lab Sample ID: 310-99845-5**

**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	59.2		5.00		mg/L			02/22/17 05:06	5
Fluoride	1.37		0.500		mg/L			02/22/17 05:06	5
Sulfate	374		20.0		mg/L			02/22/17 14:09	20

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.0530		0.0500		mg/L		02/22/17 10:00	02/22/17 22:53	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		02/22/17 10:00	03/01/17 16:22	1
Arsenic	<0.00200		0.00200		mg/L		02/22/17 10:00	03/01/17 16:22	1
Barium	0.0857		0.00200		mg/L		02/22/17 10:00	03/01/17 16:22	1
Beryllium	<0.00100		0.00100		mg/L		02/22/17 10:00	03/01/17 16:22	1
Boron	0.433		0.200		mg/L		02/22/17 10:00	03/01/17 16:22	1
Cadmium	<0.000500		0.000500		mg/L		02/22/17 10:00	03/01/17 16:22	1
Calcium	181		0.200		mg/L		02/22/17 10:00	03/01/17 16:22	1
Chromium	<0.00500		0.00500		mg/L		02/22/17 10:00	03/01/17 16:22	1
Cobalt	0.00102		0.000500		mg/L		02/22/17 10:00	03/01/17 16:22	1
Lead	<0.000500		0.000500		mg/L		02/22/17 10:00	03/01/17 16:22	1
Molybdenum	0.0164		0.00200		mg/L		02/22/17 10:00	03/01/17 16:22	1
Selenium	<0.00500		0.00500		mg/L		02/22/17 10:00	03/01/17 16:22	1
Thallium	<0.00100		0.00100		mg/L		02/22/17 10:00	03/01/17 16:22	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		02/23/17 08:21	02/24/17 11:27	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1410		150		mg/L			02/21/17 14:31	1

# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-1

**Client Sample ID: MW17**  
**Date Collected: 02/17/17 12:22**  
**Date Received: 02/21/17 09:20**

**Lab Sample ID: 310-99845-6**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	62.6		5.00		mg/L			02/22/17 05:32	5
Fluoride	2.91		0.500		mg/L			02/22/17 05:32	5
Sulfate	1010		50.0		mg/L			02/22/17 14:35	50

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.115		0.0500		mg/L		02/22/17 10:00	02/22/17 22:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		02/22/17 10:00	03/02/17 12:21	1
Arsenic	0.0219		0.00200		mg/L		02/22/17 10:00	03/02/17 12:21	1
Barium	0.0406		0.00200		mg/L		02/22/17 10:00	03/01/17 16:35	1
Beryllium	<0.00100		0.00100		mg/L		02/22/17 10:00	03/01/17 16:35	1
Boron	0.700		0.200		mg/L		02/22/17 10:00	03/01/17 16:35	1
Cadmium	<0.000500		0.000500		mg/L		02/22/17 10:00	03/01/17 16:35	1
Calcium	380		0.200		mg/L		02/22/17 10:00	03/01/17 16:35	1
Chromium	<0.00500		0.00500		mg/L		02/22/17 10:00	03/01/17 16:35	1
Cobalt	0.0112		0.000500		mg/L		02/22/17 10:00	03/01/17 16:35	1
Lead	0.00710		0.000500		mg/L		02/22/17 10:00	03/01/17 16:35	1
Molybdenum	0.00214		0.00200		mg/L		02/22/17 10:00	03/01/17 16:35	1
Selenium	<0.00500		0.00500		mg/L		02/22/17 10:00	03/01/17 16:35	1
Thallium	<0.00100		0.00100		mg/L		02/22/17 10:00	03/01/17 16:35	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		02/23/17 08:21	02/24/17 11:42	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	2250		60.0		mg/L			02/21/17 14:31	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-1

**Client Sample ID: MW18**  
**Date Collected: 02/17/17 08:34**  
**Date Received: 02/21/17 09:20**

**Lab Sample ID: 310-99845-7**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			02/22/17 15:00	5
<b>Fluoride</b>	<b>0.508</b>		0.500		mg/L			02/22/17 15:00	5
Sulfate	<5.00		5.00		mg/L			02/22/17 15:00	5

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		02/22/17 10:00	02/22/17 22:57	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		02/22/17 10:00	03/02/17 12:24	1
Arsenic	<0.00200		0.00200		mg/L		02/22/17 10:00	03/02/17 12:24	1
<b>Barium</b>	<b>0.314</b>		0.00200		mg/L		02/22/17 10:00	03/01/17 16:38	1
Beryllium	<0.00100		0.00100		mg/L		02/22/17 10:00	03/01/17 16:38	1
Boron	<0.200		0.200		mg/L		02/22/17 10:00	03/01/17 16:38	1
Cadmium	<0.000500		0.000500		mg/L		02/22/17 10:00	03/01/17 16:38	1
<b>Calcium</b>	<b>94.8</b>		0.200		mg/L		02/22/17 10:00	03/01/17 16:38	1
Chromium	<0.00500		0.00500		mg/L		02/22/17 10:00	03/01/17 16:38	1
Cobalt	<0.000500		0.000500		mg/L		02/22/17 10:00	03/01/17 16:38	1
Lead	<0.000500		0.000500		mg/L		02/22/17 10:00	03/01/17 16:38	1
Molybdenum	<0.00200		0.00200		mg/L		02/22/17 10:00	03/01/17 16:38	1
Selenium	<0.00500		0.00500		mg/L		02/22/17 10:00	03/01/17 16:38	1
Thallium	<0.00100		0.00100		mg/L		02/22/17 10:00	03/01/17 16:38	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		02/23/17 08:21	02/24/17 11:43	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>474</b>		30.0		mg/L			02/21/17 14:31	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-1

**Client Sample ID: MW19**  
**Date Collected: 02/17/17 09:04**  
**Date Received: 02/21/17 09:20**

**Lab Sample ID: 310-99845-8**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.55		1.00		mg/L			02/22/17 15:26	1
Fluoride	0.418		0.100		mg/L			02/22/17 15:26	1
Sulfate	15.7		1.00		mg/L			02/22/17 15:26	1

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		02/22/17 10:00	02/22/17 22:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		02/22/17 10:00	03/02/17 12:27	1
Arsenic	<0.00200		0.00200		mg/L		02/22/17 10:00	03/02/17 12:27	1
Barium	0.281		0.00200		mg/L		02/22/17 10:00	03/01/17 16:41	1
Beryllium	<0.00100		0.00100		mg/L		02/22/17 10:00	03/01/17 16:41	1
Boron	<0.200		0.200		mg/L		02/22/17 10:00	03/01/17 16:41	1
Cadmium	<0.000500		0.000500		mg/L		02/22/17 10:00	03/01/17 16:41	1
Calcium	90.5		0.200		mg/L		02/22/17 10:00	03/01/17 16:41	1
Chromium	<0.00500		0.00500		mg/L		02/22/17 10:00	03/01/17 16:41	1
Cobalt	<0.000500		0.000500		mg/L		02/22/17 10:00	03/01/17 16:41	1
Lead	<0.000500		0.000500		mg/L		02/22/17 10:00	03/01/17 16:41	1
Molybdenum	<0.00200		0.00200		mg/L		02/22/17 10:00	03/01/17 16:41	1
Selenium	<0.00500		0.00500		mg/L		02/22/17 10:00	03/01/17 16:41	1
Thallium	<0.00100		0.00100		mg/L		02/22/17 10:00	03/01/17 16:41	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		02/23/17 08:21	02/24/17 11:45	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	484		30.0		mg/L			02/21/17 14:31	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-1

**Client Sample ID: DUP-1**

**Date Collected: 02/17/17 11:04**

**Date Received: 02/21/17 09:20**

**Lab Sample ID: 310-99845-9**

**Matrix: Ground Water**

**Method: 9056A - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.45		5.00		mg/L			03/07/17 11:07	5
Fluoride	0.571		0.500		mg/L			03/07/17 11:07	5
Sulfate	584		20.0		mg/L			02/22/17 15:52	20

**Method: 6010C - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		02/22/17 10:00	02/22/17 23:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		02/22/17 10:00	03/02/17 12:30	1
Arsenic	0.105		0.00200		mg/L		02/22/17 10:00	03/02/17 12:30	1
Barium	0.0928		0.00200		mg/L		02/22/17 10:00	03/01/17 16:44	1
Beryllium	<0.00100		0.00100		mg/L		02/22/17 10:00	03/01/17 16:44	1
Boron	1.89		0.200		mg/L		02/22/17 10:00	03/01/17 16:44	1
Cadmium	<0.000500		0.000500		mg/L		02/22/17 10:00	03/01/17 16:44	1
Calcium	149		0.200		mg/L		02/22/17 10:00	03/01/17 16:44	1
Chromium	<0.00500		0.00500		mg/L		02/22/17 10:00	03/01/17 16:44	1
Cobalt	<0.000500		0.000500		mg/L		02/22/17 10:00	03/01/17 16:44	1
Lead	<0.000500		0.000500		mg/L		02/22/17 10:00	03/01/17 16:44	1
Molybdenum	0.774		0.00200		mg/L		02/22/17 10:00	03/01/17 16:44	1
Selenium	0.0320		0.00500		mg/L		02/22/17 10:00	03/01/17 16:44	1
Thallium	<0.00100		0.00100		mg/L		02/22/17 10:00	03/01/17 16:44	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		02/23/17 08:21	02/24/17 11:47	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1260		60.0		mg/L			02/21/17 14:31	1

# Definitions/Glossary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-1

## 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.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)



# QC Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-1

## Method: 9056A - Anions, Ion Chromatography

**Lab Sample ID: MB 310-157918/3**  
**Matrix: Water**  
**Analysis Batch: 157918**

**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			02/21/17 20:55	1
Fluoride	<0.100		0.100		mg/L			02/21/17 20:55	1
Sulfate	<1.00		1.00		mg/L			02/21/17 20:55	1

**Lab Sample ID: LCS 310-157918/4**  
**Matrix: Water**  
**Analysis Batch: 157918**

**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	7.472		mg/L		100	90 - 110
Fluoride	1.50	1.557		mg/L		104	90 - 110
Sulfate	7.50	8.054		mg/L		107	90 - 110

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 310-157787/1-A**  
**Matrix: Water**  
**Analysis Batch: 157960**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 157787**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		02/22/17 10:00	02/22/17 22:04	1

**Lab Sample ID: LCS 310-157787/2-A**  
**Matrix: Water**  
**Analysis Batch: 157960**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 157787**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	2.00	1.937		mg/L		97	80 - 120

**Lab Sample ID: 310-99845-2 MS**  
**Matrix: Ground Water**  
**Analysis Batch: 157960**

**Client Sample ID: MW9**  
**Prep Type: Total/NA**  
**Prep Batch: 157787**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	<0.0500		2.00	1.965		mg/L		96	75 - 125

**Lab Sample ID: 310-99845-2 MSD**  
**Matrix: Ground Water**  
**Analysis Batch: 157960**

**Client Sample ID: MW9**  
**Prep Type: Total/NA**  
**Prep Batch: 157787**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lithium	<0.0500		2.00	1.970		mg/L		97	75 - 125	0	20

**Lab Sample ID: 310-99845-1 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 157960**

**Client Sample ID: MW2**  
**Prep Type: Total/NA**  
**Prep Batch: 157787**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Lithium	<0.0500		<0.0500		mg/L		NC	20

TestAmerica Cedar Falls

# QC Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-1

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

**Lab Sample ID: MB 310-157789/1-A**  
**Matrix: Water**  
**Analysis Batch: 158663**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 157789**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		02/22/17 10:00	03/01/17 12:46	1
Arsenic	<0.00200		0.00200		mg/L		02/22/17 10:00	03/01/17 12:46	1
Barium	<0.00200		0.00200		mg/L		02/22/17 10:00	03/01/17 12:46	1
Beryllium	<0.00100		0.00100		mg/L		02/22/17 10:00	03/01/17 12:46	1
Boron	<0.200		0.200		mg/L		02/22/17 10:00	03/01/17 12:46	1
Cadmium	<0.000500		0.000500		mg/L		02/22/17 10:00	03/01/17 12:46	1
Calcium	<0.200		0.200		mg/L		02/22/17 10:00	03/01/17 12:46	1
Chromium	<0.00500		0.00500		mg/L		02/22/17 10:00	03/01/17 12:46	1
Cobalt	<0.000500		0.000500		mg/L		02/22/17 10:00	03/01/17 12:46	1
Lead	<0.000500		0.000500		mg/L		02/22/17 10:00	03/01/17 12:46	1
Molybdenum	<0.00200		0.00200		mg/L		02/22/17 10:00	03/01/17 12:46	1
Selenium	<0.00500		0.00500		mg/L		02/22/17 10:00	03/01/17 12:46	1
Thallium	<0.00100		0.00100		mg/L		02/22/17 10:00	03/01/17 12:46	1

**Lab Sample ID: LCS 310-157789/2-A**  
**Matrix: Water**  
**Analysis Batch: 158663**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 157789**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0200	0.02082		mg/L		104	80 - 120
Arsenic	0.0400	0.04540		mg/L		114	80 - 120
Barium	0.0400	0.04319		mg/L		108	80 - 120
Beryllium	0.0200	0.02016		mg/L		101	80 - 120
Boron	0.880	0.8776		mg/L		100	80 - 120
Cadmium	0.0200	0.02057		mg/L		103	80 - 120
Calcium	2.00	2.114		mg/L		106	80 - 120
Chromium	0.0400	0.04120		mg/L		103	80 - 120
Cobalt	0.0200	0.01992		mg/L		100	80 - 120
Lead	0.0200	0.02081		mg/L		104	80 - 120
Molybdenum	0.0400	0.03983		mg/L		100	80 - 120
Selenium	0.0400	0.03821		mg/L		96	80 - 120
Thallium	0.0160	0.01641		mg/L		103	80 - 120

**Lab Sample ID: 310-99845-3 MS**  
**Matrix: Ground Water**  
**Analysis Batch: 158663**

**Client Sample ID: MW13**  
**Prep Type: Total/NA**  
**Prep Batch: 157789**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	<0.00100		0.0200	0.02391		mg/L		118	75 - 125
Arsenic	0.112	F1	0.0400	0.1523		mg/L		102	75 - 125
Barium	0.0946		0.0400	0.1359		mg/L		103	75 - 125
Beryllium	<0.00100		0.0200	0.02118		mg/L		106	75 - 125
Boron	2.02		0.880	2.706		mg/L		78	75 - 125
Cadmium	<0.000500		0.0200	0.02152		mg/L		106	75 - 125
Calcium	153		2.00	150.0	4	mg/L		-170	75 - 125
Chromium	<0.00500		0.0400	0.03839		mg/L		96	75 - 125
Cobalt	<0.000500		0.0200	0.02018		mg/L		99	75 - 125
Lead	<0.000500		0.0200	0.02031		mg/L		100	75 - 125

TestAmerica Cedar Falls

# QC Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-1

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

**Lab Sample ID: 310-99845-3 MS**  
**Matrix: Ground Water**  
**Analysis Batch: 158663**

**Client Sample ID: MW13**  
**Prep Type: Total/NA**  
**Prep Batch: 157789**  
**%Rec.**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Molybdenum	0.817		0.0400	0.8226	4	mg/L		13	75 - 125
Selenium	0.0345		0.0400	0.07503		mg/L		101	75 - 125
Thallium	<0.00100		0.0160	0.01709		mg/L		107	75 - 125

**Lab Sample ID: 310-99845-3 MSD**  
**Matrix: Ground Water**  
**Analysis Batch: 158663**

**Client Sample ID: MW13**  
**Prep Type: Total/NA**  
**Prep Batch: 157789**  
**%Rec.**  
**RPD**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	<0.00100		0.0200	0.02524		mg/L		124	75 - 125	5	20
Arsenic	0.112	F1	0.0400	0.1633	F1	mg/L		130	75 - 125	7	20
Barium	0.0946		0.0400	0.1438		mg/L		123	75 - 125	6	20
Beryllium	<0.00100		0.0200	0.02150		mg/L		107	75 - 125	1	20
Boron	2.02		0.880	2.940		mg/L		105	75 - 125	8	20
Cadmium	<0.000500		0.0200	0.02285		mg/L		113	75 - 125	6	20
Calcium	153		2.00	160.4	4	mg/L		349	75 - 125	7	20
Chromium	<0.00500		0.0400	0.04102		mg/L		103	75 - 125	7	20
Cobalt	<0.000500		0.0200	0.02145		mg/L		105	75 - 125	6	20
Lead	<0.000500		0.0200	0.02141		mg/L		105	75 - 125	5	20
Molybdenum	0.817		0.0400	0.8859	4	mg/L		171	75 - 125	7	20
Selenium	0.0345		0.0400	0.08040		mg/L		115	75 - 125	7	20
Thallium	<0.00100		0.0160	0.01786		mg/L		112	75 - 125	4	20

**Lab Sample ID: 310-99845-1 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 158663**

**Client Sample ID: MW2**  
**Prep Type: Total/NA**  
**Prep Batch: 157789**  
**%Rec.**  
**RPD**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Antimony	<0.00100		<0.00100		mg/L		NC	20
Arsenic	0.234		0.2566		mg/L		9	20
Barium	0.126		0.1333		mg/L		6	20
Beryllium	<0.00100		<0.00100		mg/L		NC	20
Boron	1.92		2.136		mg/L		11	20
Cadmium	<0.000500		<0.000500		mg/L		NC	20
Calcium	292		312.3		mg/L		7	20
Chromium	<0.00500		<0.00500		mg/L		NC	20
Cobalt	0.000656		0.0007030		mg/L		7	20
Lead	<0.000500		<0.000500		mg/L		NC	20
Molybdenum	<0.00200		<0.00200		mg/L		NC	20
Selenium	<0.00500		<0.00500		mg/L		NC	20
Thallium	<0.00100		<0.00100		mg/L		NC	20

TestAmerica Cedar Falls

# QC Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-1

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 310-157953/1-A**  
**Matrix: Water**  
**Analysis Batch: 158127**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 157953**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		02/23/17 08:21	02/24/17 11:15	1

**Lab Sample ID: LCS 310-157953/2-A**  
**Matrix: Water**  
**Analysis Batch: 158127**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 157953**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00167	0.001709		mg/L		103	80 - 120

**Lab Sample ID: 310-99845-4 MS**  
**Matrix: Ground Water**  
**Analysis Batch: 158127**

**Client Sample ID: MW15**  
**Prep Type: Total/NA**  
**Prep Batch: 157953**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.000200		0.00167	0.001892		mg/L		114	80 - 120

**Lab Sample ID: 310-99845-4 MSD**  
**Matrix: Ground Water**  
**Analysis Batch: 158127**

**Client Sample ID: MW15**  
**Prep Type: Total/NA**  
**Prep Batch: 157953**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000200		0.00167	0.001901		mg/L		114	80 - 120	0	20

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

**Lab Sample ID: MB 310-157756/25**  
**Matrix: Water**  
**Analysis Batch: 157756**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<30.0		30.0		mg/L			02/21/17 10:33	1

**Lab Sample ID: LCS 310-157756/26**  
**Matrix: Water**  
**Analysis Batch: 157756**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	1000	1004		mg/L		100	90 - 110

**Lab Sample ID: 310-99845-1 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 157756**

**Client Sample ID: MW2**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	2120		1980		mg/L		7	24

TestAmerica Cedar Falls

# QC Association Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-1

## HPLC/IC

### Analysis Batch: 157918

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99845-1	MW2	Total/NA	Ground Water	9056A	
310-99845-1	MW2	Total/NA	Ground Water	9056A	
310-99845-2	MW9	Total/NA	Ground Water	9056A	
310-99845-2	MW9	Total/NA	Ground Water	9056A	
310-99845-3	MW13	Total/NA	Ground Water	9056A	
310-99845-3	MW13	Total/NA	Ground Water	9056A	
310-99845-4	MW15	Total/NA	Ground Water	9056A	
310-99845-4	MW15	Total/NA	Ground Water	9056A	
310-99845-5	MW16	Total/NA	Ground Water	9056A	
310-99845-5	MW16	Total/NA	Ground Water	9056A	
310-99845-6	MW17	Total/NA	Ground Water	9056A	
310-99845-6	MW17	Total/NA	Ground Water	9056A	
310-99845-7	MW18	Total/NA	Ground Water	9056A	
310-99845-8	MW19	Total/NA	Ground Water	9056A	
310-99845-9	DUP-1	Total/NA	Ground Water	9056A	
310-99845-9	DUP-1	Total/NA	Ground Water	9056A	
MB 310-157918/3	Method Blank	Total/NA	Water	9056A	
LCS 310-157918/4	Lab Control Sample	Total/NA	Water	9056A	

## Metals

### Prep Batch: 157787

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99845-1	MW2	Total/NA	Ground Water	3010A	
310-99845-2	MW9	Total/NA	Ground Water	3010A	
310-99845-3	MW13	Total/NA	Ground Water	3010A	
310-99845-4	MW15	Total/NA	Ground Water	3010A	
310-99845-5	MW16	Total/NA	Ground Water	3010A	
310-99845-6	MW17	Total/NA	Ground Water	3010A	
310-99845-7	MW18	Total/NA	Ground Water	3010A	
310-99845-8	MW19	Total/NA	Ground Water	3010A	
310-99845-9	DUP-1	Total/NA	Ground Water	3010A	
MB 310-157787/1-A	Method Blank	Total/NA	Water	3010A	
LCS 310-157787/2-A	Lab Control Sample	Total/NA	Water	3010A	
310-99845-2 MS	MW9	Total/NA	Ground Water	3010A	
310-99845-2 MSD	MW9	Total/NA	Ground Water	3010A	
310-99845-1 DU	MW2	Total/NA	Ground Water	3010A	

### Prep Batch: 157789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99845-1	MW2	Total/NA	Ground Water	3010A	
310-99845-2	MW9	Total/NA	Ground Water	3010A	
310-99845-3	MW13	Total/NA	Ground Water	3010A	
310-99845-4	MW15	Total/NA	Ground Water	3010A	
310-99845-5	MW16	Total/NA	Ground Water	3010A	
310-99845-6	MW17	Total/NA	Ground Water	3010A	
310-99845-7	MW18	Total/NA	Ground Water	3010A	
310-99845-8	MW19	Total/NA	Ground Water	3010A	
310-99845-9	DUP-1	Total/NA	Ground Water	3010A	
MB 310-157789/1-A	Method Blank	Total/NA	Water	3010A	

TestAmerica Cedar Falls

# QC Association Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-1

## Metals (Continued)

### Prep Batch: 157789 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 310-157789/2-A	Lab Control Sample	Total/NA	Water	3010A	
310-99845-3 MS	MW13	Total/NA	Ground Water	3010A	
310-99845-3 MSD	MW13	Total/NA	Ground Water	3010A	
310-99845-1 DU	MW2	Total/NA	Ground Water	3010A	

### Prep Batch: 157953

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99845-1	MW2	Total/NA	Ground Water	7470A	
310-99845-2	MW9	Total/NA	Ground Water	7470A	
310-99845-3	MW13	Total/NA	Ground Water	7470A	
310-99845-4	MW15	Total/NA	Ground Water	7470A	
310-99845-5	MW16	Total/NA	Ground Water	7470A	
310-99845-6	MW17	Total/NA	Ground Water	7470A	
310-99845-7	MW18	Total/NA	Ground Water	7470A	
310-99845-8	MW19	Total/NA	Ground Water	7470A	
310-99845-9	DUP-1	Total/NA	Ground Water	7470A	
MB 310-157953/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-157953/2-A	Lab Control Sample	Total/NA	Water	7470A	
310-99845-4 MS	MW15	Total/NA	Ground Water	7470A	
310-99845-4 MSD	MW15	Total/NA	Ground Water	7470A	

### Analysis Batch: 157960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99845-1	MW2	Total/NA	Ground Water	6010C	157787
310-99845-2	MW9	Total/NA	Ground Water	6010C	157787
310-99845-3	MW13	Total/NA	Ground Water	6010C	157787
310-99845-4	MW15	Total/NA	Ground Water	6010C	157787
310-99845-5	MW16	Total/NA	Ground Water	6010C	157787
310-99845-6	MW17	Total/NA	Ground Water	6010C	157787
310-99845-7	MW18	Total/NA	Ground Water	6010C	157787
310-99845-8	MW19	Total/NA	Ground Water	6010C	157787
310-99845-9	DUP-1	Total/NA	Ground Water	6010C	157787
MB 310-157787/1-A	Method Blank	Total/NA	Water	6010C	157787
LCS 310-157787/2-A	Lab Control Sample	Total/NA	Water	6010C	157787
310-99845-2 MS	MW9	Total/NA	Ground Water	6010C	157787
310-99845-2 MSD	MW9	Total/NA	Ground Water	6010C	157787
310-99845-1 DU	MW2	Total/NA	Ground Water	6010C	157787

### Analysis Batch: 158127

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99845-1	MW2	Total/NA	Ground Water	7470A	157953
310-99845-2	MW9	Total/NA	Ground Water	7470A	157953
310-99845-3	MW13	Total/NA	Ground Water	7470A	157953
310-99845-4	MW15	Total/NA	Ground Water	7470A	157953
310-99845-5	MW16	Total/NA	Ground Water	7470A	157953
310-99845-6	MW17	Total/NA	Ground Water	7470A	157953
310-99845-7	MW18	Total/NA	Ground Water	7470A	157953
310-99845-8	MW19	Total/NA	Ground Water	7470A	157953
310-99845-9	DUP-1	Total/NA	Ground Water	7470A	157953
MB 310-157953/1-A	Method Blank	Total/NA	Water	7470A	157953
LCS 310-157953/2-A	Lab Control Sample	Total/NA	Water	7470A	157953

TestAmerica Cedar Falls

# QC Association Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-1

## Metals (Continued)

### Analysis Batch: 158127 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99845-4 MS	MW15	Total/NA	Ground Water	7470A	157953
310-99845-4 MSD	MW15	Total/NA	Ground Water	7470A	157953

### Analysis Batch: 158663

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99845-1	MW2	Total/NA	Ground Water	6020A	157789
310-99845-2	MW9	Total/NA	Ground Water	6020A	157789
310-99845-3	MW13	Total/NA	Ground Water	6020A	157789
310-99845-4	MW15	Total/NA	Ground Water	6020A	157789
310-99845-5	MW16	Total/NA	Ground Water	6020A	157789
310-99845-6	MW17	Total/NA	Ground Water	6020A	157789
310-99845-7	MW18	Total/NA	Ground Water	6020A	157789
310-99845-8	MW19	Total/NA	Ground Water	6020A	157789
310-99845-9	DUP-1	Total/NA	Ground Water	6020A	157789
MB 310-157789/1-A	Method Blank	Total/NA	Water	6020A	157789
LCS 310-157789/2-A	Lab Control Sample	Total/NA	Water	6020A	157789
310-99845-3 MS	MW13	Total/NA	Ground Water	6020A	157789
310-99845-3 MSD	MW13	Total/NA	Ground Water	6020A	157789
310-99845-1 DU	MW2	Total/NA	Ground Water	6020A	157789

### Analysis Batch: 158781

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99845-6	MW17	Total/NA	Ground Water	6020A	157789
310-99845-7	MW18	Total/NA	Ground Water	6020A	157789
310-99845-8	MW19	Total/NA	Ground Water	6020A	157789
310-99845-9	DUP-1	Total/NA	Ground Water	6020A	157789

## General Chemistry

### Analysis Batch: 157756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99845-1	MW2	Total/NA	Ground Water	SM 2540C	
310-99845-2	MW9	Total/NA	Ground Water	SM 2540C	
310-99845-3	MW13	Total/NA	Ground Water	SM 2540C	
310-99845-4	MW15	Total/NA	Ground Water	SM 2540C	
310-99845-5	MW16	Total/NA	Ground Water	SM 2540C	
310-99845-6	MW17	Total/NA	Ground Water	SM 2540C	
310-99845-7	MW18	Total/NA	Ground Water	SM 2540C	
310-99845-8	MW19	Total/NA	Ground Water	SM 2540C	
310-99845-9	DUP-1	Total/NA	Ground Water	SM 2540C	
MB 310-157756/25	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-157756/26	Lab Control Sample	Total/NA	Water	SM 2540C	
310-99845-1 DU	MW2	Total/NA	Ground Water	SM 2540C	

TestAmerica Cedar Falls



# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-1

**Client Sample ID: MW2**  
**Date Collected: 02/17/17 10:34**  
**Date Received: 02/21/17 09:20**

**Lab Sample ID: 310-99845-1**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	157918	02/22/17 02:31	AJG	TAL CF
Total/NA	Analysis	9056A		50	157918	02/22/17 11:34	AJG	TAL CF
Total/NA	Prep	3010A			157787	02/22/17 10:00	SAD	TAL CF
Total/NA	Analysis	6010C		1	157960	02/22/17 22:33	OAD	TAL CF
Total/NA	Prep	3010A			157789	02/22/17 10:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	158663	03/01/17 15:58	OAD	TAL CF
Total/NA	Prep	7470A			157953	02/23/17 08:21	SAD	TAL CF
Total/NA	Analysis	7470A		1	158127	02/24/17 11:18	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	157756	02/21/17 14:31	MDK	TAL CF

**Client Sample ID: MW9**  
**Date Collected: 02/17/17 09:34**  
**Date Received: 02/21/17 09:20**

**Lab Sample ID: 310-99845-2**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	157918	02/22/17 02:56	AJG	TAL CF
Total/NA	Analysis	9056A		5	157918	02/22/17 12:00	AJG	TAL CF
Total/NA	Prep	3010A			157787	02/22/17 10:00	SAD	TAL CF
Total/NA	Analysis	6010C		1	157960	02/22/17 22:37	OAD	TAL CF
Total/NA	Prep	3010A			157789	02/22/17 10:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	158663	03/01/17 16:04	OAD	TAL CF
Total/NA	Prep	7470A			157953	02/23/17 08:21	SAD	TAL CF
Total/NA	Analysis	7470A		1	158127	02/24/17 11:19	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	157756	02/21/17 14:31	MDK	TAL CF

**Client Sample ID: MW13**  
**Date Collected: 02/17/17 11:02**  
**Date Received: 02/21/17 09:20**

**Lab Sample ID: 310-99845-3**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	157918	02/22/17 03:23	AJG	TAL CF
Total/NA	Analysis	9056A		50	157918	02/22/17 12:25	AJG	TAL CF
Total/NA	Prep	3010A			157787	02/22/17 10:00	SAD	TAL CF
Total/NA	Analysis	6010C		1	157960	02/22/17 22:45	OAD	TAL CF
Total/NA	Prep	3010A			157789	02/22/17 10:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	158663	03/01/17 16:07	OAD	TAL CF
Total/NA	Prep	7470A			157953	02/23/17 08:21	SAD	TAL CF
Total/NA	Analysis	7470A		1	158127	02/24/17 11:21	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	157756	02/21/17 14:31	MDK	TAL CF



# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-1

**Client Sample ID: MW15**

**Date Collected: 02/17/17 11:46**

**Date Received: 02/21/17 09:20**

**Lab Sample ID: 310-99845-4**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	157918	02/22/17 03:49	AJG	TAL CF
Total/NA	Analysis	9056A		50	157918	02/22/17 12:51	AJG	TAL CF
Total/NA	Prep	3010A			157787	02/22/17 10:00	SAD	TAL CF
Total/NA	Analysis	6010C		1	157960	02/22/17 22:51	OAD	TAL CF
Total/NA	Prep	3010A			157789	02/22/17 10:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	158663	03/01/17 16:19	OAD	TAL CF
Total/NA	Prep	7470A			157953	02/23/17 08:21	SAD	TAL CF
Total/NA	Analysis	7470A		1	158127	02/24/17 11:23	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	157756	02/21/17 14:31	MDK	TAL CF

**Client Sample ID: MW16**

**Date Collected: 02/17/17 10:06**

**Date Received: 02/21/17 09:20**

**Lab Sample ID: 310-99845-5**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	157918	02/22/17 05:06	AJG	TAL CF
Total/NA	Analysis	9056A		20	157918	02/22/17 14:09	AJG	TAL CF
Total/NA	Prep	3010A			157787	02/22/17 10:00	SAD	TAL CF
Total/NA	Analysis	6010C		1	157960	02/22/17 22:53	OAD	TAL CF
Total/NA	Prep	3010A			157789	02/22/17 10:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	158663	03/01/17 16:22	OAD	TAL CF
Total/NA	Prep	7470A			157953	02/23/17 08:21	SAD	TAL CF
Total/NA	Analysis	7470A		1	158127	02/24/17 11:27	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	157756	02/21/17 14:31	MDK	TAL CF

**Client Sample ID: MW17**

**Date Collected: 02/17/17 12:22**

**Date Received: 02/21/17 09:20**

**Lab Sample ID: 310-99845-6**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	157918	02/22/17 05:32	AJG	TAL CF
Total/NA	Analysis	9056A		50	157918	02/22/17 14:35	AJG	TAL CF
Total/NA	Prep	3010A			157787	02/22/17 10:00	SAD	TAL CF
Total/NA	Analysis	6010C		1	157960	02/22/17 22:55	OAD	TAL CF
Total/NA	Prep	3010A			157789	02/22/17 10:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	158663	03/01/17 16:35	OAD	TAL CF
Total/NA	Prep	3010A			157789	02/22/17 10:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	158781	03/02/17 12:21	OAD	TAL CF
Total/NA	Prep	7470A			157953	02/23/17 08:21	SAD	TAL CF
Total/NA	Analysis	7470A		1	158127	02/24/17 11:42	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	157756	02/21/17 14:31	MDK	TAL CF

TestAmerica Cedar Falls

# Lab Chronicle

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-1

## Client Sample ID: MW18

Date Collected: 02/17/17 08:34

Date Received: 02/21/17 09:20

## Lab Sample ID: 310-99845-7

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	157918	02/22/17 15:00	AJG	TAL CF
Total/NA	Prep	3010A			157787	02/22/17 10:00	SAD	TAL CF
Total/NA	Analysis	6010C		1	157960	02/22/17 22:57	OAD	TAL CF
Total/NA	Prep	3010A			157789	02/22/17 10:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	158663	03/01/17 16:38	OAD	TAL CF
Total/NA	Prep	3010A			157789	02/22/17 10:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	158781	03/02/17 12:24	OAD	TAL CF
Total/NA	Prep	7470A			157953	02/23/17 08:21	SAD	TAL CF
Total/NA	Analysis	7470A		1	158127	02/24/17 11:43	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	157756	02/21/17 14:31	MDK	TAL CF

## Client Sample ID: MW19

Date Collected: 02/17/17 09:04

Date Received: 02/21/17 09:20

## Lab Sample ID: 310-99845-8

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	157918	02/22/17 15:26	AJG	TAL CF
Total/NA	Prep	3010A			157787	02/22/17 10:00	SAD	TAL CF
Total/NA	Analysis	6010C		1	157960	02/22/17 22:59	OAD	TAL CF
Total/NA	Prep	3010A			157789	02/22/17 10:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	158663	03/01/17 16:41	OAD	TAL CF
Total/NA	Prep	3010A			157789	02/22/17 10:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	158781	03/02/17 12:27	OAD	TAL CF
Total/NA	Prep	7470A			157953	02/23/17 08:21	SAD	TAL CF
Total/NA	Analysis	7470A		1	158127	02/24/17 11:45	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	157756	02/21/17 14:31	MDK	TAL CF

## Client Sample ID: DUP-1

Date Collected: 02/17/17 11:04

Date Received: 02/21/17 09:20

## Lab Sample ID: 310-99845-9

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		20	157918	02/22/17 15:52	AJG	TAL CF
Total/NA	Analysis	9056A		5	157918	03/07/17 11:07	AJG	TAL CF
Total/NA	Prep	3010A			157787	02/22/17 10:00	SAD	TAL CF
Total/NA	Analysis	6010C		1	157960	02/22/17 23:01	OAD	TAL CF
Total/NA	Prep	3010A			157789	02/22/17 10:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	158663	03/01/17 16:44	OAD	TAL CF
Total/NA	Prep	3010A			157789	02/22/17 10:00	SAD	TAL CF
Total/NA	Analysis	6020A		1	158781	03/02/17 12:30	OAD	TAL CF
Total/NA	Prep	7470A			157953	02/23/17 08:21	SAD	TAL CF
Total/NA	Analysis	7470A		1	158127	02/24/17 11:47	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	157756	02/21/17 14:31	MDK	TAL CF

TestAmerica Cedar Falls

# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-1

**Laboratory References:**

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

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# Certification Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-1

## 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: North Omaha Station CCR

TestAmerica Job ID: 310-99845-1

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





**Cooler/Sample Receipt and Temperature Log Form**

<b>Client Information</b>	
Client: <u>Omaha Public Power District</u>	
City/State: <u>Omaha NE</u>	Project: <u>North Omaha station COR</u>
<b>Receipt Information</b>	
Date/Time Received: <u>2-21-17 920</u>	Received By: <u>KP</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID: <u>AA-53</u>
Multiple Coolers? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>1</u> of <u>2</u>
Cooler Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Trip Blank Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓
<b>Temperature Record</b>	
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE	
Temperature Blank? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: <u>5</u>	Correction Factor (°C): <u>+0.1</u>
Uncorrected Temp (°C): <u>2.9</u>	Corrected Temp (°C): <u>3.0</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	

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310503

**Cooler/Sample Receipt and Temperature Log Form**

<b>Client Information</b>	
Client: <u>Omaha Public Power District</u>	
City/State: <u>Omaha NE</u>	Project: <u>North Omaha Station</u>
<b>Receipt Information</b>	
Date/Time Received: <u>2-21-17 920</u>	Received By: <u>KP</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID: <u>AA-2</u>
Multiple Coolers? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>2</u> of <u>2</u>
Cooler Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Trip Blank Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓
<b>Temperature Record</b>	
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE	
Temperature Blank? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: <u>5</u>	Correction Factor (°C): <u>+0.1</u>
Uncorrected Temp (°C): <u>3.6</u>	Corrected Temp (°C): <u>3.7</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	

CCR

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**Chain of Custody Record**

<b>Client Information</b>		Sampling: <u>Brad Sojka</u>		Lab PM: <u>Hayes, Shawn M</u>		Carrier Tracking No(s):	
Client Contact: <u>Brad Sojka</u>		Phone: <u>502-636-2575</u>		E-Mail: <u>shawn.hayes@testamericainc.com</u>		Page:	
Company: <u>Omaha Public Power District</u>		Due Date Requested:		Analysis Requested		COC No:	
Address: <u>444 South 16th Street Mall 9E/EP1</u>		TAT Requested (days):		Form M/MSD (Yes or No)		Total Number of Containers	
City: <u>Omaha</u>		PO #:		Field Filtered Sample (Yes or No)		Preservation Codes:	
State: <u>NE</u>		WO #:		D N		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 Other:	
Phone: <u>402-636-2515(Tel)</u>		TestAmerica Project #:		9315, Raz26, 9320, Raz28, Combined Raz26 and Raz28		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)	
Email: <u>bsojka@oppd.com</u>		SSOW#:		6010C Lithium, 6020A CCR List, 7470A Mercury		Special Instructions/Note:	
Project Name: <u>North Omaha Station CCR</u>		Sample Date		6010C Lithium, 6020A CCR List, 7470A Mercury			
Site:		Sample Time		2540C TDS, 9056A Chloride, Fluoride, Sulfate			
<b>Sample Identification</b>		Preservation Code:					
MW2		G		GW			
MW5		G		GW			
MW6		G		GW			
MW8		G		GW			
MW9		G		GW			
MW13		G		GW			
MW15		G		GW			
MW16		G		GW			
MW17		G		GW			
MW18		G		GW			
MW19		G		GW			
<b>Possible Hazard Identification</b>		<input type="checkbox"/> Non-Hazard		<input type="checkbox"/> Flammable		<input type="checkbox"/> Skin Irritant	
Deliverable Requested: I, II, III, IV, Other (specify)		<input type="checkbox"/> Poison B		<input type="checkbox"/> Unknown		<input type="checkbox"/> Radiological	
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/20/17 11:00</u>		Company: <u>FA</u>		Date/Time: <u>2-2-17 920</u>	
Relinquished by:		Date/Time:		Company:		Date/Time:	
Relinquished by:		Date/Time:		Company:		Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:			





Temperature readings: \_\_\_\_\_

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u>	<u>Preservative</u>	<u>Lot #</u>
			<u>pH</u>	<u>Added (mls)</u>	
MW2	310-99845-A-1	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW2	310-99845-C-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-99845-D-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-99845-A-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW9	310-99845-C-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-99845-D-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-99845-A-3	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW13	310-99845-C-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-99845-D-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW15	310-99845-A-4	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW15	310-99845-C-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW15	310-99845-D-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW16	310-99845-A-5	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW16	310-99845-C-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW16	310-99845-D-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW17	310-99845-A-6	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW17	310-99845-C-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW17	310-99845-D-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW18	310-99845-A-7	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW18	310-99845-C-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW18	310-99845-D-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW19	310-99845-A-8	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW19	310-99845-C-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW19	310-99845-D-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-1	310-99845-A-9	Plastic 250ml - with Nitric Acid	<2	_____	_____
DUP-1	310-99845-C-9	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-1	310-99845-D-9	Plastic 1 liter - Nitric Acid	<2	_____	_____

# Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-99845-1

**Login Number: 99845**

**List Source: TestAmerica Cedar Falls**

**List Number: 1**

**Creator: Patrick, Kathryn A**

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



# TestAmerica

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: 310-99845-2  
Client Project/Site: North Omaha Station CCR

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:  
3/22/2017 1:30:55 PM

Shawn Hayes, Senior Project Manager  
(319)277-2401  
[shawn.hayes@testamericainc.com](mailto:shawn.hayes@testamericainc.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.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: North Omaha Station CCR

TestAmerica Job ID: 310-99845-2

**Job ID: 310-99845-2**

**Laboratory: TestAmerica Cedar Falls**

## Narrative

### Job Narrative 310-99845-2

#### Comments

No additional comments.

#### Receipt

The samples were received on 2/21/2017 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.0° C and 3.7° C.

#### RAD

Method(s) 9320: Radium-228 Prep batch 160-294755:

The detection goal was not met for the following sample due to the reduced sample volume attributed to the presence of matrix interferences MW2 (310-99845-1). Analytical results are reported with the detection limit achieved.

Method(s) PrecSep\_0: Radium-228 Prep batch 160-294755:

The following samples were prepared at a reduced sample volume due to matrix interferences. The samples contained significant sediment and floating debris; MW2 (310-99845-1) and MW9 (310-99845-2)

Method(s) PrecSep-21: Radium-226 Prep batch 160-294745:

The following samples were prepared at a reduced sample volume due to matrix interferences. The samples contained significant sediment and floating debris; MW2 (310-99845-1) and MW9 (310-99845-2)

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: North Omaha Station CCR

TestAmerica Job ID: 310-99845-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-99845-1	MW2	Ground Water	02/17/17 10:34	02/21/17 09:20
310-99845-2	MW9	Ground Water	02/17/17 09:34	02/21/17 09:20
310-99845-3	MW13	Ground Water	02/17/17 11:02	02/21/17 09:20
310-99845-4	MW15	Ground Water	02/17/17 11:46	02/21/17 09:20
310-99845-5	MW16	Ground Water	02/17/17 10:06	02/21/17 09:20
310-99845-6	MW17	Ground Water	02/17/17 12:22	02/21/17 09:20
310-99845-7	MW18	Ground Water	02/17/17 08:34	02/21/17 09:20
310-99845-8	MW19	Ground Water	02/17/17 09:04	02/21/17 09:20
310-99845-9	DUP-1	Ground Water	02/17/17 11:04	02/21/17 09:20



# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-2

**Client Sample ID: MW2**  
**Date Collected: 02/17/17 10:34**  
**Date Received: 02/21/17 09:20**

**Lab Sample ID: 310-99845-1**  
**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	0.256	U	0.192	0.193	1.00	0.277	pCi/L	02/27/17 10:50	03/21/17 05:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.9		40 - 110					02/27/17 10:50	03/21/17 05:34	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.423	U G	0.653	0.654	1.00	1.09	pCi/L	02/27/17 11:42	03/13/17 17:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.9		40 - 110					02/27/17 11:42	03/13/17 17:52	1
Y Carrier	89.0		40 - 110					02/27/17 11:42	03/13/17 17:52	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	0.679	U	0.680	0.682	5.00	1.09	pCi/L		03/21/17 14:31	1



# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-2

**Client Sample ID: MW9**  
**Date Collected: 02/17/17 09:34**  
**Date Received: 02/21/17 09:20**

**Lab Sample ID: 310-99845-2**  
**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	0.609		0.224	0.231	1.00	0.194	pCi/L	02/27/17 10:50	03/21/17 05:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.4		40 - 110					02/27/17 10:50	03/21/17 05:34	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0135	U	0.510	0.510	1.00	0.904	pCi/L	02/27/17 11:42	03/13/17 17:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.4		40 - 110					02/27/17 11:42	03/13/17 17:52	1
Y Carrier	87.5		40 - 110					02/27/17 11:42	03/13/17 17:52	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	0.623	U	0.557	0.560	5.00	0.904	pCi/L		03/21/17 14:31	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-2

**Client Sample ID: MW13**  
**Date Collected: 02/17/17 11:02**  
**Date Received: 02/21/17 09:20**

**Lab Sample ID: 310-99845-3**  
**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	0.128		0.0780	0.0788	1.00	0.0892	pCi/L	02/27/17 10:50	03/21/17 05:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.9		40 - 110					02/27/17 10:50	03/21/17 05:34	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.327	U	0.269	0.271	1.00	0.428	pCi/L	02/27/17 11:42	03/13/17 17:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.9		40 - 110					02/27/17 11:42	03/13/17 17:53	1
Y Carrier	88.6		40 - 110					02/27/17 11:42	03/13/17 17:53	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	0.455		0.280	0.282	5.00	0.428	pCi/L		03/21/17 14:31	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-2

**Client Sample ID: MW15**

**Date Collected: 02/17/17 11:46**

**Date Received: 02/21/17 09:20**

**Lab Sample ID: 310-99845-4**

**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	0.159		0.111	0.112	1.00	0.150	pCi/L	02/27/17 10:50	03/21/17 05:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.3		40 - 110					02/27/17 10:50	03/21/17 05:35	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0158	U	0.366	0.366	1.00	0.652	pCi/L	02/27/17 11:42	03/13/17 17:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.3		40 - 110					02/27/17 11:42	03/13/17 17:53	1
Y Carrier	87.9		40 - 110					02/27/17 11:42	03/13/17 17:53	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	0.143	U	0.383	0.383	5.00	0.652	pCi/L		03/21/17 14:31	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-2

**Client Sample ID: MW16**  
**Date Collected: 02/17/17 10:06**  
**Date Received: 02/21/17 09:20**

**Lab Sample ID: 310-99845-5**  
**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	0.213		0.101	0.103	1.00	0.120	pCi/L	02/27/17 10:50	03/21/17 05:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		40 - 110					02/27/17 10:50	03/21/17 05:35	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.149	U	0.232	0.233	1.00	0.391	pCi/L	02/27/17 11:42	03/13/17 17:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		40 - 110					02/27/17 11:42	03/13/17 17:53	1
Y Carrier	90.8		40 - 110					02/27/17 11:42	03/13/17 17:53	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	0.362	U	0.253	0.255	5.00	0.391	pCi/L		03/21/17 14:31	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-2

**Client Sample ID: MW17**  
**Date Collected: 02/17/17 12:22**  
**Date Received: 02/21/17 09:20**

**Lab Sample ID: 310-99845-6**  
**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	0.134		0.0932	0.0940	1.00	0.119	pCi/L	02/27/17 10:50	03/21/17 05:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.0		40 - 110					02/27/17 10:50	03/21/17 05:35	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0475	U	0.323	0.323	1.00	0.571	pCi/L	02/27/17 11:42	03/13/17 17:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.0		40 - 110					02/27/17 11:42	03/13/17 17:53	1
Y Carrier	83.7		40 - 110					02/27/17 11:42	03/13/17 17:53	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	0.181	U	0.336	0.336	5.00	0.571	pCi/L		03/21/17 14:31	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-2

**Client Sample ID: MW18**  
**Date Collected: 02/17/17 08:34**  
**Date Received: 02/21/17 09:20**

**Lab Sample ID: 310-99845-7**  
**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	0.470		0.130	0.137	1.00	0.0891	pCi/L	02/27/17 10:50	03/21/17 05:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.7		40 - 110					02/27/17 10:50	03/21/17 05:35	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.437		0.282	0.285	1.00	0.434	pCi/L	02/27/17 11:42	03/13/17 17:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.7		40 - 110					02/27/17 11:42	03/13/17 17:53	1
Y Carrier	85.6		40 - 110					02/27/17 11:42	03/13/17 17:53	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	0.907		0.311	0.316	5.00	0.434	pCi/L		03/21/17 14:31	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-2

**Client Sample ID: MW19**  
**Date Collected: 02/17/17 09:04**  
**Date Received: 02/21/17 09:20**

**Lab Sample ID: 310-99845-8**  
**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	0.423		0.125	0.130	1.00	0.0889	pCi/L	02/27/17 10:50	03/21/17 05:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.5		40 - 110					02/27/17 10:50	03/21/17 05:35	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.396	U	0.263	0.266	1.00	0.408	pCi/L	02/27/17 11:42	03/13/17 17:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.5		40 - 110					02/27/17 11:42	03/13/17 17:53	1
Y Carrier	91.2		40 - 110					02/27/17 11:42	03/13/17 17:53	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	0.820		0.292	0.296	5.00	0.408	pCi/L		03/21/17 14:31	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-2

**Client Sample ID: DUP-1**

**Date Collected: 02/17/17 11:04**

**Date Received: 02/21/17 09:20**

**Lab Sample ID: 310-99845-9**

**Matrix: Ground Water**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.252		0.100	0.103	1.00	0.0902	pCi/L	02/27/17 10:50	03/21/17 05:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.5		40 - 110					02/27/17 10:50	03/21/17 05:35	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.133	U	0.209	0.209	1.00	0.398	pCi/L	02/27/17 11:42	03/13/17 17:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.5		40 - 110					02/27/17 11:42	03/13/17 17:53	1
Y Carrier	91.6		40 - 110					02/27/17 11:42	03/13/17 17:53	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	0.119	U	0.232	0.233	5.00	0.398	pCi/L		03/21/17 14:31	1



# Definitions/Glossary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-2

## Qualifiers

### Rad

Qualifier	Qualifier Description
G	The Sample MDC is greater than the requested RL.
U	Result is less than the sample detection limit.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)

# QC Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-2

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

**Lab Sample ID: MB 160-294745/1-A**  
**Matrix: Water**  
**Analysis Batch: 298668**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 294745**

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.05200	U	0.0605	0.0607	1.00	0.0976	pCi/L	02/27/17 10:50	03/21/17 05:34	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	Limits							
Ba Carrier	87.3		40 - 110		02/27/17 10:50	03/21/17 05:34	1			

**Lab Sample ID: LCS 160-294745/2-A**  
**Matrix: Water**  
**Analysis Batch: 298668**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 294745**

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.4	10.91		1.15	1.00	0.118	pCi/L	96	68 - 137
Carrier	LCS LCS		Limits		Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier	Limits						
Ba Carrier	91.4		40 - 110						

**Lab Sample ID: LCSD 160-294745/3-A**  
**Matrix: Water**  
**Analysis Batch: 298668**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 294745**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
				Uncert. (2σ+/-)							
Radium-226	11.4	11.32		1.18	1.00	0.0899	pCi/L	100	68 - 137	0.17	1
Carrier	LCSD LCSD		Limits		Prepared	Analyzed	Dil Fac				
Ba Carrier	%Yield	Qualifier	Limits								
Ba Carrier	90.6		40 - 110								

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

**Lab Sample ID: MB 160-294755/1-A**  
**Matrix: Water**  
**Analysis Batch: 297322**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 294755**

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.3596	U	0.281	0.283	1.00	0.447	pCi/L	02/27/17 11:42	03/13/17 17:52	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	Limits							
Ba Carrier	87.3		40 - 110		02/27/17 11:42	03/13/17 17:52	1			
Y Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Y Carrier	%Yield	Qualifier	Limits							
Y Carrier	92.0		40 - 110		02/27/17 11:42	03/13/17 17:52	1			

TestAmerica Cedar Falls

# QC Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-2

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

**Lab Sample ID: LCS 160-294755/2-A**  
**Matrix: Water**  
**Analysis Batch: 297322**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 294755**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.7	15.73		1.67	1.00	0.422	pCi/L	115	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	91.4		40 - 110
Y Carrier	89.3		40 - 110

**Lab Sample ID: LCSD 160-294755/3-A**  
**Matrix: Water**  
**Analysis Batch: 297322**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 294755**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	13.7	14.72		1.58	1.00	0.440	pCi/L	107	56 - 140	0.31	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	90.6		40 - 110
Y Carrier	89.7		40 - 110

# QC Association Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-2

## Rad

### Prep Batch: 294745

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99845-1	MW2	Total/NA	Ground Water	PrecSep-21	
310-99845-2	MW9	Total/NA	Ground Water	PrecSep-21	
310-99845-3	MW13	Total/NA	Ground Water	PrecSep-21	
310-99845-4	MW15	Total/NA	Ground Water	PrecSep-21	
310-99845-5	MW16	Total/NA	Ground Water	PrecSep-21	
310-99845-6	MW17	Total/NA	Ground Water	PrecSep-21	
310-99845-7	MW18	Total/NA	Ground Water	PrecSep-21	
310-99845-8	MW19	Total/NA	Ground Water	PrecSep-21	
310-99845-9	DUP-1	Total/NA	Ground Water	PrecSep-21	
MB 160-294745/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-294745/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-294745/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

### Prep Batch: 294755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-99845-1	MW2	Total/NA	Ground Water	PrecSep_0	
310-99845-2	MW9	Total/NA	Ground Water	PrecSep_0	
310-99845-3	MW13	Total/NA	Ground Water	PrecSep_0	
310-99845-4	MW15	Total/NA	Ground Water	PrecSep_0	
310-99845-5	MW16	Total/NA	Ground Water	PrecSep_0	
310-99845-6	MW17	Total/NA	Ground Water	PrecSep_0	
310-99845-7	MW18	Total/NA	Ground Water	PrecSep_0	
310-99845-8	MW19	Total/NA	Ground Water	PrecSep_0	
310-99845-9	DUP-1	Total/NA	Ground Water	PrecSep_0	
MB 160-294755/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-294755/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-294755/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-2

**Client Sample ID: MW2**  
**Date Collected: 02/17/17 10:34**  
**Date Received: 02/21/17 09:20**

**Lab Sample ID: 310-99845-1**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			294745	02/27/17 10:50	MBC	TAL SL
Total/NA	Analysis	9315		1	298668	03/21/17 05:34	MLK	TAL SL
Total/NA	Prep	PrecSep_0			294755	02/27/17 11:42	BME	TAL SL
Total/NA	Analysis	9320		1	297322	03/13/17 17:52	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	298860	03/21/17 14:31	RTM	TAL SL

**Client Sample ID: MW9**  
**Date Collected: 02/17/17 09:34**  
**Date Received: 02/21/17 09:20**

**Lab Sample ID: 310-99845-2**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			294745	02/27/17 10:50	MBC	TAL SL
Total/NA	Analysis	9315		1	298668	03/21/17 05:34	MLK	TAL SL
Total/NA	Prep	PrecSep_0			294755	02/27/17 11:42	BME	TAL SL
Total/NA	Analysis	9320		1	297322	03/13/17 17:52	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	298860	03/21/17 14:31	RTM	TAL SL

**Client Sample ID: MW13**  
**Date Collected: 02/17/17 11:02**  
**Date Received: 02/21/17 09:20**

**Lab Sample ID: 310-99845-3**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			294745	02/27/17 10:50	MBC	TAL SL
Total/NA	Analysis	9315		1	298668	03/21/17 05:34	MLK	TAL SL
Total/NA	Prep	PrecSep_0			294755	02/27/17 11:42	BME	TAL SL
Total/NA	Analysis	9320		1	297322	03/13/17 17:53	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	298860	03/21/17 14:31	RTM	TAL SL

**Client Sample ID: MW15**  
**Date Collected: 02/17/17 11:46**  
**Date Received: 02/21/17 09:20**

**Lab Sample ID: 310-99845-4**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			294745	02/27/17 10:50	MBC	TAL SL
Total/NA	Analysis	9315		1	298668	03/21/17 05:35	MLK	TAL SL
Total/NA	Prep	PrecSep_0			294755	02/27/17 11:42	BME	TAL SL
Total/NA	Analysis	9320		1	297322	03/13/17 17:53	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	298860	03/21/17 14:31	RTM	TAL SL

TestAmerica Cedar Falls

# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-2

**Client Sample ID: MW16**

**Date Collected: 02/17/17 10:06**

**Date Received: 02/21/17 09:20**

**Lab Sample ID: 310-99845-5**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			294745	02/27/17 10:50	MBC	TAL SL
Total/NA	Analysis	9315		1	298668	03/21/17 05:35	MLK	TAL SL
Total/NA	Prep	PrecSep_0			294755	02/27/17 11:42	BME	TAL SL
Total/NA	Analysis	9320		1	297322	03/13/17 17:53	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	298860	03/21/17 14:31	RTM	TAL SL

**Client Sample ID: MW17**

**Date Collected: 02/17/17 12:22**

**Date Received: 02/21/17 09:20**

**Lab Sample ID: 310-99845-6**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			294745	02/27/17 10:50	MBC	TAL SL
Total/NA	Analysis	9315		1	298668	03/21/17 05:35	MLK	TAL SL
Total/NA	Prep	PrecSep_0			294755	02/27/17 11:42	BME	TAL SL
Total/NA	Analysis	9320		1	297322	03/13/17 17:53	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	298860	03/21/17 14:31	RTM	TAL SL

**Client Sample ID: MW18**

**Date Collected: 02/17/17 08:34**

**Date Received: 02/21/17 09:20**

**Lab Sample ID: 310-99845-7**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			294745	02/27/17 10:50	MBC	TAL SL
Total/NA	Analysis	9315		1	298668	03/21/17 05:35	MLK	TAL SL
Total/NA	Prep	PrecSep_0			294755	02/27/17 11:42	BME	TAL SL
Total/NA	Analysis	9320		1	297322	03/13/17 17:53	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	298860	03/21/17 14:31	RTM	TAL SL

**Client Sample ID: MW19**

**Date Collected: 02/17/17 09:04**

**Date Received: 02/21/17 09:20**

**Lab Sample ID: 310-99845-8**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			294745	02/27/17 10:50	MBC	TAL SL
Total/NA	Analysis	9315		1	298668	03/21/17 05:35	MLK	TAL SL
Total/NA	Prep	PrecSep_0			294755	02/27/17 11:42	BME	TAL SL
Total/NA	Analysis	9320		1	297322	03/13/17 17:53	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	298860	03/21/17 14:31	RTM	TAL SL

TestAmerica Cedar Falls

# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-2

**Client Sample ID: DUP-1**

**Date Collected: 02/17/17 11:04**

**Date Received: 02/21/17 09:20**

**Lab Sample ID: 310-99845-9**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			294745	02/27/17 10:50	MBC	TAL SL
Total/NA	Analysis	9315		1	298668	03/21/17 05:35	MLK	TAL SL
Total/NA	Prep	PrecSep_0			294755	02/27/17 11:42	BME	TAL SL
Total/NA	Analysis	9320		1	297322	03/13/17 17:53	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	298860	03/21/17 14:31	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: North Omaha Station CCR

TestAmerica Job ID: 310-99845-2

## 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: North Omaha Station CCR

TestAmerica Job ID: 310-99845-2

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





**Cooler/Sample Receipt and Temperature Log Form**

<b>Client Information</b>	
Client: <u>Omaha Public Power District</u>	
City/State: <u>Omaha NE</u>	Project: <u>North Omaha station COR</u>
<b>Receipt Information</b>	
Date/Time Received: <u>2-21-17 920</u>	Received By: <u>KP</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID: <u>AA-53</u>
Multiple Coolers? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>1</u> of <u>2</u>
Cooler Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Trip Blank Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓
<b>Temperature Record</b>	
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE	
Temperature Blank? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: <u>5</u>	Correction Factor (°C): <u>+0.1</u>
Uncorrected Temp (°C): <u>2.9</u>	Corrected Temp (°C): <u>3.0</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	

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**Cooler/Sample Receipt and Temperature Log Form**

<b>Client Information</b>	
Client: <u>Omaha Public Power District</u>	
City/State: <u>Omaha NE</u>	Project: <u>North Omaha Station</u>
<b>Receipt Information</b>	
Date/Time Received: <u>2-21-17 920</u>	Received By: <u>KP</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID: <u>AA-2</u>
Multiple Coolers? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>2</u> of <u>2</u>
Cooler Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Trip Blank Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓
<b>Temperature Record</b>	
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE	
Temperature Blank? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: <u>5</u>	Correction Factor (°C): <u>+0.1</u>
Uncorrected Temp (°C): <u>3.6</u>	Corrected Temp (°C): <u>3.7</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
Note: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	

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# Chain of Custody Record

<b>Client Information</b>		Sampling: <u>Brad Sojka</u>		Lab PM: <u>Hayes, Shawn M</u>		Carrier Tracking No(s):	
Client Contact: <u>Brad Sojka</u>		Phone: <u>502-636-2575</u>		E-Mail: <u>shawn.hayes@testamericainc.com</u>		Page:	
Company: <u>Omaha Public Power District</u>		Due Date Requested:		Analysis Requested		COC No:	
Address: <u>444 South 16th Street Mall 9E/EP1</u>		TAT Requested (days):		Form M/MSD (Yes or No)		Total Number of Containers	
City: <u>Omaha</u>		PO #:		Field Filtered Sample (Yes or No)		Preservation Codes:	
State: <u>NE</u>		WO #:		D N		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 Other:	
Phone: <u>402-636-2515(Tel)</u>		TestAmerica Project #:		9315, Raz26, 9320, Raz28, Combined Raz26 and Raz28		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)	
Email: <u>bsojka@oppd.com</u>		SSOW#:		6010C Lithium, 6020A CCR List, 7470A Mercury		Special Instructions/Note:	
Project Name: <u>North Omaha Station CCR</u>		Sample Date		9315, Raz26, 9320, Raz28, Combined Raz26 and Raz28		Special Instructions/Note:	
Site:		Sample Time		2540C TDS, 9056A Chloride, Fluoride, Sulfate		Special Instructions/Note:	
<b>Sample Identification</b>		Sample Date		2540C TDS, 9056A Chloride, Fluoride, Sulfate		Special Instructions/Note:	
MW2		2/17/17		2540C TDS, 9056A Chloride, Fluoride, Sulfate		Special Instructions/Note:	
MW5		1034		2540C TDS, 9056A Chloride, Fluoride, Sulfate		Special Instructions/Note:	
MW6		0934		2540C TDS, 9056A Chloride, Fluoride, Sulfate		Special Instructions/Note:	
MW9		1102		2540C TDS, 9056A Chloride, Fluoride, Sulfate		Special Instructions/Note:	
MW13		1146		2540C TDS, 9056A Chloride, Fluoride, Sulfate		Special Instructions/Note:	
MW15		1206		2540C TDS, 9056A Chloride, Fluoride, Sulfate		Special Instructions/Note:	
MW16		1228		2540C TDS, 9056A Chloride, Fluoride, Sulfate		Special Instructions/Note:	
MW17		0834		2540C TDS, 9056A Chloride, Fluoride, Sulfate		Special Instructions/Note:	
MW18		0904		2540C TDS, 9056A Chloride, Fluoride, Sulfate		Special Instructions/Note:	
MW19				2540C TDS, 9056A Chloride, Fluoride, Sulfate		Special Instructions/Note:	
<b>Possible Hazard Identification</b>		Sample Matrix		Sample Disposal		Sample Disposal	
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		G GW		Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
Deliverable Requested: I, II, III, IV, Other (specify)		G GW		Special Instructions/QC Requirements:		Special Instructions/Note:	
Empty Kit Relinquished by:		G GW		Date:		Special Instructions/Note:	
Relinquished by: <u>[Signature]</u>		G GW		Date: <u>2/20/17</u>		Special Instructions/Note:	
Relinquished by:		G GW		Date: <u>1100</u>		Special Instructions/Note:	
Relinquished by:		G GW		Date:		Special Instructions/Note:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Date:		Special Instructions/Note:	
Cooler Temperature(s) °C and Other Remarks:		Date:		Date:		Special Instructions/Note:	



SO# 21462

**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

<b>Client Information</b>		Lab PM: Hayes, Shawn M		Carrier Tracking No(s):	
Client Contact: Brad Sojka		E-Mail: shawn.hayes@testamericainc.com		Page:	
Company: Omaha Public Power District		Address: 444 South 16th Street Mall 9E/EP1		Job #:	
City: Omaha		State, Zip: NE, 68102-2247		Preservation Codes: 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)	
Phone: 402-636-2515 (Tel)		Email: bsojka@oppd.com		Other:	
Project Name: North Omaha Station CCR		TestAmerica Project #: 31007560		Total Number of Containers	
Site:		SSOW#:		Analysis Requested	
Due Date Requested:		TAT Requested (days):		Perform MS/MSD (Yes or No)	
Sample Date		Sample Time		Field Filtered Sample (Yes or No)	
Sample Type (C=Comp, G=grab)		Matrix (Water, Sewage, Soil, Onwaste/Sl, etc.)		9315 Ra226, 9320 Ra228, Combined Ra226 and Ra228	
Sample Identification		Preservation Code:		2540C TDS, 9056A Chloride, Fluoride, Sulfate	
MW20	G	GW		D	N
DUP-1	G	GW	2/17/17 1104	X	X
DUP-2	G	GW		X	X
Possible Hazard Identification		Radiological		Special Instructions/Note:	
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:		Special Instructions/QC Requirements:	
Empty Kit Relinquished by:		Date:		Method of Shipment:	
Reinquired by: [Signature]		Date/Time: 2/20/17 1100		Date/Time: 2-21-17 920	
Relinquished by:		Date/Time:		Date/Time:	
Relinquished by:		Date/Time:		Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	

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Temperature readings: \_\_\_\_\_

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u> pH	<u>Preservative</u> Added (mls)	<u>Lot #</u>
MW2	310-99845-A-1	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW2	310-99845-C-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-99845-D-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-99845-A-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW9	310-99845-C-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-99845-D-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-99845-A-3	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW13	310-99845-C-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-99845-D-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW15	310-99845-A-4	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW15	310-99845-C-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW15	310-99845-D-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW16	310-99845-A-5	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW16	310-99845-C-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW16	310-99845-D-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW17	310-99845-A-6	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW17	310-99845-C-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW17	310-99845-D-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW18	310-99845-A-7	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW18	310-99845-C-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW18	310-99845-D-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW19	310-99845-A-8	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW19	310-99845-C-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW19	310-99845-D-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-1	310-99845-A-9	Plastic 250ml - with Nitric Acid	<2	_____	_____
DUP-1	310-99845-C-9	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-1	310-99845-D-9	Plastic 1 liter - Nitric Acid	<2	_____	_____



Chain of Custody Record



<b>Client Information (Sub Contract Lab)</b> Company: TestAmerica Laboratories, Inc. Address: 13715 Rider Trail North, City: Earth City State, Zip: MO, 63045 Phone: 314-298-8566(Tel) 314-298-8757(Fax) Email: Project Name: North Omaha Station CCR Site: 310 OPPD North Omaha Station		Sampler: Lab PM: Hayes, Shawn M Phone: E-Mail: shawn.hayes@testamericainc.com Accreditations Required (See note): Nebraska											
Due Date Requested: 3/21/2017 TAT Requested (days): PO #: WO #: Project #: 31007560 SSOW#:		Job #: 310-99845-2 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 Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)											
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=water/oil, BT=Tissue, A=Air)	Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Ra26Ra228 GFC	9315_Ra226/PreSep_21 Standard Target List	9320_Ra228/PreSep_0 Standard Target List	Analysis Requested	Total Number of Containers	Special Instructions/Note:
MW2 (310-99845-1)	2/17/17	10:34 Central	Water	Water	X	X	X	X	X	X		2	
MW9 (310-99845-2)	2/17/17	09:34 Central	Water	Water	X	X	X	X	X	X		2	
MW13 (310-99845-3)	2/17/17	11:02 Central	Water	Water	X	X	X	X	X	X		2	
MW15 (310-99845-4)	2/17/17	11:46 Central	Water	Water	X	X	X	X	X	X		2	
MW16 (310-99845-5)	2/17/17	10:06 Central	Water	Water	X	X	X	X	X	X		2	
MW17 (310-99845-6)	2/17/17	12:22 Central	Water	Water	X	X	X	X	X	X		2	
MW18 (310-99845-7)	2/17/17	08:34 Central	Water	Water	X	X	X	X	X	X		2	
MW19 (310-99845-8)	2/17/17	09:04 Central	Water	Water	X	X	X	X	X	X		2	
DUP-1 (310-99845-9)	2/17/17	11:04 Central	Water	Water	X	X	X	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 of the 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 compliance to TestAmerica Laboratories, Inc.													
<b>Possible Hazard Identification</b> Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 Empty Kit Relinquished by: Date: Method of Shipment:													
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months													
Special Instructions/QC Requirements:													
Relinquished by: T. Deth Date/Time: 2/21/17 1444 Company: Company Relinquished by: Date/Time: Company: Company Relinquished by: Date/Time: Company: Company Custody Seals Intact: Custody Seal No.: Cooler Temperature(s) °C and Other Remarks:													



## Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-99845-2

**Login Number: 99845**

**List Source: TestAmerica Cedar Falls**

**List Number: 1**

**Creator: Patrick, Kathryn A**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	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: 310-99845-2

**Login Number: 99845**  
**List Number: 2**  
**Creator: Daniels, Brian J**

**List Source: TestAmerica St. Louis**  
**List Creation: 02/22/17 01:47 PM**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	18
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# Tracer/Carrier Summary

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-2

## 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)
310-99845-1	MW2	77.9
310-99845-2	MW9	84.4
310-99845-3	MW13	79.9
310-99845-4	MW15	82.3
310-99845-5	MW16	90.3
310-99845-6	MW17	85.0
310-99845-7	MW18	84.7
310-99845-8	MW19	83.5
310-99845-9	DUP-1	83.5

#### 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 160-294745/2-A	Lab Control Sample	91.4
LCSD 160-294745/3-A	Lab Control Sample Dup	90.6
MB 160-294745/1-A	Method Blank	87.3

#### 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)
310-99845-1	MW2	77.9	89.0
310-99845-2	MW9	84.4	87.5
310-99845-3	MW13	79.9	88.6
310-99845-4	MW15	82.3	87.9
310-99845-5	MW16	90.3	90.8
310-99845-6	MW17	85.0	83.7
310-99845-7	MW18	84.7	85.6
310-99845-8	MW19	83.5	91.2
310-99845-9	DUP-1	83.5	91.6

#### Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

# Tracer/Carrier Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-99845-2

**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 160-294755/2-A	Lab Control Sample	91.4	89.3
LCSD 160-294755/3-A	Lab Control Sample Dup	90.6	89.7
MB 160-294755/1-A	Method Blank	87.3	92.0

### 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: 310-105128-1  
Client Project/Site: North Omaha Station  
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:  
5/22/2017 12:14:26 PM

Shawn Hayes, Senior Project Manager  
(319)277-2401  
[shawn.hayes@testamericainc.com](mailto:shawn.hayes@testamericainc.com)

### LINKS

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results through  
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Have a Question?



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*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: North Omaha Station

TestAmerica Job ID: 310-105128-1

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**Job ID: 310-105128-1**

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**Laboratory: TestAmerica Cedar Falls**

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## Narrative

**Job Narrative**  
**310-105128-1**

### Comments

No additional comments.

### Receipt

The samples were received on 5/5/2017 9:50 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.4° C, 3.7° C and 5.3° 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.

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# Sample Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-105128-1	MW2	Ground Water	05/02/17 11:02	05/05/17 09:50
310-105128-2	MW5	Ground Water	05/02/17 15:28	05/05/17 09:50
310-105128-3	MW6	Ground Water	05/02/17 13:16	05/05/17 09:50
310-105128-4	MW8	Ground Water	05/02/17 14:00	05/05/17 09:50
310-105128-5	MW9	Ground Water	05/02/17 09:59	05/05/17 09:50
310-105128-6	MW13	Ground Water	05/02/17 11:24	05/05/17 09:50
310-105128-7	MW15	Ground Water	05/02/17 12:38	05/05/17 09:50
310-105128-8	MW16	Ground Water	05/02/17 10:36	05/05/17 09:50
310-105128-9	MW17	Ground Water	05/02/17 14:39	05/05/17 09:50
310-105128-10	MW18	Ground Water	05/02/17 08:52	05/05/17 09:50
310-105128-11	MW19	Ground Water	05/02/17 09:18	05/05/17 09:50
310-105128-12	DUP-1	Ground Water	05/02/17 11:30	05/05/17 09:50
310-105128-13	DUP-2	Ground Water	05/02/17 15:30	05/05/17 09:50

# Detection Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-1

## Client Sample ID: MW2

## Lab Sample ID: 310-105128-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	22.9		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.94		0.500		mg/L	5		9056A	Total/NA
Sulfate	889		50.0		mg/L	50		9056A	Total/NA
Arsenic	0.231		0.00200		mg/L	1		6020A	Total/NA
Barium	0.118		0.00200		mg/L	1		6020A	Total/NA
Boron	1.79		0.200		mg/L	1		6020A	Total/NA
Calcium	300		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000833		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1840		60.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW5

## Lab Sample ID: 310-105128-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	46.9		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.82		0.500		mg/L	5		9056A	Total/NA
Sulfate	1330		50.0		mg/L	50		9056A	Total/NA
Lithium	0.0819		0.0500		mg/L	1		6010C	Total/NA
Arsenic	0.0544		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0488		0.00200		mg/L	1		6020A	Total/NA
Boron	0.564		0.200		mg/L	1		6020A	Total/NA
Calcium	435		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	2910		150		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW6

## Lab Sample ID: 310-105128-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	224		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.32		0.500		mg/L	5		9056A	Total/NA
Sulfate	314		10.0		mg/L	10		9056A	Total/NA
Arsenic	0.0243		0.00200		mg/L	1		6020A	Total/NA
Barium	0.195		0.00200		mg/L	1		6020A	Total/NA
Boron	0.461		0.200		mg/L	1		6020A	Total/NA
Calcium	279		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.00562		0.000500		mg/L	1		6020A	Total/NA
Lead	0.00169		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.0610		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1340		60.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW8

## Lab Sample ID: 310-105128-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	10.5		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.70		0.500		mg/L	5		9056A	Total/NA
Sulfate	519		20.0		mg/L	20		9056A	Total/NA
Arsenic	0.0256		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0813		0.00200		mg/L	1		6020A	Total/NA
Boron	1.04		0.200		mg/L	1		6020A	Total/NA
Calcium	121		0.200		mg/L	1		6020A	Total/NA
Lead	0.00155		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.101		0.00200		mg/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Cedar Falls



# Detection Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-1

## Client Sample ID: MW8 (Continued)

## Lab Sample ID: 310-105128-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	814		30.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW9

## Lab Sample ID: 310-105128-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	127		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.84		0.500		mg/L	5		9056A	Total/NA
Sulfate	25.5		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.00423		0.00200		mg/L	1		6020A	Total/NA
Barium	0.487		0.00200		mg/L	1		6020A	Total/NA
Calcium	148		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000974		0.000500		mg/L	1		6020A	Total/NA
Lead	0.00246		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	760		30.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW13

## Lab Sample ID: 310-105128-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.52		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.05		0.500		mg/L	5		9056A	Total/NA
Sulfate	650		50.0		mg/L	50		9056A	Total/NA
Arsenic	0.133		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0882		0.00200		mg/L	1		6020A	Total/NA
Boron	1.80		0.200		mg/L	1		6020A	Total/NA
Calcium	156		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.951		0.00200		mg/L	1		6020A	Total/NA
Selenium	0.0403		0.00500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1450		60.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW15

## Lab Sample ID: 310-105128-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	11.2		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.878		0.500		mg/L	5		9056A	Total/NA
Sulfate	861		50.0		mg/L	50		9056A	Total/NA
Antimony	0.00130		0.00100		mg/L	1		6020A	Total/NA
Barium	0.0382		0.00200		mg/L	1		6020A	Total/NA
Boron	2.80		0.200		mg/L	1		6020A	Total/NA
Calcium	263		0.200		mg/L	1		6020A	Total/NA
Chromium	0.0153		0.00500		mg/L	1		6020A	Total/NA
Molybdenum	0.316		0.00200		mg/L	1		6020A	Total/NA
Selenium	0.0785		0.00500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1280		30.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW16

## Lab Sample ID: 310-105128-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	60.7		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.85		0.500		mg/L	5		9056A	Total/NA
Sulfate	381		20.0		mg/L	20		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Cedar Falls

# Detection Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-1

## Client Sample ID: MW16 (Continued)

## Lab Sample ID: 310-105128-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.0503		0.0500		mg/L	1		6010C	Total/NA
Barium	0.0818		0.00200		mg/L	1		6020A	Total/NA
Boron	0.320		0.200		mg/L	1		6020A	Total/NA
Calcium	184		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000952		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.00651		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1030		30.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW17

## Lab Sample ID: 310-105128-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	45.3		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.66		0.500		mg/L	5		9056A	Total/NA
Sulfate	1090		50.0		mg/L	50		9056A	Total/NA
Lithium	0.116		0.0500		mg/L	1		6010C	Total/NA
Arsenic	0.0300		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0411		0.00200		mg/L	1		6020A	Total/NA
Boron	0.649		0.200		mg/L	1		6020A	Total/NA
Calcium	364		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.0113		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	3040		150		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW18

## Lab Sample ID: 310-105128-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	1.32		0.500		mg/L	5		9056A	Total/NA
Barium	0.329		0.00200		mg/L	1		6020A	Total/NA
Calcium	98.9		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	542		30.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW19

## Lab Sample ID: 310-105128-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.70		1.00		mg/L	1		9056A	Total/NA
Fluoride	0.804		0.100		mg/L	1		9056A	Total/NA
Sulfate	10.6		1.00		mg/L	1		9056A	Total/NA
Barium	0.328		0.00200		mg/L	1		6020A	Total/NA
Calcium	107		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	566		30.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: DUP-1

## Lab Sample ID: 310-105128-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.22		5.00		mg/L	5		9056A	Total/NA
Fluoride	3.24		0.500		mg/L	5		9056A	Total/NA
Sulfate	591		20.0		mg/L	20		9056A	Total/NA
Arsenic	0.203		0.00200		mg/L	1		6020A	Total/NA
Barium	0.106		0.00200		mg/L	1		6020A	Total/NA
Boron	2.04		0.200		mg/L	1		6020A	Total/NA
Calcium	165		0.200		mg/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Cedar Falls

# Detection Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-1

## Client Sample ID: DUP-1 (Continued)

## Lab Sample ID: 310-105128-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Molybdenum	0.838		0.00200		mg/L	1		6020A	Total/NA
Selenium	0.0301		0.00500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1390		60.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: DUP-2

## Lab Sample ID: 310-105128-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	46.8		5.00		mg/L	5		9056A	Total/NA
Fluoride	2.60		0.500		mg/L	5		9056A	Total/NA
Sulfate	1310		50.0		mg/L	50		9056A	Total/NA
Lithium	0.0801		0.0500		mg/L	1		6010C	Total/NA
Arsenic	0.0588		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0525		0.00200		mg/L	1		6020A	Total/NA
Boron	0.545		0.200		mg/L	1		6020A	Total/NA
Calcium	439		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.00209		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	2610		150		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Cedar Falls

# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-1

**Client Sample ID: MW2**  
**Date Collected: 05/02/17 11:02**  
**Date Received: 05/05/17 09:50**

**Lab Sample ID: 310-105128-1**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22.9		5.00		mg/L			05/10/17 02:38	5
Fluoride	1.94		0.500		mg/L			05/10/17 02:38	5
Sulfate	889		50.0		mg/L			05/10/17 02:54	50

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		05/08/17 10:00	05/08/17 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		05/08/17 10:00	05/12/17 23:57	1
Arsenic	0.231		0.00200		mg/L		05/08/17 10:00	05/12/17 23:57	1
Barium	0.118		0.00200		mg/L		05/08/17 10:00	05/12/17 23:57	1
Beryllium	<0.00100		0.00100		mg/L		05/08/17 10:00	05/12/17 23:57	1
Boron	1.79		0.200		mg/L		05/08/17 10:00	05/18/17 11:04	1
Cadmium	<0.000500		0.000500		mg/L		05/08/17 10:00	05/12/17 23:57	1
Calcium	300		0.200		mg/L		05/08/17 10:00	05/12/17 23:57	1
Chromium	<0.00500		0.00500		mg/L		05/08/17 10:00	05/12/17 23:57	1
Cobalt	0.000833		0.000500		mg/L		05/08/17 10:00	05/12/17 23:57	1
Lead	<0.000500		0.000500		mg/L		05/08/17 10:00	05/12/17 23:57	1
Molybdenum	<0.00200		0.00200		mg/L		05/08/17 10:00	05/12/17 23:57	1
Selenium	<0.00500		0.00500		mg/L		05/08/17 10:00	05/12/17 23:57	1
Thallium	<0.00100		0.00100		mg/L		05/08/17 10:00	05/12/17 23:57	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		05/09/17 09:48	05/10/17 12:49	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1840		60.0		mg/L			05/08/17 11:29	1

# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-1

**Client Sample ID: MW5**  
**Date Collected: 05/02/17 15:28**  
**Date Received: 05/05/17 09:50**

**Lab Sample ID: 310-105128-2**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	46.9		5.00		mg/L			05/09/17 17:54	5
Fluoride	1.82		0.500		mg/L			05/09/17 17:54	5
Sulfate	1330		50.0		mg/L			05/10/17 12:24	50

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.0819		0.0500		mg/L		05/08/17 10:00	05/08/17 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		05/08/17 10:00	05/13/17 00:10	1
Arsenic	0.0544		0.00200		mg/L		05/08/17 10:00	05/13/17 00:10	1
Barium	0.0488		0.00200		mg/L		05/08/17 10:00	05/13/17 00:10	1
Beryllium	<0.00100		0.00100		mg/L		05/08/17 10:00	05/13/17 00:10	1
Boron	0.564		0.200		mg/L		05/08/17 10:00	05/18/17 11:07	1
Cadmium	<0.000500		0.000500		mg/L		05/08/17 10:00	05/13/17 00:10	1
Calcium	435		0.200		mg/L		05/08/17 10:00	05/13/17 00:10	1
Chromium	<0.00500		0.00500		mg/L		05/08/17 10:00	05/13/17 00:10	1
Cobalt	<0.000500		0.000500		mg/L		05/08/17 10:00	05/13/17 00:10	1
Lead	<0.000500		0.000500		mg/L		05/08/17 10:00	05/13/17 00:10	1
Molybdenum	<0.00200		0.00200		mg/L		05/08/17 10:00	05/13/17 00:10	1
Selenium	<0.00500		0.00500		mg/L		05/08/17 10:00	05/13/17 00:10	1
Thallium	<0.00100		0.00100		mg/L		05/08/17 10:00	05/13/17 00:10	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		05/09/17 09:48	05/10/17 12:54	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	2910		150		mg/L			05/08/17 11:29	1

# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-1

**Client Sample ID: MW6**  
**Date Collected: 05/02/17 13:16**  
**Date Received: 05/05/17 09:50**

**Lab Sample ID: 310-105128-3**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	224		5.00		mg/L			05/09/17 18:10	5
Fluoride	1.32		0.500		mg/L			05/09/17 18:10	5
Sulfate	314		10.0		mg/L			05/10/17 12:39	10

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		05/08/17 10:00	05/08/17 17:52	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		05/08/17 10:00	05/13/17 00:13	1
Arsenic	0.0243		0.00200		mg/L		05/08/17 10:00	05/13/17 00:13	1
Barium	0.195		0.00200		mg/L		05/08/17 10:00	05/13/17 00:13	1
Beryllium	<0.00100		0.00100		mg/L		05/08/17 10:00	05/13/17 00:13	1
Boron	0.461		0.200		mg/L		05/08/17 10:00	05/18/17 11:10	1
Cadmium	<0.000500		0.000500		mg/L		05/08/17 10:00	05/13/17 00:13	1
Calcium	279		0.200		mg/L		05/08/17 10:00	05/13/17 00:13	1
Chromium	<0.00500		0.00500		mg/L		05/08/17 10:00	05/13/17 00:13	1
Cobalt	0.00562		0.000500		mg/L		05/08/17 10:00	05/13/17 00:13	1
Lead	0.00169		0.000500		mg/L		05/08/17 10:00	05/13/17 00:13	1
Molybdenum	0.0610		0.00200		mg/L		05/08/17 10:00	05/13/17 00:13	1
Selenium	<0.00500		0.00500		mg/L		05/08/17 10:00	05/13/17 00:13	1
Thallium	<0.00100		0.00100		mg/L		05/08/17 10:00	05/13/17 00:13	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		05/09/17 09:48	05/10/17 12:56	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1340		60.0		mg/L			05/08/17 11:29	1

# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-1

**Client Sample ID: MW8**  
**Date Collected: 05/02/17 14:00**  
**Date Received: 05/05/17 09:50**

**Lab Sample ID: 310-105128-4**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10.5		5.00		mg/L			05/09/17 19:27	5
Fluoride	1.70		0.500		mg/L			05/09/17 19:27	5
Sulfate	519		20.0		mg/L			05/10/17 12:55	20

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		05/08/17 10:00	05/08/17 17:54	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		05/08/17 10:00	05/13/17 00:16	1
Arsenic	0.0256		0.00200		mg/L		05/08/17 10:00	05/13/17 00:16	1
Barium	0.0813		0.00200		mg/L		05/08/17 10:00	05/13/17 00:16	1
Beryllium	<0.00100		0.00100		mg/L		05/08/17 10:00	05/13/17 00:16	1
Boron	1.04		0.200		mg/L		05/08/17 10:00	05/18/17 11:13	1
Cadmium	<0.000500		0.000500		mg/L		05/08/17 10:00	05/13/17 00:16	1
Calcium	121		0.200		mg/L		05/08/17 10:00	05/13/17 00:16	1
Chromium	<0.00500		0.00500		mg/L		05/08/17 10:00	05/13/17 00:16	1
Cobalt	<0.000500		0.000500		mg/L		05/08/17 10:00	05/13/17 00:16	1
Lead	0.00155		0.000500		mg/L		05/08/17 10:00	05/13/17 00:16	1
Molybdenum	0.101		0.00200		mg/L		05/08/17 10:00	05/13/17 00:16	1
Selenium	<0.00500		0.00500		mg/L		05/08/17 10:00	05/13/17 00:16	1
Thallium	<0.00100		0.00100		mg/L		05/08/17 10:00	05/13/17 00:16	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		05/09/17 09:48	05/10/17 13:02	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	814		30.0		mg/L			05/08/17 11:29	1

# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-1

**Client Sample ID: MW9**  
**Date Collected: 05/02/17 09:59**  
**Date Received: 05/05/17 09:50**

**Lab Sample ID: 310-105128-5**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	127		5.00		mg/L			05/09/17 19:42	5
Fluoride	1.84		0.500		mg/L			05/09/17 19:42	5
Sulfate	25.5		5.00		mg/L			05/09/17 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		05/08/17 10:00	05/08/17 17:56	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		05/08/17 10:00	05/13/17 00:19	1
Arsenic	0.00423		0.00200		mg/L		05/08/17 10:00	05/13/17 00:19	1
Barium	0.487		0.00200		mg/L		05/08/17 10:00	05/13/17 00:19	1
Beryllium	<0.00100		0.00100		mg/L		05/08/17 10:00	05/13/17 00:19	1
Boron	<0.200		0.200		mg/L		05/08/17 10:00	05/18/17 11:25	1
Cadmium	<0.000500		0.000500		mg/L		05/08/17 10:00	05/13/17 00:19	1
Calcium	148		0.200		mg/L		05/08/17 10:00	05/13/17 00:19	1
Chromium	<0.00500		0.00500		mg/L		05/08/17 10:00	05/13/17 00:19	1
Cobalt	0.000974		0.000500		mg/L		05/08/17 10:00	05/13/17 00:19	1
Lead	0.00246		0.000500		mg/L		05/08/17 10:00	05/13/17 00:19	1
Molybdenum	<0.00200		0.00200		mg/L		05/08/17 10:00	05/13/17 00:19	1
Selenium	<0.00500		0.00500		mg/L		05/08/17 10:00	05/13/17 00:19	1
Thallium	<0.00100		0.00100		mg/L		05/08/17 10:00	05/13/17 00:19	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		05/09/17 09:48	05/10/17 13:04	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	760		30.0		mg/L			05/08/17 11:29	1



# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-1

**Client Sample ID: MW13**

**Date Collected: 05/02/17 11:24**

**Date Received: 05/05/17 09:50**

**Lab Sample ID: 310-105128-6**

**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.52		5.00		mg/L			05/09/17 19:58	5
Fluoride	1.05		0.500		mg/L			05/09/17 19:58	5
Sulfate	650		50.0		mg/L			05/09/17 20:13	50

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		05/08/17 10:00	05/08/17 17:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		05/08/17 10:00	05/13/17 00:22	1
Arsenic	0.133		0.00200		mg/L		05/08/17 10:00	05/13/17 00:22	1
Barium	0.0882		0.00200		mg/L		05/08/17 10:00	05/13/17 00:22	1
Beryllium	<0.00100		0.00100		mg/L		05/08/17 10:00	05/13/17 00:22	1
Boron	1.80		0.200		mg/L		05/08/17 10:00	05/18/17 11:28	1
Cadmium	<0.000500		0.000500		mg/L		05/08/17 10:00	05/13/17 00:22	1
Calcium	156		0.200		mg/L		05/08/17 10:00	05/13/17 00:22	1
Chromium	<0.00500		0.00500		mg/L		05/08/17 10:00	05/13/17 00:22	1
Cobalt	<0.000500		0.000500		mg/L		05/08/17 10:00	05/13/17 00:22	1
Lead	<0.000500		0.000500		mg/L		05/08/17 10:00	05/13/17 00:22	1
Molybdenum	0.951		0.00200		mg/L		05/08/17 10:00	05/13/17 00:22	1
Selenium	0.0403		0.00500		mg/L		05/08/17 10:00	05/13/17 00:22	1
Thallium	<0.00100		0.00100		mg/L		05/08/17 10:00	05/13/17 00:22	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		05/09/17 09:48	05/10/17 13:05	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1450		60.0		mg/L			05/08/17 11:29	1

# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-1

**Client Sample ID: MW15**

**Date Collected: 05/02/17 12:38**

**Date Received: 05/05/17 09:50**

**Lab Sample ID: 310-105128-7**

**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			05/09/17 20:28	5
Fluoride	0.878		0.500		mg/L			05/09/17 20:28	5
Sulfate	861		50.0		mg/L			05/09/17 20:44	50

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		05/08/17 10:00	05/08/17 18:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00130		0.00100		mg/L		05/08/17 10:00	05/13/17 00:25	1
Arsenic	<0.00200		0.00200		mg/L		05/08/17 10:00	05/13/17 00:25	1
Barium	0.0382		0.00200		mg/L		05/08/17 10:00	05/13/17 00:25	1
Beryllium	<0.00100		0.00100		mg/L		05/08/17 10:00	05/13/17 00:25	1
Boron	2.80		0.200		mg/L		05/08/17 10:00	05/18/17 11:31	1
Cadmium	<0.000500		0.000500		mg/L		05/08/17 10:00	05/13/17 00:25	1
Calcium	263		0.200		mg/L		05/08/17 10:00	05/13/17 00:25	1
Chromium	0.0153		0.00500		mg/L		05/08/17 10:00	05/13/17 00:25	1
Cobalt	<0.000500		0.000500		mg/L		05/08/17 10:00	05/13/17 00:25	1
Lead	<0.000500		0.000500		mg/L		05/08/17 10:00	05/13/17 00:25	1
Molybdenum	0.316		0.00200		mg/L		05/08/17 10:00	05/13/17 00:25	1
Selenium	0.0785		0.00500		mg/L		05/08/17 10:00	05/13/17 00:25	1
Thallium	<0.00100		0.00100		mg/L		05/08/17 10:00	05/13/17 00:25	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		05/09/17 09:48	05/10/17 13:07	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1280		30.0		mg/L			05/08/17 11:29	1

# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-1

**Client Sample ID: MW16**

**Date Collected: 05/02/17 10:36**

**Date Received: 05/05/17 09:50**

**Lab Sample ID: 310-105128-8**

**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	60.7		5.00		mg/L			05/09/17 20:59	5
Fluoride	1.85		0.500		mg/L			05/09/17 20:59	5
Sulfate	381		20.0		mg/L			05/09/17 21:15	20

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.0503		0.0500		mg/L		05/08/17 10:00	05/08/17 18:03	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		05/08/17 10:00	05/18/17 21:31	1
Arsenic	<0.00200		0.00200		mg/L		05/08/17 10:00	05/18/17 21:31	1
Barium	0.0818		0.00200		mg/L		05/08/17 10:00	05/18/17 21:31	1
Beryllium	<0.00100		0.00100		mg/L		05/08/17 10:00	05/18/17 21:31	1
Boron	0.320		0.200		mg/L		05/08/17 10:00	05/18/17 21:31	1
Cadmium	<0.000500		0.000500		mg/L		05/08/17 10:00	05/18/17 21:31	1
Calcium	184		0.200		mg/L		05/08/17 10:00	05/18/17 21:31	1
Chromium	<0.00500		0.00500		mg/L		05/08/17 10:00	05/18/17 21:31	1
Cobalt	0.000952		0.000500		mg/L		05/08/17 10:00	05/18/17 21:31	1
Lead	<0.000500		0.000500		mg/L		05/08/17 10:00	05/18/17 21:31	1
Molybdenum	0.00651		0.00200		mg/L		05/08/17 10:00	05/18/17 21:31	1
Selenium	<0.00500		0.00500		mg/L		05/08/17 10:00	05/18/17 21:31	1
Thallium	<0.00100		0.00100		mg/L		05/08/17 10:00	05/18/17 21:31	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		05/09/17 09:48	05/10/17 13:09	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1030		30.0		mg/L			05/08/17 11:29	1

# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-1

**Client Sample ID: MW17**

**Date Collected: 05/02/17 14:39**

**Date Received: 05/05/17 09:50**

**Lab Sample ID: 310-105128-9**

**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	45.3		5.00		mg/L			05/09/17 21:30	5
Fluoride	1.66		0.500		mg/L			05/09/17 21:30	5
Sulfate	1090		50.0		mg/L			05/09/17 21:46	50

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.116		0.0500		mg/L		05/08/17 10:00	05/08/17 18:05	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		05/08/17 10:00	05/18/17 21:52	1
Arsenic	0.0300		0.00200		mg/L		05/08/17 10:00	05/18/17 21:52	1
Barium	0.0411		0.00200		mg/L		05/08/17 10:00	05/18/17 21:52	1
Beryllium	<0.00100		0.00100		mg/L		05/08/17 10:00	05/18/17 21:52	1
Boron	0.649		0.200		mg/L		05/08/17 10:00	05/18/17 21:52	1
Cadmium	<0.000500		0.000500		mg/L		05/08/17 10:00	05/18/17 21:52	1
Calcium	364		0.200		mg/L		05/08/17 10:00	05/18/17 21:52	1
Chromium	<0.00500		0.00500		mg/L		05/08/17 10:00	05/18/17 21:52	1
Cobalt	0.0113		0.000500		mg/L		05/08/17 10:00	05/18/17 21:52	1
Lead	<0.000500		0.000500		mg/L		05/08/17 10:00	05/18/17 21:52	1
Molybdenum	<0.00200		0.00200		mg/L		05/08/17 10:00	05/18/17 21:52	1
Selenium	<0.00500		0.00500		mg/L		05/08/17 10:00	05/18/17 21:52	1
Thallium	<0.00100		0.00100		mg/L		05/08/17 10:00	05/18/17 21:52	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		05/09/17 09:48	05/10/17 13:10	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3040		150		mg/L			05/08/17 11:29	1

# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-1

**Client Sample ID: MW18**

**Date Collected: 05/02/17 08:52**

**Date Received: 05/05/17 09:50**

**Lab Sample ID: 310-105128-10**

**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			05/09/17 22:32	5
<b>Fluoride</b>	<b>1.32</b>		0.500		mg/L			05/09/17 22:32	5
Sulfate	<5.00		5.00		mg/L			05/09/17 22:32	5

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		05/08/17 10:00	05/08/17 18:07	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		05/08/17 10:00	05/18/17 21:55	1
Arsenic	<0.00200		0.00200		mg/L		05/08/17 10:00	05/18/17 21:55	1
<b>Barium</b>	<b>0.329</b>		0.00200		mg/L		05/08/17 10:00	05/18/17 21:55	1
Beryllium	<0.00100		0.00100		mg/L		05/08/17 10:00	05/18/17 21:55	1
Boron	<0.200		0.200		mg/L		05/08/17 10:00	05/18/17 21:55	1
Cadmium	<0.000500		0.000500		mg/L		05/08/17 10:00	05/18/17 21:55	1
<b>Calcium</b>	<b>98.9</b>		0.200		mg/L		05/08/17 10:00	05/18/17 21:55	1
Chromium	<0.00500		0.00500		mg/L		05/08/17 10:00	05/18/17 21:55	1
Cobalt	<0.000500		0.000500		mg/L		05/08/17 10:00	05/18/17 21:55	1
Lead	<0.000500		0.000500		mg/L		05/08/17 10:00	05/18/17 21:55	1
Molybdenum	<0.00200		0.00200		mg/L		05/08/17 10:00	05/18/17 21:55	1
Selenium	<0.00500		0.00500		mg/L		05/08/17 10:00	05/18/17 21:55	1
Thallium	<0.00100		0.00100		mg/L		05/08/17 10:00	05/18/17 21:55	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		05/09/17 09:48	05/10/17 13:12	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>542</b>		30.0		mg/L			05/08/17 11:29	1

# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-1

**Client Sample ID: MW19**

**Date Collected: 05/02/17 09:18**

**Date Received: 05/05/17 09:50**

**Lab Sample ID: 310-105128-11**

**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.70		1.00		mg/L			05/09/17 22:47	1
Fluoride	0.804		0.100		mg/L			05/09/17 22:47	1
Sulfate	10.6		1.00		mg/L			05/09/17 22:47	1

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		05/08/17 10:00	05/08/17 18:15	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		05/08/17 10:00	05/18/17 21:58	1
Arsenic	<0.00200		0.00200		mg/L		05/08/17 10:00	05/18/17 21:58	1
Barium	0.328		0.00200		mg/L		05/08/17 10:00	05/18/17 21:58	1
Beryllium	<0.00100		0.00100		mg/L		05/08/17 10:00	05/18/17 21:58	1
Boron	<0.200		0.200		mg/L		05/08/17 10:00	05/18/17 21:58	1
Cadmium	<0.000500		0.000500		mg/L		05/08/17 10:00	05/18/17 21:58	1
Calcium	107		0.200		mg/L		05/08/17 10:00	05/18/17 21:58	1
Chromium	<0.00500		0.00500		mg/L		05/08/17 10:00	05/18/17 21:58	1
Cobalt	<0.000500		0.000500		mg/L		05/08/17 10:00	05/18/17 21:58	1
Lead	<0.000500		0.000500		mg/L		05/08/17 10:00	05/18/17 21:58	1
Molybdenum	<0.00200		0.00200		mg/L		05/08/17 10:00	05/18/17 21:58	1
Selenium	<0.00500		0.00500		mg/L		05/08/17 10:00	05/18/17 21:58	1
Thallium	<0.00100		0.00100		mg/L		05/08/17 10:00	05/18/17 21:58	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		05/09/17 09:48	05/10/17 13:13	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	566		30.0		mg/L			05/08/17 11:29	1

# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-1

**Client Sample ID: DUP-1**

**Date Collected: 05/02/17 11:30**

**Date Received: 05/05/17 09:50**

**Lab Sample ID: 310-105128-12**

**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.22		5.00		mg/L			05/09/17 23:03	5
Fluoride	3.24		0.500		mg/L			05/09/17 23:03	5
Sulfate	591		20.0		mg/L			05/09/17 23:18	20

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		05/08/17 10:00	05/08/17 18:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		05/08/17 10:00	05/18/17 22:01	1
Arsenic	0.203		0.00200		mg/L		05/08/17 10:00	05/18/17 22:01	1
Barium	0.106		0.00200		mg/L		05/08/17 10:00	05/18/17 22:01	1
Beryllium	<0.00100		0.00100		mg/L		05/08/17 10:00	05/18/17 22:01	1
Boron	2.04		0.200		mg/L		05/08/17 10:00	05/18/17 22:01	1
Cadmium	<0.000500		0.000500		mg/L		05/08/17 10:00	05/18/17 22:01	1
Calcium	165		0.200		mg/L		05/08/17 10:00	05/18/17 22:01	1
Chromium	<0.00500		0.00500		mg/L		05/08/17 10:00	05/18/17 22:01	1
Cobalt	<0.000500		0.000500		mg/L		05/08/17 10:00	05/18/17 22:01	1
Lead	<0.000500		0.000500		mg/L		05/08/17 10:00	05/18/17 22:01	1
Molybdenum	0.838		0.00200		mg/L		05/08/17 10:00	05/18/17 22:01	1
Selenium	0.0301		0.00500		mg/L		05/08/17 10:00	05/18/17 22:01	1
Thallium	<0.00100		0.00100		mg/L		05/08/17 10:00	05/18/17 22:01	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		05/09/17 09:48	05/10/17 13:15	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1390		60.0		mg/L			05/08/17 11:29	1

# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-1

**Client Sample ID: DUP-2**

**Date Collected: 05/02/17 15:30**

**Date Received: 05/05/17 09:50**

**Lab Sample ID: 310-105128-13**

**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	46.8		5.00		mg/L			05/09/17 23:33	5
Fluoride	2.60		0.500		mg/L			05/09/17 23:33	5
Sulfate	1310		50.0		mg/L			05/10/17 13:41	50

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.0801		0.0500		mg/L		05/08/17 10:00	05/08/17 18:20	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		05/08/17 10:00	05/18/17 22:04	1
Arsenic	0.0588		0.00200		mg/L		05/08/17 10:00	05/18/17 22:04	1
Barium	0.0525		0.00200		mg/L		05/08/17 10:00	05/18/17 22:04	1
Beryllium	<0.00100		0.00100		mg/L		05/08/17 10:00	05/18/17 22:04	1
Boron	0.545		0.200		mg/L		05/08/17 10:00	05/18/17 22:04	1
Cadmium	<0.000500		0.000500		mg/L		05/08/17 10:00	05/18/17 22:04	1
Calcium	439		0.200		mg/L		05/08/17 10:00	05/18/17 22:04	1
Chromium	<0.00500		0.00500		mg/L		05/08/17 10:00	05/18/17 22:04	1
Cobalt	<0.000500		0.000500		mg/L		05/08/17 10:00	05/18/17 22:04	1
Lead	<0.000500		0.000500		mg/L		05/08/17 10:00	05/18/17 22:04	1
Molybdenum	0.00209		0.00200		mg/L		05/08/17 10:00	05/18/17 22:04	1
Selenium	<0.00500		0.00500		mg/L		05/08/17 10:00	05/18/17 22:04	1
Thallium	<0.00100		0.00100		mg/L		05/08/17 10:00	05/18/17 22:04	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		05/09/17 09:48	05/10/17 13:17	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	2610		150		mg/L			05/08/17 11:29	1



# Definitions/Glossary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-1

## 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.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)

# QC Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-1

## Method: 9056A - Anions, Ion Chromatography

**Lab Sample ID: MB 310-165930/3**  
**Matrix: Water**  
**Analysis Batch: 165930**

**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			05/09/17 17:24	1
Fluoride	<0.100		0.100		mg/L			05/09/17 17:24	1
Sulfate	<1.00		1.00		mg/L			05/09/17 17:24	1

**Lab Sample ID: LCS 310-165930/4**  
**Matrix: Water**  
**Analysis Batch: 165930**

**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	7.604		mg/L		101	90 - 110
Fluoride	1.50	1.594		mg/L		106	90 - 110
Sulfate	7.50	8.185		mg/L		109	90 - 110

**Lab Sample ID: 310-105128-5 MS**  
**Matrix: Ground Water**  
**Analysis Batch: 165930**

**Client Sample ID: MW9**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	127		25.0	151.6	4	mg/L		98	80 - 120
Fluoride	1.84		5.00	6.270		mg/L		89	80 - 120
Sulfate	25.5		25.0	51.02		mg/L		102	80 - 120

**Lab Sample ID: 310-105128-5 MSD**  
**Matrix: Ground Water**  
**Analysis Batch: 165930**

**Client Sample ID: MW9**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	127		25.0	153.1	4	mg/L		104	80 - 120	1	15
Fluoride	1.84		5.00	6.014		mg/L		84	80 - 120	4	15
Sulfate	25.5		25.0	50.24		mg/L		99	80 - 120	2	15

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 310-165446/1-A**  
**Matrix: Water**  
**Analysis Batch: 165677**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 165446**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		05/08/17 10:00	05/08/17 17:33	1

**Lab Sample ID: LCS 310-165446/2-A**  
**Matrix: Water**  
**Analysis Batch: 165677**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 165446**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	2.00	1.908		mg/L		95	80 - 120

TestAmerica Cedar Falls

# QC Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-1

## Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 310-105128-10 DU  
Matrix: Ground Water  
Analysis Batch: 165677

Client Sample ID: MW18  
Prep Type: Total/NA  
Prep Batch: 165446

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Lithium	<0.0500		<0.0500		mg/L		NC	20

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

Lab Sample ID: MB 310-165444/1-A  
Matrix: Water  
Analysis Batch: 166282

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 165444

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		05/08/17 10:00	05/12/17 22:52	1
Arsenic	<0.00200		0.00200		mg/L		05/08/17 10:00	05/12/17 22:52	1
Barium	<0.00200		0.00200		mg/L		05/08/17 10:00	05/12/17 22:52	1
Beryllium	<0.00100		0.00100		mg/L		05/08/17 10:00	05/12/17 22:52	1
Boron	<0.200		0.200		mg/L		05/08/17 10:00	05/12/17 22:52	1
Cadmium	<0.000500		0.000500		mg/L		05/08/17 10:00	05/12/17 22:52	1
Calcium	<0.200		0.200		mg/L		05/08/17 10:00	05/12/17 22:52	1
Chromium	<0.00500		0.00500		mg/L		05/08/17 10:00	05/12/17 22:52	1
Cobalt	<0.000500		0.000500		mg/L		05/08/17 10:00	05/12/17 22:52	1
Lead	<0.000500		0.000500		mg/L		05/08/17 10:00	05/12/17 22:52	1
Molybdenum	<0.00200		0.00200		mg/L		05/08/17 10:00	05/12/17 22:52	1
Selenium	<0.00500		0.00500		mg/L		05/08/17 10:00	05/12/17 22:52	1
Thallium	<0.00100		0.00100		mg/L		05/08/17 10:00	05/12/17 22:52	1

Lab Sample ID: LCS 310-165444/2-A  
Matrix: Water  
Analysis Batch: 166282

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 165444

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0200	0.01939		mg/L		97	80 - 120
Arsenic	0.0400	0.04080		mg/L		102	80 - 120
Barium	0.0400	0.04062		mg/L		102	80 - 120
Beryllium	0.0200	0.02134		mg/L		107	80 - 120
Boron	0.880	0.8799		mg/L		100	80 - 120
Cadmium	0.0200	0.02086		mg/L		104	80 - 120
Calcium	2.00	2.107		mg/L		105	80 - 120
Chromium	0.0400	0.04341		mg/L		109	80 - 120
Cobalt	0.0200	0.02150		mg/L		107	80 - 120
Lead	0.0200	0.02108		mg/L		105	80 - 120
Molybdenum	0.0400	0.03967		mg/L		99	80 - 120
Selenium	0.0400	0.04131		mg/L		103	80 - 120
Thallium	0.0160	0.01595		mg/L		100	80 - 120

Lab Sample ID: MB 310-165445/1-A  
Matrix: Water  
Analysis Batch: 166927

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 165445

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		05/08/17 10:00	05/18/17 21:24	1

TestAmerica Cedar Falls

# QC Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-1

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

**Lab Sample ID: MB 310-165445/1-A**  
**Matrix: Water**  
**Analysis Batch: 166927**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 165445**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	<0.00200		0.00200		mg/L		05/08/17 10:00	05/18/17 21:24	1
Barium	<0.00200		0.00200		mg/L		05/08/17 10:00	05/18/17 21:24	1
Beryllium	<0.00100		0.00100		mg/L		05/08/17 10:00	05/18/17 21:24	1
Boron	<0.200		0.200		mg/L		05/08/17 10:00	05/18/17 21:24	1
Cadmium	<0.000500		0.000500		mg/L		05/08/17 10:00	05/18/17 21:24	1
Calcium	<0.200		0.200		mg/L		05/08/17 10:00	05/18/17 21:24	1
Chromium	<0.00500		0.00500		mg/L		05/08/17 10:00	05/18/17 21:24	1
Cobalt	<0.000500		0.000500		mg/L		05/08/17 10:00	05/18/17 21:24	1
Lead	<0.000500		0.000500		mg/L		05/08/17 10:00	05/18/17 21:24	1
Molybdenum	<0.00200		0.00200		mg/L		05/08/17 10:00	05/18/17 21:24	1
Selenium	<0.00500		0.00500		mg/L		05/08/17 10:00	05/18/17 21:24	1
Thallium	<0.00100		0.00100		mg/L		05/08/17 10:00	05/18/17 21:24	1

**Lab Sample ID: LCS 310-165445/2-A**  
**Matrix: Water**  
**Analysis Batch: 166927**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 165445**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
		Result	Qualifier					
Antimony	0.0200	0.01990		mg/L		99		80 - 120
Barium	0.0400	0.04395		mg/L		110		80 - 120
Beryllium	0.0200	0.02154		mg/L		108		80 - 120
Boron	0.880	0.8383		mg/L		95		80 - 120
Cadmium	0.0200	0.02157		mg/L		108		80 - 120
Calcium	2.00	2.165		mg/L		108		80 - 120
Chromium	0.0400	0.04230		mg/L		106		80 - 120
Cobalt	0.0200	0.02138		mg/L		107		80 - 120
Lead	0.0200	0.02103		mg/L		105		80 - 120
Molybdenum	0.0400	0.04099		mg/L		102		80 - 120
Selenium	0.0400	0.04105		mg/L		103		80 - 120
Thallium	0.0160	0.01676		mg/L		105		80 - 120

**Lab Sample ID: LCS 310-165445/2-A**  
**Matrix: Water**  
**Analysis Batch: 167005**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 165445**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
		Result	Qualifier					
Arsenic	0.0400	0.04047		mg/L		101		80 - 120

**Lab Sample ID: 310-105128-8 MS**  
**Matrix: Ground Water**  
**Analysis Batch: 166927**

**Client Sample ID: MW16**  
**Prep Type: Total/NA**  
**Prep Batch: 165445**

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier		Result	Qualifier					
Antimony	<0.00100		0.0200	0.02031		mg/L		100		75 - 125
Arsenic	<0.00200		0.0400	0.04401		mg/L		105		75 - 125
Barium	0.0818		0.0400	0.1289		mg/L		118		75 - 125
Beryllium	<0.00100		0.0200	0.02053		mg/L		103		75 - 125
Boron	0.320		0.880	1.172		mg/L		97		75 - 125
Cadmium	<0.000500		0.0200	0.02142		mg/L		107		75 - 125

TestAmerica Cedar Falls

# QC Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-1

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

**Lab Sample ID: 310-105128-8 MS**  
**Matrix: Ground Water**  
**Analysis Batch: 166927**

**Client Sample ID: MW16**  
**Prep Type: Total/NA**  
**Prep Batch: 165445**  
**%Rec.**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Calcium	184		2.00	187.3	4	mg/L		149	75 - 125
Chromium	<0.00500		0.0400	0.04128		mg/L		103	75 - 125
Cobalt	0.000952		0.0200	0.02106		mg/L		101	75 - 125
Lead	<0.000500		0.0200	0.02166		mg/L		108	75 - 125
Molybdenum	0.00651		0.0400	0.05047		mg/L		110	75 - 125
Selenium	<0.00500		0.0400	0.04343		mg/L		106	75 - 125
Thallium	<0.00100		0.0160	0.01652		mg/L		103	75 - 125

**Lab Sample ID: 310-105128-8 MSD**  
**Matrix: Ground Water**  
**Analysis Batch: 166927**

**Client Sample ID: MW16**  
**Prep Type: Total/NA**  
**Prep Batch: 165445**  
**%Rec.**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	<0.00100		0.0200	0.01987		mg/L		97	75 - 125	2	20
Arsenic	<0.00200		0.0400	0.04379		mg/L		105	75 - 125	0	20
Barium	0.0818		0.0400	0.1292		mg/L		119	75 - 125	0	20
Beryllium	<0.00100		0.0200	0.02054		mg/L		103	75 - 125	0	20
Boron	0.320		0.880	1.214		mg/L		101	75 - 125	3	20
Cadmium	<0.000500		0.0200	0.02127		mg/L		106	75 - 125	1	20
Calcium	184		2.00	190.1	4	mg/L		290	75 - 125	1	20
Chromium	<0.00500		0.0400	0.04109		mg/L		103	75 - 125	0	20
Cobalt	0.000952		0.0200	0.02097		mg/L		100	75 - 125	0	20
Lead	<0.000500		0.0200	0.02143		mg/L		107	75 - 125	1	20
Molybdenum	0.00651		0.0400	0.04998		mg/L		109	75 - 125	1	20
Selenium	<0.00500		0.0400	0.04273		mg/L		104	75 - 125	2	20
Thallium	<0.00100		0.0160	0.01636		mg/L		102	75 - 125	1	20

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 310-165721/1-A**  
**Matrix: Water**  
**Analysis Batch: 165924**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 165721**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		05/09/17 09:48	05/10/17 12:46	1

**Lab Sample ID: LCS 310-165721/2-A**  
**Matrix: Water**  
**Analysis Batch: 165924**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 165721**  
**%Rec.**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00167	0.001343		mg/L		81	80 - 120

**Lab Sample ID: 310-105128-1 MS**  
**Matrix: Ground Water**  
**Analysis Batch: 165924**

**Client Sample ID: MW2**  
**Prep Type: Total/NA**  
**Prep Batch: 165721**  
**%Rec.**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000200		0.00167	0.001428		mg/L		86	80 - 120

TestAmerica Cedar Falls

# QC Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-1

**Lab Sample ID: 310-105128-1 MSD**  
**Matrix: Ground Water**  
**Analysis Batch: 165924**

**Client Sample ID: MW2**  
**Prep Type: Total/NA**  
**Prep Batch: 165721**  
**%Rec.**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000200		0.00167	0.001442		mg/L		87	80 - 120	1	20

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

**Lab Sample ID: MB 310-165582/1**  
**Matrix: Water**  
**Analysis Batch: 165582**

**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			05/08/17 11:29	1

**Lab Sample ID: LCS 310-165582/2**  
**Matrix: Water**  
**Analysis Batch: 165582**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	1000	1088		mg/L		109	90 - 110

**Lab Sample ID: 310-105128-1 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 165582**

**Client Sample ID: MW2**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	1840		1808		mg/L		2	24

**Lab Sample ID: 310-105128-11 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 165582**

**Client Sample ID: MW19**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	566		528.0		mg/L		7	24

TestAmerica Cedar Falls

# QC Association Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-1

## HPLC/IC

### Analysis Batch: 165930

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-105128-1	MW2	Total/NA	Ground Water	9056A	
310-105128-1	MW2	Total/NA	Ground Water	9056A	
310-105128-2	MW5	Total/NA	Ground Water	9056A	
310-105128-2	MW5	Total/NA	Ground Water	9056A	
310-105128-3	MW6	Total/NA	Ground Water	9056A	
310-105128-3	MW6	Total/NA	Ground Water	9056A	
310-105128-4	MW8	Total/NA	Ground Water	9056A	
310-105128-4	MW8	Total/NA	Ground Water	9056A	
310-105128-5	MW9	Total/NA	Ground Water	9056A	
310-105128-6	MW13	Total/NA	Ground Water	9056A	
310-105128-6	MW13	Total/NA	Ground Water	9056A	
310-105128-7	MW15	Total/NA	Ground Water	9056A	
310-105128-7	MW15	Total/NA	Ground Water	9056A	
310-105128-8	MW16	Total/NA	Ground Water	9056A	
310-105128-8	MW16	Total/NA	Ground Water	9056A	
310-105128-9	MW17	Total/NA	Ground Water	9056A	
310-105128-9	MW17	Total/NA	Ground Water	9056A	
310-105128-10	MW18	Total/NA	Ground Water	9056A	
310-105128-11	MW19	Total/NA	Ground Water	9056A	
310-105128-12	DUP-1	Total/NA	Ground Water	9056A	
310-105128-12	DUP-1	Total/NA	Ground Water	9056A	
310-105128-13	DUP-2	Total/NA	Ground Water	9056A	
310-105128-13	DUP-2	Total/NA	Ground Water	9056A	
MB 310-165930/3	Method Blank	Total/NA	Water	9056A	
LCS 310-165930/4	Lab Control Sample	Total/NA	Water	9056A	
310-105128-5 MS	MW9	Total/NA	Ground Water	9056A	
310-105128-5 MSD	MW9	Total/NA	Ground Water	9056A	

## Metals

### Prep Batch: 165444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-105128-1	MW2	Total/NA	Ground Water	3010A	
310-105128-2	MW5	Total/NA	Ground Water	3010A	
310-105128-3	MW6	Total/NA	Ground Water	3010A	
310-105128-4	MW8	Total/NA	Ground Water	3010A	
310-105128-5	MW9	Total/NA	Ground Water	3010A	
310-105128-6	MW13	Total/NA	Ground Water	3010A	
310-105128-7	MW15	Total/NA	Ground Water	3010A	
MB 310-165444/1-A	Method Blank	Total/NA	Water	3010A	
LCS 310-165444/2-A	Lab Control Sample	Total/NA	Water	3010A	

### Prep Batch: 165445

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-105128-8	MW16	Total/NA	Ground Water	3010A	
310-105128-9	MW17	Total/NA	Ground Water	3010A	
310-105128-10	MW18	Total/NA	Ground Water	3010A	
310-105128-11	MW19	Total/NA	Ground Water	3010A	
310-105128-12	DUP-1	Total/NA	Ground Water	3010A	
310-105128-13	DUP-2	Total/NA	Ground Water	3010A	

TestAmerica Cedar Falls

# QC Association Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-1

## Metals (Continued)

### Prep Batch: 165445 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-165445/1-A	Method Blank	Total/NA	Water	3010A	
LCS 310-165445/2-A	Lab Control Sample	Total/NA	Water	3010A	
310-105128-8 MS	MW16	Total/NA	Ground Water	3010A	
310-105128-8 MSD	MW16	Total/NA	Ground Water	3010A	

### Prep Batch: 165446

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-105128-1	MW2	Total/NA	Ground Water	3010A	
310-105128-2	MW5	Total/NA	Ground Water	3010A	
310-105128-3	MW6	Total/NA	Ground Water	3010A	
310-105128-4	MW8	Total/NA	Ground Water	3010A	
310-105128-5	MW9	Total/NA	Ground Water	3010A	
310-105128-6	MW13	Total/NA	Ground Water	3010A	
310-105128-7	MW15	Total/NA	Ground Water	3010A	
310-105128-8	MW16	Total/NA	Ground Water	3010A	
310-105128-9	MW17	Total/NA	Ground Water	3010A	
310-105128-10	MW18	Total/NA	Ground Water	3010A	
310-105128-11	MW19	Total/NA	Ground Water	3010A	
310-105128-12	DUP-1	Total/NA	Ground Water	3010A	
310-105128-13	DUP-2	Total/NA	Ground Water	3010A	
MB 310-165446/1-A	Method Blank	Total/NA	Water	3010A	
LCS 310-165446/2-A	Lab Control Sample	Total/NA	Water	3010A	
310-105128-10 DU	MW18	Total/NA	Ground Water	3010A	

### Analysis Batch: 165677

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-105128-1	MW2	Total/NA	Ground Water	6010C	165446
310-105128-2	MW5	Total/NA	Ground Water	6010C	165446
310-105128-3	MW6	Total/NA	Ground Water	6010C	165446
310-105128-4	MW8	Total/NA	Ground Water	6010C	165446
310-105128-5	MW9	Total/NA	Ground Water	6010C	165446
310-105128-6	MW13	Total/NA	Ground Water	6010C	165446
310-105128-7	MW15	Total/NA	Ground Water	6010C	165446
310-105128-8	MW16	Total/NA	Ground Water	6010C	165446
310-105128-9	MW17	Total/NA	Ground Water	6010C	165446
310-105128-10	MW18	Total/NA	Ground Water	6010C	165446
310-105128-11	MW19	Total/NA	Ground Water	6010C	165446
310-105128-12	DUP-1	Total/NA	Ground Water	6010C	165446
310-105128-13	DUP-2	Total/NA	Ground Water	6010C	165446
MB 310-165446/1-A	Method Blank	Total/NA	Water	6010C	165446
LCS 310-165446/2-A	Lab Control Sample	Total/NA	Water	6010C	165446
310-105128-10 DU	MW18	Total/NA	Ground Water	6010C	165446

### Prep Batch: 165721

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-105128-1	MW2	Total/NA	Ground Water	7470A	
310-105128-2	MW5	Total/NA	Ground Water	7470A	
310-105128-3	MW6	Total/NA	Ground Water	7470A	
310-105128-4	MW8	Total/NA	Ground Water	7470A	
310-105128-5	MW9	Total/NA	Ground Water	7470A	
310-105128-6	MW13	Total/NA	Ground Water	7470A	

TestAmerica Cedar Falls



# QC Association Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-1

## Metals (Continued)

### Prep Batch: 165721 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-105128-7	MW15	Total/NA	Ground Water	7470A	
310-105128-8	MW16	Total/NA	Ground Water	7470A	
310-105128-9	MW17	Total/NA	Ground Water	7470A	
310-105128-10	MW18	Total/NA	Ground Water	7470A	
310-105128-11	MW19	Total/NA	Ground Water	7470A	
310-105128-12	DUP-1	Total/NA	Ground Water	7470A	
310-105128-13	DUP-2	Total/NA	Ground Water	7470A	
MB 310-165721/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-165721/2-A	Lab Control Sample	Total/NA	Water	7470A	
310-105128-1 MS	MW2	Total/NA	Ground Water	7470A	
310-105128-1 MSD	MW2	Total/NA	Ground Water	7470A	

### Analysis Batch: 165924

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-105128-1	MW2	Total/NA	Ground Water	7470A	165721
310-105128-2	MW5	Total/NA	Ground Water	7470A	165721
310-105128-3	MW6	Total/NA	Ground Water	7470A	165721
310-105128-4	MW8	Total/NA	Ground Water	7470A	165721
310-105128-5	MW9	Total/NA	Ground Water	7470A	165721
310-105128-6	MW13	Total/NA	Ground Water	7470A	165721
310-105128-7	MW15	Total/NA	Ground Water	7470A	165721
310-105128-8	MW16	Total/NA	Ground Water	7470A	165721
310-105128-9	MW17	Total/NA	Ground Water	7470A	165721
310-105128-10	MW18	Total/NA	Ground Water	7470A	165721
310-105128-11	MW19	Total/NA	Ground Water	7470A	165721
310-105128-12	DUP-1	Total/NA	Ground Water	7470A	165721
310-105128-13	DUP-2	Total/NA	Ground Water	7470A	165721
MB 310-165721/1-A	Method Blank	Total/NA	Water	7470A	165721
LCS 310-165721/2-A	Lab Control Sample	Total/NA	Water	7470A	165721
310-105128-1 MS	MW2	Total/NA	Ground Water	7470A	165721
310-105128-1 MSD	MW2	Total/NA	Ground Water	7470A	165721

### Analysis Batch: 166282

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-105128-1	MW2	Total/NA	Ground Water	6020A	165444
310-105128-2	MW5	Total/NA	Ground Water	6020A	165444
310-105128-3	MW6	Total/NA	Ground Water	6020A	165444
310-105128-4	MW8	Total/NA	Ground Water	6020A	165444
310-105128-5	MW9	Total/NA	Ground Water	6020A	165444
310-105128-6	MW13	Total/NA	Ground Water	6020A	165444
310-105128-7	MW15	Total/NA	Ground Water	6020A	165444
MB 310-165444/1-A	Method Blank	Total/NA	Water	6020A	165444
LCS 310-165444/2-A	Lab Control Sample	Total/NA	Water	6020A	165444

### Analysis Batch: 166876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-105128-1	MW2	Total/NA	Ground Water	6020A	165444
310-105128-2	MW5	Total/NA	Ground Water	6020A	165444
310-105128-3	MW6	Total/NA	Ground Water	6020A	165444
310-105128-4	MW8	Total/NA	Ground Water	6020A	165444
310-105128-5	MW9	Total/NA	Ground Water	6020A	165444

TestAmerica Cedar Falls

# QC Association Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-1

## Metals (Continued)

### Analysis Batch: 166876 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-105128-6	MW13	Total/NA	Ground Water	6020A	165444
310-105128-7	MW15	Total/NA	Ground Water	6020A	165444

### Analysis Batch: 166927

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-105128-8	MW16	Total/NA	Ground Water	6020A	165445
310-105128-9	MW17	Total/NA	Ground Water	6020A	165445
310-105128-10	MW18	Total/NA	Ground Water	6020A	165445
310-105128-11	MW19	Total/NA	Ground Water	6020A	165445
310-105128-12	DUP-1	Total/NA	Ground Water	6020A	165445
310-105128-13	DUP-2	Total/NA	Ground Water	6020A	165445
MB 310-165445/1-A	Method Blank	Total/NA	Water	6020A	165445
LCS 310-165445/2-A	Lab Control Sample	Total/NA	Water	6020A	165445
310-105128-8 MS	MW16	Total/NA	Ground Water	6020A	165445
310-105128-8 MSD	MW16	Total/NA	Ground Water	6020A	165445

### Analysis Batch: 167005

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 310-165445/2-A	Lab Control Sample	Total/NA	Water	6020A	165445

## General Chemistry

### Analysis Batch: 165582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-105128-1	MW2	Total/NA	Ground Water	SM 2540C	
310-105128-2	MW5	Total/NA	Ground Water	SM 2540C	
310-105128-3	MW6	Total/NA	Ground Water	SM 2540C	
310-105128-4	MW8	Total/NA	Ground Water	SM 2540C	
310-105128-5	MW9	Total/NA	Ground Water	SM 2540C	
310-105128-6	MW13	Total/NA	Ground Water	SM 2540C	
310-105128-7	MW15	Total/NA	Ground Water	SM 2540C	
310-105128-8	MW16	Total/NA	Ground Water	SM 2540C	
310-105128-9	MW17	Total/NA	Ground Water	SM 2540C	
310-105128-10	MW18	Total/NA	Ground Water	SM 2540C	
310-105128-11	MW19	Total/NA	Ground Water	SM 2540C	
310-105128-12	DUP-1	Total/NA	Ground Water	SM 2540C	
310-105128-13	DUP-2	Total/NA	Ground Water	SM 2540C	
MB 310-165582/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-165582/2	Lab Control Sample	Total/NA	Water	SM 2540C	
310-105128-1 DU	MW2	Total/NA	Ground Water	SM 2540C	
310-105128-11 DU	MW19	Total/NA	Ground Water	SM 2540C	

# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-1

**Client Sample ID: MW2**  
**Date Collected: 05/02/17 11:02**  
**Date Received: 05/05/17 09:50**

**Lab Sample ID: 310-105128-1**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	165930	05/10/17 02:38	SAD	TAL CF
Total/NA	Analysis	9056A		50	165930	05/10/17 02:54	SAD	TAL CF
Total/NA	Prep	3010A			165446	05/08/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	165677	05/08/17 17:44	OAD	TAL CF
Total/NA	Prep	3010A			165444	05/08/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166282	05/12/17 23:57	JIS	TAL CF
Total/NA	Prep	3010A			165444	05/08/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166876	05/18/17 11:04	OAD	TAL CF
Total/NA	Prep	7470A			165721	05/09/17 09:48	SAD	TAL CF
Total/NA	Analysis	7470A		1	165924	05/10/17 12:49	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	165582	05/08/17 11:29	SAS	TAL CF

**Client Sample ID: MW5**  
**Date Collected: 05/02/17 15:28**  
**Date Received: 05/05/17 09:50**

**Lab Sample ID: 310-105128-2**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	165930	05/09/17 17:54	SAD	TAL CF
Total/NA	Analysis	9056A		50	165930	05/10/17 12:24	SAD	TAL CF
Total/NA	Prep	3010A			165446	05/08/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	165677	05/08/17 17:50	OAD	TAL CF
Total/NA	Prep	3010A			165444	05/08/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166282	05/13/17 00:10	JIS	TAL CF
Total/NA	Prep	3010A			165444	05/08/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166876	05/18/17 11:07	OAD	TAL CF
Total/NA	Prep	7470A			165721	05/09/17 09:48	SAD	TAL CF
Total/NA	Analysis	7470A		1	165924	05/10/17 12:54	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	165582	05/08/17 11:29	SAS	TAL CF

**Client Sample ID: MW6**  
**Date Collected: 05/02/17 13:16**  
**Date Received: 05/05/17 09:50**

**Lab Sample ID: 310-105128-3**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	165930	05/09/17 18:10	SAD	TAL CF
Total/NA	Analysis	9056A		10	165930	05/10/17 12:39	SAD	TAL CF
Total/NA	Prep	3010A			165446	05/08/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	165677	05/08/17 17:52	OAD	TAL CF
Total/NA	Prep	3010A			165444	05/08/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166282	05/13/17 00:13	JIS	TAL CF
Total/NA	Prep	3010A			165444	05/08/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166876	05/18/17 11:10	OAD	TAL CF

TestAmerica Cedar Falls

# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-1

**Client Sample ID: MW6**  
**Date Collected: 05/02/17 13:16**  
**Date Received: 05/05/17 09:50**

**Lab Sample ID: 310-105128-3**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			165721	05/09/17 09:48	SAD	TAL CF
Total/NA	Analysis	7470A		1	165924	05/10/17 12:56	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	165582	05/08/17 11:29	SAS	TAL CF

**Client Sample ID: MW8**  
**Date Collected: 05/02/17 14:00**  
**Date Received: 05/05/17 09:50**

**Lab Sample ID: 310-105128-4**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	165930	05/09/17 19:27	SAD	TAL CF
Total/NA	Analysis	9056A		20	165930	05/10/17 12:55	SAD	TAL CF
Total/NA	Prep	3010A			165446	05/08/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	165677	05/08/17 17:54	OAD	TAL CF
Total/NA	Prep	3010A			165444	05/08/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166282	05/13/17 00:16	JIS	TAL CF
Total/NA	Prep	3010A			165444	05/08/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166876	05/18/17 11:13	OAD	TAL CF
Total/NA	Prep	7470A			165721	05/09/17 09:48	SAD	TAL CF
Total/NA	Analysis	7470A		1	165924	05/10/17 13:02	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	165582	05/08/17 11:29	SAS	TAL CF

**Client Sample ID: MW9**  
**Date Collected: 05/02/17 09:59**  
**Date Received: 05/05/17 09:50**

**Lab Sample ID: 310-105128-5**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	165930	05/09/17 19:42	SAD	TAL CF
Total/NA	Prep	3010A			165446	05/08/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	165677	05/08/17 17:56	OAD	TAL CF
Total/NA	Prep	3010A			165444	05/08/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166282	05/13/17 00:19	JIS	TAL CF
Total/NA	Prep	3010A			165444	05/08/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166876	05/18/17 11:25	OAD	TAL CF
Total/NA	Prep	7470A			165721	05/09/17 09:48	SAD	TAL CF
Total/NA	Analysis	7470A		1	165924	05/10/17 13:04	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	165582	05/08/17 11:29	SAS	TAL CF

# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-1

**Client Sample ID: MW13**

**Date Collected: 05/02/17 11:24**

**Date Received: 05/05/17 09:50**

**Lab Sample ID: 310-105128-6**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	165930	05/09/17 19:58	SAD	TAL CF
Total/NA	Analysis	9056A		50	165930	05/09/17 20:13	SAD	TAL CF
Total/NA	Prep	3010A			165446	05/08/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	165677	05/08/17 17:59	OAD	TAL CF
Total/NA	Prep	3010A			165444	05/08/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166282	05/13/17 00:22	JIS	TAL CF
Total/NA	Prep	3010A			165444	05/08/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166876	05/18/17 11:28	OAD	TAL CF
Total/NA	Prep	7470A			165721	05/09/17 09:48	SAD	TAL CF
Total/NA	Analysis	7470A		1	165924	05/10/17 13:05	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	165582	05/08/17 11:29	SAS	TAL CF

**Client Sample ID: MW15**

**Date Collected: 05/02/17 12:38**

**Date Received: 05/05/17 09:50**

**Lab Sample ID: 310-105128-7**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	165930	05/09/17 20:28	SAD	TAL CF
Total/NA	Analysis	9056A		50	165930	05/09/17 20:44	SAD	TAL CF
Total/NA	Prep	3010A			165446	05/08/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	165677	05/08/17 18:01	OAD	TAL CF
Total/NA	Prep	3010A			165444	05/08/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166282	05/13/17 00:25	JIS	TAL CF
Total/NA	Prep	3010A			165444	05/08/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166876	05/18/17 11:31	OAD	TAL CF
Total/NA	Prep	7470A			165721	05/09/17 09:48	SAD	TAL CF
Total/NA	Analysis	7470A		1	165924	05/10/17 13:07	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	165582	05/08/17 11:29	SAS	TAL CF

**Client Sample ID: MW16**

**Date Collected: 05/02/17 10:36**

**Date Received: 05/05/17 09:50**

**Lab Sample ID: 310-105128-8**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	165930	05/09/17 20:59	SAD	TAL CF
Total/NA	Analysis	9056A		20	165930	05/09/17 21:15	SAD	TAL CF
Total/NA	Prep	3010A			165446	05/08/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	165677	05/08/17 18:03	OAD	TAL CF
Total/NA	Prep	3010A			165445	05/08/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166927	05/18/17 21:31	OAD	TAL CF
Total/NA	Prep	7470A			165721	05/09/17 09:48	SAD	TAL CF
Total/NA	Analysis	7470A		1	165924	05/10/17 13:09	SAD	TAL CF

TestAmerica Cedar Falls

# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-1

**Client Sample ID: MW16**

**Date Collected: 05/02/17 10:36**

**Date Received: 05/05/17 09:50**

**Lab Sample ID: 310-105128-8**

**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	165582	05/08/17 11:29	SAS	TAL CF

**Client Sample ID: MW17**

**Date Collected: 05/02/17 14:39**

**Date Received: 05/05/17 09:50**

**Lab Sample ID: 310-105128-9**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	165930	05/09/17 21:30	SAD	TAL CF
Total/NA	Analysis	9056A		50	165930	05/09/17 21:46	SAD	TAL CF
Total/NA	Prep	3010A			165446	05/08/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	165677	05/08/17 18:05	OAD	TAL CF
Total/NA	Prep	3010A			165445	05/08/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166927	05/18/17 21:52	OAD	TAL CF
Total/NA	Prep	7470A			165721	05/09/17 09:48	SAD	TAL CF
Total/NA	Analysis	7470A		1	165924	05/10/17 13:10	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	165582	05/08/17 11:29	SAS	TAL CF

**Client Sample ID: MW18**

**Date Collected: 05/02/17 08:52**

**Date Received: 05/05/17 09:50**

**Lab Sample ID: 310-105128-10**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	165930	05/09/17 22:32	SAD	TAL CF
Total/NA	Prep	3010A			165446	05/08/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	165677	05/08/17 18:07	OAD	TAL CF
Total/NA	Prep	3010A			165445	05/08/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166927	05/18/17 21:55	OAD	TAL CF
Total/NA	Prep	7470A			165721	05/09/17 09:48	SAD	TAL CF
Total/NA	Analysis	7470A		1	165924	05/10/17 13:12	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	165582	05/08/17 11:29	SAS	TAL CF

**Client Sample ID: MW19**

**Date Collected: 05/02/17 09:18**

**Date Received: 05/05/17 09:50**

**Lab Sample ID: 310-105128-11**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	165930	05/09/17 22:47	SAD	TAL CF
Total/NA	Prep	3010A			165446	05/08/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	165677	05/08/17 18:15	OAD	TAL CF
Total/NA	Prep	3010A			165445	05/08/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166927	05/18/17 21:58	OAD	TAL CF
Total/NA	Prep	7470A			165721	05/09/17 09:48	SAD	TAL CF

TestAmerica Cedar Falls

# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-1

**Client Sample ID: MW19**

**Date Collected: 05/02/17 09:18**

**Date Received: 05/05/17 09:50**

**Lab Sample ID: 310-105128-11**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7470A		1	165924	05/10/17 13:13	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	165582	05/08/17 11:29	SAS	TAL CF

**Client Sample ID: DUP-1**

**Date Collected: 05/02/17 11:30**

**Date Received: 05/05/17 09:50**

**Lab Sample ID: 310-105128-12**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	165930	05/09/17 23:03	SAD	TAL CF
Total/NA	Analysis	9056A		20	165930	05/09/17 23:18	SAD	TAL CF
Total/NA	Prep	3010A			165446	05/08/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	165677	05/08/17 18:18	OAD	TAL CF
Total/NA	Prep	3010A			165445	05/08/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166927	05/18/17 22:01	OAD	TAL CF
Total/NA	Prep	7470A			165721	05/09/17 09:48	SAD	TAL CF
Total/NA	Analysis	7470A		1	165924	05/10/17 13:15	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	165582	05/08/17 11:29	SAS	TAL CF

**Client Sample ID: DUP-2**

**Date Collected: 05/02/17 15:30**

**Date Received: 05/05/17 09:50**

**Lab Sample ID: 310-105128-13**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	165930	05/09/17 23:33	SAD	TAL CF
Total/NA	Analysis	9056A		50	165930	05/10/17 13:41	SAD	TAL CF
Total/NA	Prep	3010A			165446	05/08/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	165677	05/08/17 18:20	OAD	TAL CF
Total/NA	Prep	3010A			165445	05/08/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	166927	05/18/17 22:04	OAD	TAL CF
Total/NA	Prep	7470A			165721	05/09/17 09:48	SAD	TAL CF
Total/NA	Analysis	7470A		1	165924	05/10/17 13:17	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	165582	05/08/17 11:29	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: North Omaha Station

TestAmerica Job ID: 310-105128-1

## 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: North Omaha Station

TestAmerica Job ID: 310-105128-1

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





Cooler/Sample Receipt and Temperature Log Form

<b>Client Information</b>	
Client: <u>Omaha Public Power District</u>	
City/State: <u>Omaha, NE</u>	Project: <u>N. Omaha Station CER</u>
<b>Receipt Information</b>	
Date/Time Received: <u>5.5.17 9:50</u>	Received By: <u>BB</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: Cooler ID: <u>H-17</u>
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>BB</sup> If yes: Cooler # <u>1</u> of <u>3</u> <sub>S.S.17</sub>
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: Cooler custody seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes: Which VOA samples are in cooler? ↓
<b>Temperature Record</b>	
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE	
Temperature Blank? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: <u>H</u>	Correction Factor (°C): <u>0.0</u>
Uncorrected Temp (°C): <u>5.3</u>	Corrected Temp (°C): <u>5.3</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	

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Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

<b>Client Information</b>	
Client: <u>Omaha Public Power District</u>	
City/State: <u>Omaha, NE</u>	Project: <u>N. Omaha Station CUR</u>
<b>Receipt Information</b>	
Date/Time Received: <u>5.5.17 9:50</u>	Received By: <u>BB</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: Cooler ID: <u>H-15</u>
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>BB</sup> If yes: Cooler # <u>2</u> of <u>3</u>
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: Cooler custody seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes: Which VOA samples are in cooler? ↓
<b>Temperature Record</b>	
Coolant:	<input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE
Temperature Blank?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No ID & Bottle Type: <u>1C HNO<sub>3</sub>-MW-2</u>
NOTE: If yes, use temp blank for measurement. If no, specify sample ID(s) and bottle type used to take measurement.	
Thermometer ID: <u>H</u>	Correction Factor (°C): <u>0.2</u>
Uncorrected Temp (°C): <u>2.4</u>	Corrected Temp (°C): <u>2.4</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	



Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

<b>Client Information</b>	
Client: <u>Omaha Public Power District</u>	
City/State: <u>Omaha NE</u>	Project: <u>N. Omaha Station COR</u>
<b>Receipt Information</b>	
Date/Time Received: <u>5.5.17 9:50</u>	Received By: <u>BB</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler ID: <u>A-201</u></i>
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler # <u>3</u> of <u>3</u></i>
Cooler Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No</i>
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No</i>
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Which VOA samples are in cooler? ↓</i>
<b>Temperature Record</b>	
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE	
Temperature Blank?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: <u>H</u>	Correction Factor (°C): <u>0.0</u>
Uncorrected Temp (°C): <u>3.7</u>	Corrected Temp (°C): <u>3.7</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) <i>If yes: Is there evidence that the chilling process began?</i> <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	

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# Chain of Custody Record

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

<b>Client Information</b>		Lab PM: Hayes, Shawn M		Carrier Tracking No(s):	
Company: Omaha Public Power District		E-Mail: shawn.hayes@testamericainc.com		COC No:	
Address: 444 South 16th Street Mail 9E/EP1		Phone: Brad Sojka		Page:	
City: Omaha		E-Mail: shawn.hayes@testamericainc.com		Job #:	
State, Zip: NE, 68102-2247		PO #:		Analysis Requested	
Phone: 402-636-2515(Tel)		WO #:		Due Date Requested:	
Email: bsojka@oppd.com		TestAmerica Project #:		TAT Requested (days):	
Project Name: North Omaha Station CCR		31007560		Field Filtered Sample (Yes or No)	
Site:		SSOW#:		Perform MS/MSD (Yes or No)	
				915_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 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:	
				Special Instructions/Note:	
				Sample Identification	
MW2	5/2/17	1100	G	GW	X
MW5		1528	G	GW	X
MW6		1316	G	GW	X
MW8		1400	G	GW	X
MW9		0959	G	GW	X
MW13		1124	G	GW	X
MW15		1238	G	GW	X
MW16		1036	G	GW	X
MW17		1439	G	GW	X
MW18		0862	G	GW	X
MW19		0918	G	GW	X
Possible Hazard Identification					
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological					
Deliverable Requested: I, II, III, IV, Other (specify)					
Empty Kit Relinquished by:					
Relinquished by: [Signature]					
Date/Time: 5/14/17 1150					
Relinquished by:					
Date/Time:					
Relinquished by:					
Date/Time:					
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No					
Custody Seal No.:					
Cooler Temperature(s) °C and Other Remarks:					
Special Instructions/QC Requirements:					
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Method of Shipment:					
Time:					
Received by: [Signature]					
Date/Time: 5-5-17 950					
Company: [Signature]					
Received by:					
Date/Time:					
Received by:					
Date/Time:					





**Chain of Custody Record**

**TestAmerica Cedar Falls**  
704 Enterprise Drive  
Cedar Falls, IA 50613  
PHONE: 515.253.277 FAX: 515.277.2425

Client Information  
 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: North Omaha Station CCR  
 Site:  
 Client Contact: Brad Sojka  
 Phone: *Brad Sojka*  
 E-Mail: shawn.hayes@testamericainc.com  
 Hayes, Shawn M  
 Carrier Tracking No(s):  
 Job #:   
 Page:   
 COC No:   
 Analysis Requested

Due Date Requested:  
 TAT Requested (days):  
 PO #:  
 WO #:  
 TestAmerica Project #:  
 31007560  
 SSOW #:  
 Matrix (w=water, s=solid, o=waste/oil, br=tissue, a=air)  
 Sample Type (C=comp, G=grab)  
 Sample Date  
 Sample Time  
 Preservation Code:  
 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

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (w=water, s=solid, o=waste/oil, br=tissue, a=air)	Preservation Code:	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:
MW20			G	GW		X	X	X	X			
DUP-1	5/2/17	1130	G	GW		X	X	X	X			
DUP-2	↓	1630	G	GW		X	X	X	X			

Possible Hazard Identification  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological  
 Deliverable Requested: I, II, III, IV, Other (specify)  
 Empty Kit Relinquished by:  
 Relinquished by: *[Signature]* Date: 5/14/17 11:50  
 Relinquished by: Company  
 Relinquished by: Company  
 Relinquished by: Company  
 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months  
 Special Instructions/QC Requirements:  
 Method of Shipment:  
 Received by: *[Signature]* Date/Time: 5-5-17 9:50 Company: TA  
 Received by: Company  
 Received by: Company  
 Cooler Temperature(s) °C and Other Remarks:



Temperature readings: \_\_\_\_\_

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u>	<u>Preservative</u>	<u>Lot #</u>
			pH	Added (mls)	
MW2	310-105128-A-1	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW2	310-105128-C-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-105128-D-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW5	310-105128-A-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW5	310-105128-C-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW5	310-105128-D-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW6	310-105128-A-3	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW6	310-105128-C-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW6	310-105128-D-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW8	310-105128-A-4	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW8	310-105128-C-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW8	310-105128-D-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-105128-A-5	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW9	310-105128-C-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-105128-D-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-105128-A-6	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW13	310-105128-C-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-105128-D-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW15	310-105128-A-7	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW15	310-105128-C-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW15	310-105128-D-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW16	310-105128-A-8	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW16	310-105128-C-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW16	310-105128-D-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW17	310-105128-A-9	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW17	310-105128-C-9	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW17	310-105128-D-9	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW18	310-105128-A-10	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW18	310-105128-C-10	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW18	310-105128-D-10	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW19	310-105128-A-11	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW19	310-105128-C-11	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW19	310-105128-D-11	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-1	310-105128-A-12	Plastic 250ml - with Nitric Acid	<2	_____	_____
DUP-1	310-105128-C-12	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-1	310-105128-D-12	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-2	310-105128-A-13	Plastic 250ml - with Nitric Acid	<2	_____	_____

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<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container pH</u>	<u>Preservative Added (mls)</u>	<u>Lot #</u>
DUP-2	310-105128-C-13	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-2	310-105128-D-13	Plastic 1 liter - Nitric Acid	<2	_____	_____



# Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-105128-1

**Login Number: 105128**

**List Source: TestAmerica Cedar Falls**

**List Number: 1**

**Creator: Patrick, Kathryn E**

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



# 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: 310-105128-2  
Client Project/Site: North Omaha Station  
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:  
6/5/2017 11:28:25 AM

Shawn Hayes, Senior Project Manager  
(319)277-2401  
[shawn.hayes@testamericainc.com](mailto:shawn.hayes@testamericainc.com)

### LINKS

Review your project  
results through  
**Total Access**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.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: North Omaha Station

TestAmerica Job ID: 310-105128-2

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**Job ID: 310-105128-2**

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**Laboratory: TestAmerica Cedar Falls**

## Narrative

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**Job Narrative  
310-105128-2**

## Comments

No additional comments.

## Receipt

The samples were received on 5/5/2017 9:50 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.4° C, 3.7° C and 5.3° C.

## RAD

Method(s) PrecSep\_0: Radium 228 Prep Batch 160-308318

The following sample was reduced due to sediment making sample murky: MW9 (310-105128-5)

Method(s) PrecSep-21: Radium 226 Prep Batch 160-308217

The following sample was reduced due to sediment making sample murky: MW9 (310-105128-5)

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: North Omaha Station

TestAmerica Job ID: 310-105128-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-105128-1	MW2	Ground Water	05/02/17 11:02	05/05/17 09:50
310-105128-2	MW5	Ground Water	05/02/17 15:28	05/05/17 09:50
310-105128-3	MW6	Ground Water	05/02/17 13:16	05/05/17 09:50
310-105128-4	MW8	Ground Water	05/02/17 14:00	05/05/17 09:50
310-105128-5	MW9	Ground Water	05/02/17 09:59	05/05/17 09:50
310-105128-6	MW13	Ground Water	05/02/17 11:24	05/05/17 09:50
310-105128-7	MW15	Ground Water	05/02/17 12:38	05/05/17 09:50
310-105128-8	MW16	Ground Water	05/02/17 10:36	05/05/17 09:50
310-105128-9	MW17	Ground Water	05/02/17 14:39	05/05/17 09:50
310-105128-10	MW18	Ground Water	05/02/17 08:52	05/05/17 09:50
310-105128-11	MW19	Ground Water	05/02/17 09:18	05/05/17 09:50
310-105128-12	DUP-1	Ground Water	05/02/17 11:30	05/05/17 09:50
310-105128-13	DUP-2	Ground Water	05/02/17 15:30	05/05/17 09:50

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-2

**Client Sample ID: MW2**

**Lab Sample ID: 310-105128-1**

Date Collected: 05/02/17 11:02

Matrix: Ground Water

Date Received: 05/05/17 09:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0541	U	0.0750	0.0751	1.00	0.127	pCi/L	05/11/17 07:50	06/02/17 05:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.5		40 - 110					05/11/17 07:50	06/02/17 05:51	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0684	U	0.271	0.271	1.00	0.471	pCi/L	05/11/17 10:46	05/25/17 14:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.5		40 - 110					05/11/17 10:46	05/25/17 14:27	1
Y Carrier	83.0		40 - 110					05/11/17 10:46	05/25/17 14:27	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	0.123	U	0.281	0.282	5.00	0.471	pCi/L		06/04/17 13:13	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-2

**Client Sample ID: MW5**

**Lab Sample ID: 310-105128-2**

Date Collected: 05/02/17 15:28

Matrix: Ground Water

Date Received: 05/05/17 09:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0680	U	0.0718	0.0721	1.00	0.114	pCi/L	05/11/17 07:50	06/02/17 05:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					05/11/17 07:50	06/02/17 05:51	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0286	U	0.244	0.244	1.00	0.430	pCi/L	05/11/17 10:46	05/25/17 14:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					05/11/17 10:46	05/25/17 14:27	1
Y Carrier	79.6		40 - 110					05/11/17 10:46	05/25/17 14:27	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	0.0966	U	0.254	0.254	5.00	0.430	pCi/L		06/04/17 13:13	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-2

**Client Sample ID: MW6**

**Lab Sample ID: 310-105128-3**

Date Collected: 05/02/17 13:16

Matrix: Ground Water

Date Received: 05/05/17 09:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.146		0.0867	0.0877	1.00	0.112	pCi/L	05/11/17 07:50	06/02/17 05:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.2		40 - 110					05/11/17 07:50	06/02/17 05:52	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.673		0.310	0.316	1.00	0.451	pCi/L	05/11/17 10:46	05/25/17 14:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.2		40 - 110					05/11/17 10:46	05/25/17 14:27	1
Y Carrier	79.6		40 - 110					05/11/17 10:46	05/25/17 14:27	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	0.819		0.322	0.328	5.00	0.451	pCi/L		06/04/17 13:13	1



# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-2

**Client Sample ID: MW8**

**Lab Sample ID: 310-105128-4**

Date Collected: 05/02/17 14:00

Matrix: Ground Water

Date Received: 05/05/17 09:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.100		0.0706	0.0712	1.00	0.0946	pCi/L	05/11/17 07:50	06/02/17 05:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					05/11/17 07:50	06/02/17 05:52	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.547		0.283	0.287	1.00	0.419	pCi/L	05/11/17 10:46	05/25/17 14:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					05/11/17 10:46	05/25/17 14:27	1
Y Carrier	82.6		40 - 110					05/11/17 10:46	05/25/17 14:27	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		0.291	0.296	5.00	0.419	pCi/L		06/04/17 13:13	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-2

**Client Sample ID: MW9**

**Lab Sample ID: 310-105128-5**

Date Collected: 05/02/17 09:59

Matrix: Ground Water

Date Received: 05/05/17 09:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.594		0.187	0.194	1.00	0.164	pCi/L	05/11/17 07:50	06/02/17 05:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	73.7		40 - 110					05/11/17 07:50	06/02/17 05:52	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.567	U	0.408	0.411	1.00	0.637	pCi/L	05/11/17 10:46	05/25/17 14:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	73.7		40 - 110					05/11/17 10:46	05/25/17 14:27	1
Y Carrier	83.4		40 - 110					05/11/17 10:46	05/25/17 14:27	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.16		0.449	0.455	5.00	0.637	pCi/L		06/04/17 13:13	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-2

**Client Sample ID: MW13**

**Lab Sample ID: 310-105128-6**

Date Collected: 05/02/17 11:24

Matrix: Ground Water

Date Received: 05/05/17 09:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.122		0.0825	0.0832	1.00	0.112	pCi/L	05/11/17 07:50	06/02/17 05:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.0		40 - 110					05/11/17 07:50	06/02/17 05:52	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.179	U	0.248	0.248	1.00	0.414	pCi/L	05/11/17 10:46	05/25/17 14:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.0		40 - 110					05/11/17 10:46	05/25/17 14:27	1
Y Carrier	84.9		40 - 110					05/11/17 10:46	05/25/17 14:27	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.301	U	0.261	0.262	5.00	0.414	pCi/L		06/04/17 13:13	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-2

**Client Sample ID: MW15**

**Lab Sample ID: 310-105128-7**

**Date Collected: 05/02/17 12:38**

**Matrix: Ground Water**

**Date Received: 05/05/17 09:50**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0875	U	0.0671	0.0676	1.00	0.0949	pCi/L	05/11/17 07:50	06/02/17 05:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					05/11/17 07:50	06/02/17 05:52	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0704	U	0.197	0.197	1.00	0.342	pCi/L	05/11/17 10:46	05/25/17 14:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					05/11/17 10:46	05/25/17 14:27	1
Y Carrier	82.6		40 - 110					05/11/17 10:46	05/25/17 14:27	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	0.158	U	0.208	0.208	5.00	0.342	pCi/L		06/04/17 13:13	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-2

**Client Sample ID: MW16**

**Lab Sample ID: 310-105128-8**

Date Collected: 05/02/17 10:36

Matrix: Ground Water

Date Received: 05/05/17 09:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.120		0.0791	0.0799	1.00	0.105	pCi/L	05/11/17 07:50	06/02/17 05:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.5		40 - 110					05/11/17 07:50	06/02/17 05:52	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.234	U	0.244	0.245	1.00	0.398	pCi/L	05/11/17 10:46	05/25/17 14:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.5		40 - 110					05/11/17 10:46	05/25/17 14:27	1
Y Carrier	83.7		40 - 110					05/11/17 10:46	05/25/17 14:27	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	0.354	U	0.257	0.258	5.00	0.398	pCi/L		06/04/17 13:13	1

# Client Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-2

**Client Sample ID: MW17**

**Lab Sample ID: 310-105128-9**

Date Collected: 05/02/17 14:39

Matrix: Ground Water

Date Received: 05/05/17 09:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0863		0.0635	0.0639	1.00	0.0845	pCi/L	05/11/17 07:50	06/02/17 05:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.6		40 - 110					05/11/17 07:50	06/02/17 05:53	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.145	U	0.261	0.261	1.00	0.484	pCi/L	05/11/17 10:46	05/25/17 14:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.6		40 - 110					05/11/17 10:46	05/25/17 14:32	1
Y Carrier	82.6		40 - 110					05/11/17 10:46	05/25/17 14:32	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	-0.0590	U	0.269	0.269	5.00	0.484	pCi/L		06/04/17 13:13	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-2

**Client Sample ID: MW18**

**Lab Sample ID: 310-105128-10**

Date Collected: 05/02/17 08:52

Matrix: Ground Water

Date Received: 05/05/17 09:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.362		0.120	0.124	1.00	0.115	pCi/L	05/11/17 07:50	06/02/17 05:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					05/11/17 07:50	06/02/17 05:53	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.437		0.233	0.237	1.00	0.342	pCi/L	05/11/17 10:46	05/25/17 14:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					05/11/17 10:46	05/25/17 14:27	1
Y Carrier	82.6		40 - 110					05/11/17 10:46	05/25/17 14:27	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	0.799		0.262	0.267	5.00	0.342	pCi/L		06/04/17 13:13	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-2

**Client Sample ID: MW19**

**Date Collected: 05/02/17 09:18**

**Date Received: 05/05/17 09:50**

**Lab Sample ID: 310-105128-11**

**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	0.407		0.123	0.129	1.00	0.108	pCi/L	05/11/17 07:50	06/02/17 05:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					05/11/17 07:50	06/02/17 05:53	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.257	U	0.220	0.221	1.00	0.348	pCi/L	05/11/17 10:46	05/25/17 14:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					05/11/17 10:46	05/25/17 14:28	1
Y Carrier	78.9		40 - 110					05/11/17 10:46	05/25/17 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	0.664		0.252	0.256	5.00	0.348	pCi/L		06/04/17 13:13	1



# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-2

**Client Sample ID: DUP-1**

**Lab Sample ID: 310-105128-12**

Date Collected: 05/02/17 11:30

Matrix: Ground Water

Date Received: 05/05/17 09:50

**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		0.0827	0.0837	1.00	0.105	pCi/L	05/11/17 07:50	06/02/17 05:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					05/11/17 07:50	06/02/17 05:53	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.100	U	0.216	0.216	1.00	0.371	pCi/L	05/11/17 10:46	05/25/17 14:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					05/11/17 10:46	05/25/17 14:28	1
Y Carrier	79.3		40 - 110					05/11/17 10:46	05/25/17 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	0.245	U	0.231	0.231	5.00	0.371	pCi/L		06/04/17 13:13	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-2

**Client Sample ID: DUP-2**

**Lab Sample ID: 310-105128-13**

**Date Collected: 05/02/17 15:30**

**Matrix: Ground Water**

**Date Received: 05/05/17 09:50**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0971	U	0.0709	0.0715	1.00	0.0992	pCi/L	05/11/17 07:50	06/02/17 05:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					05/11/17 07:50	06/02/17 05:53	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.322	U	0.227	0.229	1.00	0.353	pCi/L	05/11/17 10:46	05/25/17 14:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					05/11/17 10:46	05/25/17 14:28	1
Y Carrier	84.9		40 - 110					05/11/17 10:46	05/25/17 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	0.419		0.238	0.240	5.00	0.353	pCi/L		06/04/17 13:13	1

# Definitions/Glossary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-2

## 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)

# QC Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-2

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

**Lab Sample ID: MB 160-308217/1-A**  
**Matrix: Water**  
**Analysis Batch: 311618**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 308217**

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.001396	U	0.0387	0.0387	1.00	0.0837	pCi/L	05/11/17 07:50	06/02/17 05:51	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	Limits							
Ba Carrier	103		40 - 110		05/11/17 07:50	06/02/17 05:51	1			

**Lab Sample ID: LCS 160-308217/2-A**  
**Matrix: Water**  
**Analysis Batch: 311618**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 308217**

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.4	9.354		0.990	1.00	0.103	pCi/L	82	68 - 137
Carrier	LCS LCS		Limits		Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier	Limits						
Ba Carrier	103		40 - 110						

**Lab Sample ID: LCSD 160-308217/3-A**  
**Matrix: Water**  
**Analysis Batch: 311618**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 308217**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
				Uncert. (2σ+/-)							
Radium-226	11.4	9.280		0.986	1.00	0.0909	pCi/L	82	68 - 137	0.04	1
Carrier	LCSD LCSD		Limits		Prepared	Analyzed	Dil Fac				
Ba Carrier	%Yield	Qualifier	Limits								
Ba Carrier	106		40 - 110								

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

**Lab Sample ID: MB 160-308318/1-A**  
**Matrix: Water**  
**Analysis Batch: 310445**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 308318**

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.06033	U	0.210	0.210	1.00	0.365	pCi/L	05/11/17 10:46	05/25/17 14:26	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	Limits							
Ba Carrier	103		40 - 110		05/11/17 10:46	05/25/17 14:26	1			
Y Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Y Carrier	%Yield	Qualifier	Limits							
Y Carrier	83.7		40 - 110		05/11/17 10:46	05/25/17 14:26	1			

TestAmerica Cedar Falls

# QC Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-2

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

**Lab Sample ID: LCS 160-308318/2-A**

**Matrix: Water**

**Analysis Batch: 310445**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 308318**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.4	13.00		1.40	1.00	0.344	pCi/L	97	56 - 140
<b>Carrier</b>		<b>LCS %Yield</b>	<b>LCS Qualifier</b>	<b>Limits</b>					
Ba Carrier		103		40 - 110					
Y Carrier		87.5		40 - 110					

**Lab Sample ID: LCSD 160-308318/3-A**

**Matrix: Water**

**Analysis Batch: 310445**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 308318**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	13.4	12.97		1.40	1.00	0.379	pCi/L	97	56 - 140	0.01	1
<b>Carrier</b>		<b>LCSD %Yield</b>	<b>LCSD Qualifier</b>	<b>Limits</b>							
Ba Carrier		106		40 - 110							
Y Carrier		83.7		40 - 110							

# QC Association Summary

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-2

## Rad

### Prep Batch: 308217

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-105128-1	MW2	Total/NA	Ground Water	PrecSep-21	
310-105128-2	MW5	Total/NA	Ground Water	PrecSep-21	
310-105128-3	MW6	Total/NA	Ground Water	PrecSep-21	
310-105128-4	MW8	Total/NA	Ground Water	PrecSep-21	
310-105128-5	MW9	Total/NA	Ground Water	PrecSep-21	
310-105128-6	MW13	Total/NA	Ground Water	PrecSep-21	
310-105128-7	MW15	Total/NA	Ground Water	PrecSep-21	
310-105128-8	MW16	Total/NA	Ground Water	PrecSep-21	
310-105128-9	MW17	Total/NA	Ground Water	PrecSep-21	
310-105128-10	MW18	Total/NA	Ground Water	PrecSep-21	
310-105128-11	MW19	Total/NA	Ground Water	PrecSep-21	
310-105128-12	DUP-1	Total/NA	Ground Water	PrecSep-21	
310-105128-13	DUP-2	Total/NA	Ground Water	PrecSep-21	
MB 160-308217/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-308217/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-308217/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

### Prep Batch: 308318

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-105128-1	MW2	Total/NA	Ground Water	PrecSep_0	
310-105128-2	MW5	Total/NA	Ground Water	PrecSep_0	
310-105128-3	MW6	Total/NA	Ground Water	PrecSep_0	
310-105128-4	MW8	Total/NA	Ground Water	PrecSep_0	
310-105128-5	MW9	Total/NA	Ground Water	PrecSep_0	
310-105128-6	MW13	Total/NA	Ground Water	PrecSep_0	
310-105128-7	MW15	Total/NA	Ground Water	PrecSep_0	
310-105128-8	MW16	Total/NA	Ground Water	PrecSep_0	
310-105128-9	MW17	Total/NA	Ground Water	PrecSep_0	
310-105128-10	MW18	Total/NA	Ground Water	PrecSep_0	
310-105128-11	MW19	Total/NA	Ground Water	PrecSep_0	
310-105128-12	DUP-1	Total/NA	Ground Water	PrecSep_0	
310-105128-13	DUP-2	Total/NA	Ground Water	PrecSep_0	
MB 160-308318/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-308318/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-308318/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

# Lab Chronicle

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-2

## Client Sample ID: MW2

Lab Sample ID: 310-105128-1

Date Collected: 05/02/17 11:02

Matrix: Ground Water

Date Received: 05/05/17 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			308217	05/11/17 07:50	LDE	TAL SL
Total/NA	Analysis	9315		1	311618	06/02/17 05:51	KLS	TAL SL
Total/NA	Prep	PrecSep_0			308318	05/11/17 10:46	LDE	TAL SL
Total/NA	Analysis	9320		1	310445	05/25/17 14:27	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	311841	06/04/17 13:13	RTM	TAL SL

## Client Sample ID: MW5

Lab Sample ID: 310-105128-2

Date Collected: 05/02/17 15:28

Matrix: Ground Water

Date Received: 05/05/17 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			308217	05/11/17 07:50	LDE	TAL SL
Total/NA	Analysis	9315		1	311618	06/02/17 05:51	KLS	TAL SL
Total/NA	Prep	PrecSep_0			308318	05/11/17 10:46	LDE	TAL SL
Total/NA	Analysis	9320		1	310445	05/25/17 14:27	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	311841	06/04/17 13:13	RTM	TAL SL

## Client Sample ID: MW6

Lab Sample ID: 310-105128-3

Date Collected: 05/02/17 13:16

Matrix: Ground Water

Date Received: 05/05/17 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			308217	05/11/17 07:50	LDE	TAL SL
Total/NA	Analysis	9315		1	311618	06/02/17 05:52	KLS	TAL SL
Total/NA	Prep	PrecSep_0			308318	05/11/17 10:46	LDE	TAL SL
Total/NA	Analysis	9320		1	310445	05/25/17 14:27	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	311841	06/04/17 13:13	RTM	TAL SL

## Client Sample ID: MW8

Lab Sample ID: 310-105128-4

Date Collected: 05/02/17 14:00

Matrix: Ground Water

Date Received: 05/05/17 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			308217	05/11/17 07:50	LDE	TAL SL
Total/NA	Analysis	9315		1	311618	06/02/17 05:52	KLS	TAL SL
Total/NA	Prep	PrecSep_0			308318	05/11/17 10:46	LDE	TAL SL
Total/NA	Analysis	9320		1	310445	05/25/17 14:27	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	311841	06/04/17 13:13	RTM	TAL SL

# Lab Chronicle

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-2

## Client Sample ID: MW9

Lab Sample ID: 310-105128-5

Date Collected: 05/02/17 09:59

Matrix: Ground Water

Date Received: 05/05/17 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			308217	05/11/17 07:50	LDE	TAL SL
Total/NA	Analysis	9315		1	311618	06/02/17 05:52	KLS	TAL SL
Total/NA	Prep	PrecSep_0			308318	05/11/17 10:46	LDE	TAL SL
Total/NA	Analysis	9320		1	310445	05/25/17 14:27	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	311841	06/04/17 13:13	RTM	TAL SL

## Client Sample ID: MW13

Lab Sample ID: 310-105128-6

Date Collected: 05/02/17 11:24

Matrix: Ground Water

Date Received: 05/05/17 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			308217	05/11/17 07:50	LDE	TAL SL
Total/NA	Analysis	9315		1	311618	06/02/17 05:52	KLS	TAL SL
Total/NA	Prep	PrecSep_0			308318	05/11/17 10:46	LDE	TAL SL
Total/NA	Analysis	9320		1	310445	05/25/17 14:27	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	311841	06/04/17 13:13	RTM	TAL SL

## Client Sample ID: MW15

Lab Sample ID: 310-105128-7

Date Collected: 05/02/17 12:38

Matrix: Ground Water

Date Received: 05/05/17 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			308217	05/11/17 07:50	LDE	TAL SL
Total/NA	Analysis	9315		1	311618	06/02/17 05:52	KLS	TAL SL
Total/NA	Prep	PrecSep_0			308318	05/11/17 10:46	LDE	TAL SL
Total/NA	Analysis	9320		1	310445	05/25/17 14:27	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	311841	06/04/17 13:13	RTM	TAL SL

## Client Sample ID: MW16

Lab Sample ID: 310-105128-8

Date Collected: 05/02/17 10:36

Matrix: Ground Water

Date Received: 05/05/17 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			308217	05/11/17 07:50	LDE	TAL SL
Total/NA	Analysis	9315		1	311618	06/02/17 05:52	KLS	TAL SL
Total/NA	Prep	PrecSep_0			308318	05/11/17 10:46	LDE	TAL SL
Total/NA	Analysis	9320		1	310445	05/25/17 14:27	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	311841	06/04/17 13:13	RTM	TAL SL

TestAmerica Cedar Falls



# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-2

## Client Sample ID: MW17

Lab Sample ID: 310-105128-9

Date Collected: 05/02/17 14:39

Matrix: Ground Water

Date Received: 05/05/17 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			308217	05/11/17 07:50	LDE	TAL SL
Total/NA	Analysis	9315		1	311618	06/02/17 05:53	KLS	TAL SL
Total/NA	Prep	PrecSep_0			308318	05/11/17 10:46	LDE	TAL SL
Total/NA	Analysis	9320		1	310494	05/25/17 14:32	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	311841	06/04/17 13:13	RTM	TAL SL

## Client Sample ID: MW18

Lab Sample ID: 310-105128-10

Date Collected: 05/02/17 08:52

Matrix: Ground Water

Date Received: 05/05/17 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			308217	05/11/17 07:50	LDE	TAL SL
Total/NA	Analysis	9315		1	311618	06/02/17 05:53	KLS	TAL SL
Total/NA	Prep	PrecSep_0			308318	05/11/17 10:46	LDE	TAL SL
Total/NA	Analysis	9320		1	310445	05/25/17 14:27	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	311841	06/04/17 13:13	RTM	TAL SL

## Client Sample ID: MW19

Lab Sample ID: 310-105128-11

Date Collected: 05/02/17 09:18

Matrix: Ground Water

Date Received: 05/05/17 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			308217	05/11/17 07:50	LDE	TAL SL
Total/NA	Analysis	9315		1	311618	06/02/17 05:53	KLS	TAL SL
Total/NA	Prep	PrecSep_0			308318	05/11/17 10:46	LDE	TAL SL
Total/NA	Analysis	9320		1	310445	05/25/17 14:28	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	311841	06/04/17 13:13	RTM	TAL SL

## Client Sample ID: DUP-1

Lab Sample ID: 310-105128-12

Date Collected: 05/02/17 11:30

Matrix: Ground Water

Date Received: 05/05/17 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			308217	05/11/17 07:50	LDE	TAL SL
Total/NA	Analysis	9315		1	311618	06/02/17 05:53	KLS	TAL SL
Total/NA	Prep	PrecSep_0			308318	05/11/17 10:46	LDE	TAL SL
Total/NA	Analysis	9320		1	310445	05/25/17 14:28	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	311841	06/04/17 13:13	RTM	TAL SL

# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-2

**Client Sample ID: DUP-2**

**Lab Sample ID: 310-105128-13**

**Date Collected: 05/02/17 15:30**

**Matrix: Ground Water**

**Date Received: 05/05/17 09:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			308217	05/11/17 07:50	LDE	TAL SL
Total/NA	Analysis	9315		1	311618	06/02/17 05:53	KLS	TAL SL
Total/NA	Prep	PrecSep_0			308318	05/11/17 10:46	LDE	TAL SL
Total/NA	Analysis	9320		1	310445	05/25/17 14:28	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	311841	06/04/17 13:13	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: North Omaha Station

TestAmerica Job ID: 310-105128-2

### 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.

TestAmerica Cedar Falls

# Method Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-2

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





Cooler/Sample Receipt and Temperature Log Form

<b>Client Information</b>	
Client: <u>Omaha Public Power District</u>	
City/State: <u>Omaha, NE</u>	Project: <u>N. Omaha Station CER</u>
<b>Receipt Information</b>	
Date/Time Received: <u>5.5.17 9:50</u>	Received By: <u>BB</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: Cooler ID: <u>H-17</u>
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>BB</sup> If yes: Cooler # <u>1</u> of <u>3</u> <sub>S.S.17</sub>
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: Cooler custody seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes: Which VOA samples are in cooler? ↓
<b>Temperature Record</b>	
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE	
Temperature Blank? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: <u>H</u>	Correction Factor (°C): <u>0.0</u>
Uncorrected Temp (°C): <u>5.3</u>	Corrected Temp (°C): <u>5.3</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	

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Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

<b>Client Information</b>	
Client: <u>Omaha Public Power District</u>	
City/State: <u>Omaha, NE</u>	Project: <u>N. Omaha Station CUR</u>
<b>Receipt Information</b>	
Date/Time Received: <u>5.5.17 950</u>	Received By: <u>BB</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: Cooler ID: <u>H-15</u>
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>BB</sup> If yes: Cooler # <u>2</u> of <u>3</u>
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: Cooler custody seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes: Which VOA samples are in cooler? ↓
<b>Temperature Record</b>	
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE	
Temperature Blank?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No ID & Bottle Type: <u>1C HNO<sub>3</sub>-MW-2</u>
NOTE: If yes, use temp blank for measurement. If no, specify sample ID(s) and bottle type used to take measurement.	
Thermometer ID: <u>H</u>	Correction Factor (°C): <u>0.2</u>
Uncorrected Temp (°C): <u>2.4</u>	Corrected Temp (°C): <u>2.4</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

<b>Client Information</b>	
Client: <u>Omaha Public Power District</u>	
City/State: <u>Omaha NE</u>	Project: <u>N. Omaha Station COR</u>
<b>Receipt Information</b>	
Date/Time Received: <u>5.5.17 9:50</u>	Received By: <u>BB</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler ID: <u>A-201</u></i>
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler # <u>3</u> of <u>3</u></i>
Cooler Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No</i>
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No</i>
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Which VOA samples are in cooler? ↓</i>
<b>Temperature Record</b>	
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE	
Temperature Blank? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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: <u>H</u>	Correction Factor (°C): <u>0.0</u>
Uncorrected Temp (°C): <u>3.7</u>	Corrected Temp (°C): <u>3.7</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) <i>If yes: Is there evidence that the chilling process began?</i> <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	

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**Chain of Custody Record**

<b>Client Information</b>		Sample: <i>Brad Sojka</i>		Lab PM: Hayes, Shawn M		Carrier Tracking No(s):		COC No:	
Company: Omaha Public Power District		Phone: _____		E-Mail: shawn.hayes@testamericainc.com		Job #:		Page:	
Address: 444 South 16th Street Mail 9E/EP1		Due Date Requested:		Analysis Requested		Total Number of Containers		Preservation Codes:	
City: Omaha		TAT Requested (days):		Perform MS/MSD (Yes or No)		Field Filtered Sample (Yes or No)		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: NE, 68102-2247		PO #:		915_Ra226, 9320_Ra228, Combined Ra226 and Ra228		6010C Lithium, 6020A CCR List, 7470A Mercury		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	
Phone: 402-636-2515(Tel)		WO #:		915_Ra226, 9320_Ra228, Combined Ra226 and Ra228		2540C TDS, 9056A Chloride, Fluoride, Sulfate		Other:	
Email: bsojka@oppd.com		TestAmerica Project #:		D		N		Special Instructions/Note:	
Project Name: North Omaha Station CCR		31007560		X		X			
Site:		SSOW#:		X		X			
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=onwaste/oh, BT=Tissue, A=Air)	Preservation Code:	D	N		
MW2	5/2/17	1100	G	GW		X	X		
MW5		1528	G	GW		X	X		
MW6		1316	G	GW		X	X		
MW8		1400	G	GW		X	X		
MW9		0959	G	GW		X	X		
MW13		1124	G	GW		X	X		
MW15		1238	G	GW		X	X		
MW16		1036	G	GW		X	X		
MW17		1439	G	GW		X	X		
MW18		0862	G	GW		X	X		
MW19		0918	G	GW		X	X		
<b>Possible Hazard Identification</b>									
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological									
Deliverable Requested: I, II, III, IV, Other (specify)									
Empty Kit Relinquished by: _____ Date: _____									
Relinquished by: _____ Date/Time: 5/4/17 1150 Company: _____									
Relinquished by: _____ Date/Time: _____ Company: _____									
Relinquished by: _____ Date/Time: _____ Company: _____									
Custody Seals Intact: _____ Custody Seal No.: _____									
Cooler Temperature(s) °C and Other Remarks:									





**Chain of Custody Record**

**TestAmerica Cedar Falls**  
704 Enterprise Drive  
Cedar Falls, IA 50613  
PHONE: 515.253.2772 FAX: 515.277.2425

<b>Client Information</b> Client Contact: Brad Sojka Phone: <i>Brad Sojka</i> E-Mail: shawn.hayes@testamericainc.com Hayes, Shawn M Carrier Tracking No(s):		COC No: Page: Job #:	
<b>Company:</b> 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: North Omaha Station CCR Site:		<b>Analysis Requested</b> Due Date Requested: TAT Requested (days): PO #: WO #: TestAmerica Project #: S5OW#:	
<b>Sample Identification</b> MW20 DUP-1 DUP-2		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:	
<b>Possible Hazard Identification</b> <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)		<b>Special Instructions/Note:</b>	
<b>Empty Kit Relinquished by:</b> Relinquished by: <i>[Signature]</i> Relinquished by: Relinquished by:		<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b> <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements:	
<b>Method of Shipment:</b> Date: 5/14/17 11:50 Date/Time: 5/14/17 11:50 Date/Time: Date/Time:		Cooler Temperature(s) °C and Other Remarks:	
Custody Seals Intact: Δ Yes Δ No		Company: TA Company: Company:	



Temperature readings: \_\_\_\_\_

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u>	<u>Preservative</u>	<u>Lot #</u>
			pH	Added (mls)	
MW2	310-105128-A-1	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW2	310-105128-C-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-105128-D-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW5	310-105128-A-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW5	310-105128-C-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW5	310-105128-D-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW6	310-105128-A-3	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW6	310-105128-C-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW6	310-105128-D-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW8	310-105128-A-4	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW8	310-105128-C-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW8	310-105128-D-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-105128-A-5	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW9	310-105128-C-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-105128-D-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-105128-A-6	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW13	310-105128-C-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-105128-D-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW15	310-105128-A-7	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW15	310-105128-C-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW15	310-105128-D-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW16	310-105128-A-8	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW16	310-105128-C-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW16	310-105128-D-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW17	310-105128-A-9	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW17	310-105128-C-9	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW17	310-105128-D-9	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW18	310-105128-A-10	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW18	310-105128-C-10	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW18	310-105128-D-10	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW19	310-105128-A-11	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW19	310-105128-C-11	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW19	310-105128-D-11	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-1	310-105128-A-12	Plastic 250ml - with Nitric Acid	<2	_____	_____
DUP-1	310-105128-C-12	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-1	310-105128-D-12	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-2	310-105128-A-13	Plastic 250ml - with Nitric Acid	<2	_____	_____

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<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container pH</u>	<u>Preservative Added (mls)</u>	<u>Lot #</u>
DUP-2	310-105128-C-13	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-2	310-105128-D-13	Plastic 1 liter - Nitric Acid	<2	_____	_____



# Chain of Custody Record



<b>Client Information (Sub Contract Lab)</b> Company: TestAmerica Laboratories, Inc. Address: 13715 Rider Trail North, Earth City State, Zip: MO, 63045 Phone: 314-298-8566(Tel) 314-298-8757(Fax) Email: Project Name: North Omaha Station CCR/Landfill Site: 310 OPPD North Omaha Station		Lab P.V.: Hayes, Shawn M E-Mail: shawn.hayes@testamericainc.com Accreditations Required (See note): Nebraska	
Sampler: Phone: Due Date Requested: 6/1/2017 TAT Requested (days):		Job #: 310-105128-2 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 Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Sample Date Sample Time Sample Type (C=Comp, G=grab) Matrix (W=water, S=solid, O=soil, W=water, A=air)		Analysis Requested 9315_Ra226/PreSep_21 Standard Target List 9320_Ra228/PreSep_0 Standard Target List Ra226Ra228_GFP Perform MS/MSD (Yes or No) Field Filtered Sample (Yes or No)	
Sample Identification - Client ID (Lab ID) MW2 (310-105128-1) MW5 (310-105128-2) MW6 (310-105128-3) MW8 (310-105128-4) MW9 (310-105128-5) MW13 (310-105128-6) MW15 (310-105128-7) MW16 (310-105128-8) MW17 (310-105128-9)		Total Number of containers 2 2 2 2 2 2 2 2	
Special Instructions/Note: Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our 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/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 compliance to TestAmerica Laboratories, Inc.		Special Instructions/Note: Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our 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/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 compliance to TestAmerica Laboratories, Inc.	
<b>Possible Hazard Identification</b> Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 Empty Kit Relinquished by: Date: Relinquished by: Date/Time: 5/25/17/1545 Company: Company Relinquished by: Date/Time: Company: Company Relinquished by: Date/Time: Company: Company Custody Seals Intact: Custody Seal No.: Δ Yes Δ No Cooler Temperature(s) °C and Other Remarks:			
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements:			



<b>Client Information (Sub Contract Lab)</b> Client Contact: Shipping/Receiving Company: TestAmerica Laboratories, Inc.		Lab P/V: Hayes, Shawn M E-Mail: shawn.hayes@testamericainc.com Accreditations Required (See note).	Carrier Tracking No(s): 310-9308.2 Page: Page 2 of 2 Job #: 310-105128-2	
Address: 13715 Rider Trail North, City: Earth City State/Zip: MO, 63045 Phone: 314-298-8566(Tel) 314-298-8757(Fax) Email:		Due Date Requested: 6/1/2017 TAT Requested (days): PO #: WO #: Project #: 31007560 SSO#:		
Project Name: North Omaha Station CCR/Landfill Site: 310 OPPD North Omaha Station		Analysis Requested Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> 9326Ra228_GFPc <input checked="" type="checkbox"/> 9315_Ra226/PreSep_21 Standard Target List <input checked="" type="checkbox"/> 9320_Ra228/PreSep_0 Standard Target List <input checked="" type="checkbox"/>		
<b>Sample Identification - Client ID (Lab ID)</b>		Special Instructions/Note:		
MW18 (310-105128-10)	5/2/17	08:52 Central	Water	2
MW19 (310-105128-11)	5/2/17	09:18 Central	Water	2
DUP-1 (310-105128-12)	5/2/17	11:30 Central	Water	2
DUP-2 (310-105128-13)	5/2/17	15:30 Central	Water	2
Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody.		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		
<b>Possible Hazard Identification</b> Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2		Special Instructions/QC Requirements:		
Empty Kit Relinquished by:		Method of Shipment:		
Relinquished by: <i>[Signature]</i> Date/Time: 5/17/15:45 Company:		Received by: <i>[Signature]</i> Date/Time: 5.6.17 0840 Company: IASTR		
Relinquished by: Date/Time: Company:		Received by: Date/Time: Company:		
Relinquished by: Date/Time: Company:		Received by: Date/Time: Company:		
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		



## Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-105128-2

**Login Number: 105128**

**List Source: TestAmerica Cedar Falls**

**List Number: 1**

**Creator: Patrick, Kathryn E**

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





## Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-105128-2

**Login Number: 105128**

**List Number: 2**

**Creator: Castillo, Robert L**

**List Source: TestAmerica St. Louis**

**List Creation: 05/06/17 10:53 AM**

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



# Tracer/Carrier Summary

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-2

## 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)	
310-105128-1	MW2	88.5	
310-105128-2	MW5	97.1	
310-105128-3	MW6	88.2	
310-105128-4	MW8	90.9	
310-105128-5	MW9	73.7	
310-105128-6	MW13	87.0	
310-105128-7	MW15	101	
310-105128-8	MW16	88.5	
310-105128-9	MW17	95.6	
310-105128-10	MW18	92.9	
310-105128-11	MW19	91.2	
310-105128-12	DUP-1	95.0	
310-105128-13	DUP-2	99.1	

**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 160-308217/2-A	Lab Control Sample	103	
LCS 160-308217/3-A	Lab Control Sample Dup	106	
MB 160-308217/1-A	Method Blank	103	

**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)
310-105128-1	MW2	88.5	83.0
310-105128-2	MW5	97.1	79.6
310-105128-3	MW6	88.2	79.6
310-105128-4	MW8	90.9	82.6
310-105128-5	MW9	73.7	83.4
310-105128-6	MW13	87.0	84.9
310-105128-7	MW15	101	82.6
310-105128-8	MW16	88.5	83.7
310-105128-9	MW17	95.6	82.6
310-105128-10	MW18	92.9	82.6
310-105128-11	MW19	91.2	78.9
310-105128-12	DUP-1	95.0	79.3
310-105128-13	DUP-2	99.1	84.9



# Tracer/Carrier Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-105128-2

## 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	Y
		(40-110)	(40-110)
LCS 160-308318/2-A	Lab Control Sample	103	87.5
LCSD 160-308318/3-A	Lab Control Sample Dup	106	83.7
MB 160-308318/1-A	Method Blank	103	83.7

## 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: 310-108269-1

Client Project/Site: North Omaha Station 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 2:23:09 PM

Shawn Hayes, Senior Project Manager

(319)277-2401

[shawn.hayes@testamericainc.com](mailto:shawn.hayes@testamericainc.com)

### LINKS

Review your project  
results through

Total Access

Have a Question?



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[www.testamericainc.com](http://www.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: North Omaha Station CCR

TestAmerica Job ID: 310-108269-1

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**Job ID: 310-108269-1**

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**Laboratory: TestAmerica Cedar Falls**

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**Narrative**

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**Job Narrative  
310-108269-1**

**Comments**

No additional comments.

**Receipt**

The samples were received on 6/21/2017 9:35 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.1° C and 4.2° 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.

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# Sample Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-108269-1	MW2	Ground Water	06/19/17 10:26	06/21/17 09:35
310-108269-2	MW9	Ground Water	06/19/17 09:27	06/21/17 09:35
310-108269-3	MW13	Ground Water	06/19/17 11:00	06/21/17 09:35
310-108269-4	MW15	Ground Water	06/19/17 11:30	06/21/17 09:35
310-108269-5	MW16	Ground Water	06/19/17 09:58	06/21/17 09:35
310-108269-6	MW17	Ground Water	06/19/17 12:14	06/21/17 09:35
310-108269-7	MW18	Ground Water	06/19/17 08:16	06/21/17 09:35
310-108269-8	MW19	Ground Water	06/19/17 08:54	06/21/17 09:35
310-108269-9	DUP-1	Ground Water	06/19/17 11:02	06/21/17 09:35



# Detection Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-1

## Client Sample ID: MW2

## Lab Sample ID: 310-108269-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	24.1		5.00		mg/L	5		9056A	Total/NA
Sulfate	631		50.0		mg/L	50		9056A	Total/NA
Arsenic	0.212		0.00200		mg/L	1		6020A	Total/NA
Barium	0.101		0.00200		mg/L	1		6020A	Total/NA
Boron	1.48		0.200		mg/L	1		6020A	Total/NA
Calcium	277		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000725		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	2020		150		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW9

## Lab Sample ID: 310-108269-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	149		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.517		0.500		mg/L	5		9056A	Total/NA
Sulfate	22.0		5.00		mg/L	5		9056A	Total/NA
Arsenic	0.00345		0.00200		mg/L	1		6020A	Total/NA
Barium	0.481		0.00200		mg/L	1		6020A	Total/NA
Calcium	150		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.00123		0.000500		mg/L	1		6020A	Total/NA
Lead	0.00322		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	888		60.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW13

## Lab Sample ID: 310-108269-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.83		5.00		mg/L	5		9056A	Total/NA
Sulfate	590		20.0		mg/L	20		9056A	Total/NA
Arsenic	0.260		0.00200		mg/L	1		6020A	Total/NA
Barium	0.118		0.00200		mg/L	1		6020A	Total/NA
Boron	2.09		0.200		mg/L	1		6020A	Total/NA
Calcium	179		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.881		0.00200		mg/L	1		6020A	Total/NA
Selenium	0.0372		0.00500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1400		150		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW15

## Lab Sample ID: 310-108269-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.99		5.00		mg/L	5		9056A	Total/NA
Sulfate	643		20.0		mg/L	20		9056A	Total/NA
Antimony	0.00119		0.00100		mg/L	1		6020A	Total/NA
Barium	0.0447		0.00200		mg/L	1		6020A	Total/NA
Boron	2.57		0.200		mg/L	1		6020A	Total/NA
Calcium	248		0.200		mg/L	1		6020A	Total/NA
Chromium	0.00678		0.00500		mg/L	1		6020A	Total/NA
Molybdenum	0.242		0.00200		mg/L	1		6020A	Total/NA
Selenium	0.0638		0.00500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1320		60.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW16

## Lab Sample ID: 310-108269-5

This Detection Summary does not include radiochemical test results.

TestAmerica Cedar Falls

# Detection Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-1

## Client Sample ID: MW16 (Continued)

Lab Sample ID: 310-108269-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	59.3		5.00		mg/L	5		9056A	Total/NA
Sulfate	326		20.0		mg/L	20		9056A	Total/NA
Barium	0.0752		0.00200		mg/L	1		6020A	Total/NA
Boron	0.371		0.200		mg/L	1		6020A	Total/NA
Calcium	194		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000769		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.0105		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1460		60.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW17

Lab Sample ID: 310-108269-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	42.3		5.00		mg/L	5		9056A	Total/NA
Sulfate	944		20.0		mg/L	20		9056A	Total/NA
Lithium	0.114		0.0500		mg/L	1		6010C	Total/NA
Arsenic	0.0163		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0361		0.00200		mg/L	1		6020A	Total/NA
Boron	0.679		0.200		mg/L	1		6020A	Total/NA
Calcium	373		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.0120		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	2640		150		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW18

Lab Sample ID: 310-108269-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.304		0.00200		mg/L	1		6020A	Total/NA
Calcium	98.4		0.200		mg/L	1		6020A	Total/NA
Mercury	0.000204		0.000200		mg/L	1		7470A	Total/NA
Total Dissolved Solids	514		30.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW19

Lab Sample ID: 310-108269-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	10.2		5.00		mg/L	5		9056A	Total/NA
Barium	0.297		0.00200		mg/L	1		6020A	Total/NA
Calcium	103		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	518		30.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: DUP-1

Lab Sample ID: 310-108269-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.24		5.00		mg/L	5		9056A	Total/NA
Sulfate	565		50.0		mg/L	50		9056A	Total/NA
Arsenic	0.228		0.00200		mg/L	1		6020A	Total/NA
Barium	0.106		0.00200		mg/L	1		6020A	Total/NA
Boron	2.02		0.200		mg/L	1		6020A	Total/NA
Calcium	169		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.907		0.00200		mg/L	1		6020A	Total/NA
Selenium	0.0370		0.00500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1750		150		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Cedar Falls

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-1

**Client Sample ID: MW2**  
**Date Collected: 06/19/17 10:26**  
**Date Received: 06/21/17 09:35**

**Lab Sample ID: 310-108269-1**  
**Matrix: Ground Water**

**Method: 9056A - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>24.1</b>		5.00		mg/L			06/23/17 02:02	5
Fluoride	<0.500		0.500		mg/L			06/23/17 02:02	5
<b>Sulfate</b>	<b>631</b>		50.0		mg/L			06/27/17 08:48	50

**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 15:05	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 18:18	1
<b>Arsenic</b>	<b>0.212</b>		0.00200		mg/L		06/22/17 10:00	06/22/17 18:18	1
<b>Barium</b>	<b>0.101</b>		0.00200		mg/L		06/22/17 10:00	06/22/17 18:18	1
Beryllium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 18:18	1
<b>Boron</b>	<b>1.48</b>		0.200		mg/L		06/22/17 10:00	06/22/17 18:18	1
Cadmium	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 18:18	1
<b>Calcium</b>	<b>277</b>		0.200		mg/L		06/22/17 10:00	06/22/17 18:18	1
Chromium	<0.00500		0.00500		mg/L		06/22/17 10:00	06/22/17 18:18	1
<b>Cobalt</b>	<b>0.000725</b>		0.000500		mg/L		06/22/17 10:00	06/22/17 18:18	1
Lead	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 18:18	1
Molybdenum	<0.00200		0.00200		mg/L		06/22/17 10:00	06/22/17 18:18	1
Selenium	<0.00500		0.00500		mg/L		06/22/17 10:00	06/22/17 18:18	1
Thallium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 18:18	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/23/17 13:07	06/26/17 13:27	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>2020</b>		150		mg/L			06/22/17 08:17	1



# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-1

**Client Sample ID: MW9**  
**Date Collected: 06/19/17 09:27**  
**Date Received: 06/21/17 09:35**

**Lab Sample ID: 310-108269-2**  
**Matrix: Ground Water**

**Method: 9056A - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	149		5.00		mg/L			06/27/17 09:04	5
Fluoride	0.517		0.500		mg/L			06/27/17 09:04	5
Sulfate	22.0		5.00		mg/L			06/27/17 09:04	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 15:07	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 18:21	1
Arsenic	0.00345		0.00200		mg/L		06/22/17 10:00	06/22/17 18:21	1
Barium	0.481		0.00200		mg/L		06/22/17 10:00	06/22/17 18:21	1
Beryllium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 18:21	1
Boron	<0.200		0.200		mg/L		06/22/17 10:00	06/22/17 18:21	1
Cadmium	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 18:21	1
Calcium	150		0.200		mg/L		06/22/17 10:00	06/22/17 18:21	1
Chromium	<0.00500		0.00500		mg/L		06/22/17 10:00	06/22/17 18:21	1
Cobalt	0.00123		0.000500		mg/L		06/22/17 10:00	06/22/17 18:21	1
Lead	0.00322		0.000500		mg/L		06/22/17 10:00	06/22/17 18:21	1
Molybdenum	<0.00200		0.00200		mg/L		06/22/17 10:00	06/22/17 18:21	1
Selenium	<0.00500		0.00500		mg/L		06/22/17 10:00	06/22/17 18:21	1
Thallium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 18:21	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 13:35	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	888		60.0		mg/L			06/22/17 08:17	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-1

**Client Sample ID: MW13**

**Lab Sample ID: 310-108269-3**

**Date Collected: 06/19/17 11:00**

**Matrix: Ground Water**

**Date Received: 06/21/17 09:35**

**Method: 9056A - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>7.83</b>		5.00		mg/L			06/23/17 02:57	5
Fluoride	<0.500		0.500		mg/L			06/23/17 02:57	5
<b>Sulfate</b>	<b>590</b>		20.0		mg/L			06/27/17 09:19	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 15:11	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 18:24	1
<b>Arsenic</b>	<b>0.260</b>		0.00200		mg/L		06/22/17 10:00	06/22/17 18:24	1
<b>Barium</b>	<b>0.118</b>		0.00200		mg/L		06/22/17 10:00	06/22/17 18:24	1
Beryllium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 18:24	1
<b>Boron</b>	<b>2.09</b>		0.200		mg/L		06/22/17 10:00	06/22/17 18:24	1
Cadmium	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 18:24	1
<b>Calcium</b>	<b>179</b>		0.200		mg/L		06/22/17 10:00	06/22/17 18:24	1
Chromium	<0.00500		0.00500		mg/L		06/22/17 10:00	06/22/17 18:24	1
Cobalt	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 18:24	1
Lead	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 18:24	1
<b>Molybdenum</b>	<b>0.881</b>		0.00200		mg/L		06/22/17 10:00	06/22/17 18:24	1
<b>Selenium</b>	<b>0.0372</b>		0.00500		mg/L		06/22/17 10:00	06/22/17 18:24	1
Thallium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 18:24	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 13:36	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>1400</b>		150		mg/L			06/22/17 08:17	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-1

**Client Sample ID: MW15**  
**Date Collected: 06/19/17 11:30**  
**Date Received: 06/21/17 09:35**

**Lab Sample ID: 310-108269-4**  
**Matrix: Ground Water**

**Method: 9056A - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>9.99</b>		5.00		mg/L			06/23/17 03:34	5
Fluoride	<0.500		0.500		mg/L			06/23/17 03:34	5
<b>Sulfate</b>	<b>643</b>		20.0		mg/L			06/27/17 09:35	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 15:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.00119</b>		0.00100		mg/L		06/22/17 10:00	06/22/17 18:30	1
Arsenic	<0.00200		0.00200		mg/L		06/22/17 10:00	06/22/17 18:30	1
<b>Barium</b>	<b>0.0447</b>		0.00200		mg/L		06/22/17 10:00	06/22/17 18:30	1
Beryllium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 18:30	1
<b>Boron</b>	<b>2.57</b>		0.200		mg/L		06/22/17 10:00	06/22/17 18:30	1
Cadmium	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 18:30	1
<b>Calcium</b>	<b>248</b>		0.200		mg/L		06/22/17 10:00	06/22/17 18:30	1
<b>Chromium</b>	<b>0.00678</b>		0.00500		mg/L		06/22/17 10:00	06/22/17 18:30	1
Cobalt	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 18:30	1
Lead	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 18:30	1
<b>Molybdenum</b>	<b>0.242</b>		0.00200		mg/L		06/22/17 10:00	06/22/17 18:30	1
<b>Selenium</b>	<b>0.0638</b>		0.00500		mg/L		06/22/17 10:00	06/22/17 18:30	1
Thallium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 18:30	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/23/17 13:07	06/26/17 13:38	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>1320</b>		60.0		mg/L			06/22/17 08:17	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-1

**Client Sample ID: MW16**

**Lab Sample ID: 310-108269-5**

**Date Collected: 06/19/17 09:58**

**Matrix: Ground Water**

**Date Received: 06/21/17 09:35**

**Method: 9056A - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>59.3</b>		5.00		mg/L			06/23/17 04:11	5
Fluoride	<0.500		0.500		mg/L			06/23/17 04:11	5
<b>Sulfate</b>	<b>326</b>		20.0		mg/L			06/27/17 09:51	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 15:16	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 18:33	1
Arsenic	<0.00200		0.00200		mg/L		06/22/17 10:00	06/22/17 18:33	1
<b>Barium</b>	<b>0.0752</b>		0.00200		mg/L		06/22/17 10:00	06/22/17 18:33	1
Beryllium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 18:33	1
<b>Boron</b>	<b>0.371</b>		0.200		mg/L		06/22/17 10:00	06/22/17 18:33	1
Cadmium	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 18:33	1
<b>Calcium</b>	<b>194</b>		0.200		mg/L		06/22/17 10:00	06/22/17 18:33	1
Chromium	<0.00500		0.00500		mg/L		06/22/17 10:00	06/22/17 18:33	1
<b>Cobalt</b>	<b>0.000769</b>		0.000500		mg/L		06/22/17 10:00	06/22/17 18:33	1
Lead	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 18:33	1
<b>Molybdenum</b>	<b>0.0105</b>		0.00200		mg/L		06/22/17 10:00	06/22/17 18:33	1
Selenium	<0.00500		0.00500		mg/L		06/22/17 10:00	06/22/17 18:33	1
Thallium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 18:33	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 13:39	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>1460</b>		60.0		mg/L			06/22/17 08:17	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-1

**Client Sample ID: MW17**

**Lab Sample ID: 310-108269-6**

**Date Collected: 06/19/17 12:14**

**Matrix: Ground Water**

**Date Received: 06/21/17 09:35**

**Method: 9056A - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>42.3</b>		5.00		mg/L			06/23/17 04:48	5
Fluoride	<0.500		0.500		mg/L			06/23/17 04:48	5
<b>Sulfate</b>	<b>944</b>		20.0		mg/L			06/27/17 10:06	20

**Method: 6010C - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Lithium</b>	<b>0.114</b>		0.0500		mg/L		06/22/17 10:00	06/22/17 15:22	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 18:36	1
<b>Arsenic</b>	<b>0.0163</b>		0.00200		mg/L		06/22/17 10:00	06/22/17 18:36	1
<b>Barium</b>	<b>0.0361</b>		0.00200		mg/L		06/22/17 10:00	06/22/17 18:36	1
Beryllium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 18:36	1
<b>Boron</b>	<b>0.679</b>		0.200		mg/L		06/22/17 10:00	06/22/17 18:36	1
Cadmium	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 18:36	1
<b>Calcium</b>	<b>373</b>		0.200		mg/L		06/22/17 10:00	06/22/17 18:36	1
Chromium	<0.00500		0.00500		mg/L		06/22/17 10:00	06/22/17 18:36	1
<b>Cobalt</b>	<b>0.0120</b>		0.000500		mg/L		06/22/17 10:00	06/22/17 18:36	1
Lead	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 18:36	1
Molybdenum	<0.00200		0.00200		mg/L		06/22/17 10:00	06/22/17 18:36	1
Selenium	<0.00500		0.00500		mg/L		06/22/17 10:00	06/22/17 18:36	1
Thallium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 18:36	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 13:41	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>2640</b>		150		mg/L			06/22/17 08:17	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-1

**Client Sample ID: MW18**

**Lab Sample ID: 310-108269-7**

**Date Collected: 06/19/17 08:16**

**Matrix: Ground Water**

**Date Received: 06/21/17 09:35**

**Method: 9056A - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			06/27/17 10:22	5
Fluoride	<0.500		0.500		mg/L			06/27/17 10:22	5
Sulfate	<5.00		5.00		mg/L			06/27/17 10:22	5

**Method: 6010C - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		06/22/17 10:00	06/22/17 15:24	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 18:39	1
Arsenic	<0.00200		0.00200		mg/L		06/22/17 10:00	06/22/17 18:39	1
<b>Barium</b>	<b>0.304</b>		0.00200		mg/L		06/22/17 10:00	06/22/17 18:39	1
Beryllium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 18:39	1
Boron	<0.200		0.200		mg/L		06/22/17 10:00	06/22/17 18:39	1
Cadmium	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 18:39	1
<b>Calcium</b>	<b>98.4</b>		0.200		mg/L		06/22/17 10:00	06/22/17 18:39	1
Chromium	<0.00500		0.00500		mg/L		06/22/17 10:00	06/22/17 18:39	1
Cobalt	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 18:39	1
Lead	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 18:39	1
Molybdenum	<0.00200		0.00200		mg/L		06/22/17 10:00	06/22/17 18:39	1
Selenium	<0.00500		0.00500		mg/L		06/22/17 10:00	06/22/17 18:39	1
Thallium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 18:39	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.000204</b>		0.000200		mg/L		06/23/17 13:07	06/26/17 13:42	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>514</b>		30.0		mg/L			06/22/17 08:17	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-1

**Client Sample ID: MW19**

**Lab Sample ID: 310-108269-8**

**Date Collected: 06/19/17 08:54**

**Matrix: Ground Water**

**Date Received: 06/21/17 09:35**

**Method: 9056A - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			06/27/17 10:37	5
Fluoride	<0.500		0.500		mg/L			06/27/17 10:37	5
<b>Sulfate</b>	<b>10.2</b>		5.00		mg/L			06/27/17 10:37	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 15:27	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 18:42	1
Arsenic	<0.00200		0.00200		mg/L		06/22/17 10:00	06/22/17 18:42	1
<b>Barium</b>	<b>0.297</b>		0.00200		mg/L		06/22/17 10:00	06/22/17 18:42	1
Beryllium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 18:42	1
Boron	<0.200		0.200		mg/L		06/22/17 10:00	06/22/17 18:42	1
Cadmium	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 18:42	1
<b>Calcium</b>	<b>103</b>		0.200		mg/L		06/22/17 10:00	06/22/17 18:42	1
Chromium	<0.00500		0.00500		mg/L		06/22/17 10:00	06/22/17 18:42	1
Cobalt	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 18:42	1
Lead	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 18:42	1
Molybdenum	<0.00200		0.00200		mg/L		06/22/17 10:00	06/22/17 18:42	1
Selenium	<0.00500		0.00500		mg/L		06/22/17 10:00	06/22/17 18:42	1
Thallium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 18:42	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 13:44	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>518</b>		30.0		mg/L			06/22/17 08:17	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-1

**Client Sample ID: DUP-1**

**Lab Sample ID: 310-108269-9**

**Date Collected: 06/19/17 11:02**

**Matrix: Ground Water**

**Date Received: 06/21/17 09:35**

**Method: 9056A - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>7.24</b>		5.00		mg/L			06/23/17 06:38	5
Fluoride	<0.500		0.500		mg/L			06/23/17 06:38	5
<b>Sulfate</b>	<b>565</b>		50.0		mg/L			06/27/17 10:53	50

**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 15:29	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 18:46	1
<b>Arsenic</b>	<b>0.228</b>		0.00200		mg/L		06/22/17 10:00	06/22/17 18:46	1
<b>Barium</b>	<b>0.106</b>		0.00200		mg/L		06/22/17 10:00	06/22/17 18:46	1
Beryllium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 18:46	1
<b>Boron</b>	<b>2.02</b>		0.200		mg/L		06/22/17 10:00	06/22/17 18:46	1
Cadmium	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 18:46	1
<b>Calcium</b>	<b>169</b>		0.200		mg/L		06/22/17 10:00	06/22/17 18:46	1
Chromium	<0.00500		0.00500		mg/L		06/22/17 10:00	06/22/17 18:46	1
Cobalt	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 18:46	1
Lead	<0.000500		0.000500		mg/L		06/22/17 10:00	06/22/17 18:46	1
<b>Molybdenum</b>	<b>0.907</b>		0.00200		mg/L		06/22/17 10:00	06/22/17 18:46	1
<b>Selenium</b>	<b>0.0370</b>		0.00500		mg/L		06/22/17 10:00	06/22/17 18:46	1
Thallium	<0.00100		0.00100		mg/L		06/22/17 10:00	06/22/17 18:46	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 13:45	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>1750</b>		150		mg/L			06/22/17 08:17	1



## Definitions/Glossary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-1

### 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)

# QC Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-1

## 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

## 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

**Lab Sample ID:** 310-108269-2 DU  
**Matrix:** Ground Water  
**Analysis Batch:** 170360

**Client Sample ID:** MW9  
**Prep Type:** Total/NA  
**Prep Batch:** 170142

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 310-170163/1-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

TestAmerica Cedar Falls

# QC Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-1

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

**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
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

**Lab Sample ID: 310-108269-3 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 170355**

**Client Sample ID: MW13**  
**Prep Type: Total/NA**  
**Prep Batch: 170163**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	<0.00100		<0.00100		mg/L		NC	20
Arsenic	0.260		0.2550		mg/L		2	20
Barium	0.118		0.1152		mg/L		2	20
Beryllium	<0.00100		<0.00100		mg/L		NC	20
Boron	2.09		2.047		mg/L		2	20

TestAmerica Cedar Falls

# QC Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-1

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

Lab Sample ID: 310-108269-3 DU  
 Matrix: Ground Water  
 Analysis Batch: 170355

Client Sample ID: MW13  
 Prep Type: Total/NA  
 Prep Batch: 170163

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Cadmium	<0.000500		<0.000500		mg/L		NC	20
Calcium	179		173.4		mg/L		3	20
Chromium	<0.00500		<0.00500		mg/L		NC	20
Cobalt	<0.000500		<0.000500		mg/L		NC	20
Lead	<0.000500		<0.000500		mg/L		NC	20
Molybdenum	0.881		0.8687		mg/L		1	20
Selenium	0.0372		0.03615		mg/L		3	20
Thallium	<0.00100		<0.00100		mg/L		NC	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	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
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	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Mercury	0.00167	0.001501		mg/L		90	80 - 120

## 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	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
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	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Total Dissolved Solids	1000	1050		mg/L		105	90 - 110

Lab Sample ID: 310-108269-3 DU  
 Matrix: Ground Water  
 Analysis Batch: 170221

Client Sample ID: MW13  
 Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Total Dissolved Solids	1400		1520		mg/L		8	24

TestAmerica Cedar Falls

# QC Association Summary

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-1

## HPLC/IC

### Analysis Batch: 170599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108269-1	MW2	Total/NA	Ground Water	9056A	
310-108269-1	MW2	Total/NA	Ground Water	9056A	
310-108269-2	MW9	Total/NA	Ground Water	9056A	
310-108269-3	MW13	Total/NA	Ground Water	9056A	
310-108269-3	MW13	Total/NA	Ground Water	9056A	
310-108269-4	MW15	Total/NA	Ground Water	9056A	
310-108269-4	MW15	Total/NA	Ground Water	9056A	
310-108269-5	MW16	Total/NA	Ground Water	9056A	
310-108269-5	MW16	Total/NA	Ground Water	9056A	
310-108269-6	MW17	Total/NA	Ground Water	9056A	
310-108269-6	MW17	Total/NA	Ground Water	9056A	
310-108269-7	MW18	Total/NA	Ground Water	9056A	
310-108269-8	MW19	Total/NA	Ground Water	9056A	
310-108269-9	DUP-1	Total/NA	Ground Water	9056A	
310-108269-9	DUP-1	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	

## Metals

### Prep Batch: 170142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108269-1	MW2	Total/NA	Ground Water	3010A	
310-108269-2	MW9	Total/NA	Ground Water	3010A	
310-108269-3	MW13	Total/NA	Ground Water	3010A	
310-108269-4	MW15	Total/NA	Ground Water	3010A	
310-108269-5	MW16	Total/NA	Ground Water	3010A	
310-108269-6	MW17	Total/NA	Ground Water	3010A	
310-108269-7	MW18	Total/NA	Ground Water	3010A	
310-108269-8	MW19	Total/NA	Ground Water	3010A	
310-108269-9	DUP-1	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	
310-108269-2 DU	MW9	Total/NA	Ground Water	3010A	

### Prep Batch: 170163

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108269-1	MW2	Total/NA	Ground Water	3010A	
310-108269-2	MW9	Total/NA	Ground Water	3010A	
310-108269-3	MW13	Total/NA	Ground Water	3010A	
310-108269-4	MW15	Total/NA	Ground Water	3010A	
310-108269-5	MW16	Total/NA	Ground Water	3010A	
310-108269-6	MW17	Total/NA	Ground Water	3010A	
310-108269-7	MW18	Total/NA	Ground Water	3010A	
310-108269-8	MW19	Total/NA	Ground Water	3010A	
310-108269-9	DUP-1	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	
310-108269-3 DU	MW13	Total/NA	Ground Water	3010A	

# QC Association Summary

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-1

## Metals (Continued)

### Analysis Batch: 170355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108269-1	MW2	Total/NA	Ground Water	6020A	170163
310-108269-2	MW9	Total/NA	Ground Water	6020A	170163
310-108269-3	MW13	Total/NA	Ground Water	6020A	170163
310-108269-4	MW15	Total/NA	Ground Water	6020A	170163
310-108269-5	MW16	Total/NA	Ground Water	6020A	170163
310-108269-6	MW17	Total/NA	Ground Water	6020A	170163
310-108269-7	MW18	Total/NA	Ground Water	6020A	170163
310-108269-8	MW19	Total/NA	Ground Water	6020A	170163
310-108269-9	DUP-1	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
310-108269-3 DU	MW13	Total/NA	Ground Water	6020A	170163

### Analysis Batch: 170360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108269-1	MW2	Total/NA	Ground Water	6010C	170142
310-108269-2	MW9	Total/NA	Ground Water	6010C	170142
310-108269-3	MW13	Total/NA	Ground Water	6010C	170142
310-108269-4	MW15	Total/NA	Ground Water	6010C	170142
310-108269-5	MW16	Total/NA	Ground Water	6010C	170142
310-108269-6	MW17	Total/NA	Ground Water	6010C	170142
310-108269-7	MW18	Total/NA	Ground Water	6010C	170142
310-108269-8	MW19	Total/NA	Ground Water	6010C	170142
310-108269-9	DUP-1	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
310-108269-2 DU	MW9	Total/NA	Ground Water	6010C	170142

### Prep Batch: 170420

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108269-1	MW2	Total/NA	Ground Water	7470A	
310-108269-2	MW9	Total/NA	Ground Water	7470A	
310-108269-3	MW13	Total/NA	Ground Water	7470A	
310-108269-4	MW15	Total/NA	Ground Water	7470A	
310-108269-5	MW16	Total/NA	Ground Water	7470A	
310-108269-6	MW17	Total/NA	Ground Water	7470A	
310-108269-7	MW18	Total/NA	Ground Water	7470A	
310-108269-8	MW19	Total/NA	Ground Water	7470A	
310-108269-9	DUP-1	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	

### Analysis Batch: 170613

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108269-1	MW2	Total/NA	Ground Water	7470A	170420
310-108269-2	MW9	Total/NA	Ground Water	7470A	170420
310-108269-3	MW13	Total/NA	Ground Water	7470A	170420
310-108269-4	MW15	Total/NA	Ground Water	7470A	170420
310-108269-5	MW16	Total/NA	Ground Water	7470A	170420
310-108269-6	MW17	Total/NA	Ground Water	7470A	170420
310-108269-7	MW18	Total/NA	Ground Water	7470A	170420

TestAmerica Cedar Falls

# QC Association Summary

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-1

## Metals (Continued)

### Analysis Batch: 170613 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108269-8	MW19	Total/NA	Ground Water	7470A	170420
310-108269-9	DUP-1	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

### Analysis Batch: 170653

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
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

## General Chemistry

### Analysis Batch: 170221

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108269-1	MW2	Total/NA	Ground Water	SM 2540C	
310-108269-2	MW9	Total/NA	Ground Water	SM 2540C	
310-108269-3	MW13	Total/NA	Ground Water	SM 2540C	
310-108269-4	MW15	Total/NA	Ground Water	SM 2540C	
310-108269-5	MW16	Total/NA	Ground Water	SM 2540C	
310-108269-6	MW17	Total/NA	Ground Water	SM 2540C	
310-108269-7	MW18	Total/NA	Ground Water	SM 2540C	
310-108269-8	MW19	Total/NA	Ground Water	SM 2540C	
310-108269-9	DUP-1	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	
310-108269-3 DU	MW13	Total/NA	Ground Water	SM 2540C	

# Lab Chronicle

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-1

## Client Sample ID: MW2

Lab Sample ID: 310-108269-1

Date Collected: 06/19/17 10:26

Matrix: Ground Water

Date Received: 06/21/17 09:35

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 02:02	SAD	TAL CF
Total/NA	Analysis	9056A		50	170599	06/27/17 08:48	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 15:05	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 18:18	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 13:27	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	170221	06/22/17 08:17	SAS	TAL CF

## Client Sample ID: MW9

Lab Sample ID: 310-108269-2

Date Collected: 06/19/17 09:27

Matrix: Ground Water

Date Received: 06/21/17 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	170599	06/27/17 09:04	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 15:07	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 18:21	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 13:35	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	170221	06/22/17 08:17	SAS	TAL CF

## Client Sample ID: MW13

Lab Sample ID: 310-108269-3

Date Collected: 06/19/17 11:00

Matrix: Ground Water

Date Received: 06/21/17 09:35

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 02:57	SAD	TAL CF
Total/NA	Analysis	9056A		20	170599	06/27/17 09:19	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 15:11	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 18:24	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 13:36	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: North Omaha Station CCR

TestAmerica Job ID: 310-108269-1

## Client Sample ID: MW15

Lab Sample ID: 310-108269-4

Date Collected: 06/19/17 11:30

Matrix: Ground Water

Date Received: 06/21/17 09:35

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 03:34	SAD	TAL CF
Total/NA	Analysis	9056A		20	170599	06/27/17 09:35	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 15:13	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 18:30	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 13:38	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	170221	06/22/17 08:17	SAS	TAL CF

## Client Sample ID: MW16

Lab Sample ID: 310-108269-5

Date Collected: 06/19/17 09:58

Matrix: Ground Water

Date Received: 06/21/17 09:35

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 04:11	SAD	TAL CF
Total/NA	Analysis	9056A		20	170599	06/27/17 09:51	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 15:16	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 18:33	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 13:39	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	170221	06/22/17 08:17	SAS	TAL CF

## Client Sample ID: MW17

Lab Sample ID: 310-108269-6

Date Collected: 06/19/17 12:14

Matrix: Ground Water

Date Received: 06/21/17 09:35

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 04:48	SAD	TAL CF
Total/NA	Analysis	9056A		20	170599	06/27/17 10:06	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 15:22	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 18:36	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 13:41	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: North Omaha Station CCR

TestAmerica Job ID: 310-108269-1

## Client Sample ID: MW18

Date Collected: 06/19/17 08:16

Date Received: 06/21/17 09:35

## Lab Sample ID: 310-108269-7

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	06/27/17 10:22	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 15:24	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 18:39	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 13:42	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	170221	06/22/17 08:17	SAS	TAL CF

## Client Sample ID: MW19

Date Collected: 06/19/17 08:54

Date Received: 06/21/17 09:35

## Lab Sample ID: 310-108269-8

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	06/27/17 10:37	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 15:27	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 18:42	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 13:44	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	170221	06/22/17 08:17	SAS	TAL CF

## Client Sample ID: DUP-1

Date Collected: 06/19/17 11:02

Date Received: 06/21/17 09:35

## Lab Sample ID: 310-108269-9

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	170599	06/23/17 06:38	SAD	TAL CF
Total/NA	Analysis	9056A		50	170599	06/27/17 10:53	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 15:29	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 18:46	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 13:45	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: North Omaha Station CCR

TestAmerica Job ID: 310-108269-1

## 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: North Omaha Station CCR

TestAmerica Job ID: 310-108269-1

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





## Cooler/Sample Receipt and Temperature Log Form

<b>Client Information</b>			
Client: <u>Omaha Public Power District</u>			
City/State: <u>Omaha NE</u>		Project: <u>North Omaha Station</u>	
<b>Receipt Information</b>			
Date/Time Received: <u>6-21-17 935</u>		Received By: <u>KP</u>	
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____			
<b>Condition of Cooler/Containers</b>			
Sample(s) received in Cooler?		If yes: Cooler ID: <u>1813</u>	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Multiple Coolers?		If yes: Cooler # <u>1</u> of <u>2</u>	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Cooler Custody Seals Present?		If yes: Cooler custody seals intact?	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Sample Custody Seals Present?		If yes: Sample custody seals intact?	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank Present?		If yes: Which VOA samples are in cooler? ↓	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
<b>Temperature Record</b>			
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE			
Thermometer ID: <u>H</u>		Correction Factor (°C): <u>+0.0</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>4.2</u>		Corrected Temp (°C): <u>4.2</u>	
• Sample Container Temperature			
Sample ID(s) & bottle type used: <u>CONTAINER 1</u>		<u>CONTAINER 2</u>	
Uncorrected Temp (°C): <u>TEMP 1</u> <u>TEMP 2</u>		Corrected Temp (°C): <u>TEMP 1</u> <u>TEMP 2</u>	
<b>Exceptions Noted</b>			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No			
a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
<b>Additional Comments</b>			
<u>MW 15, 17, 18, 19, Dupl</u>			

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Place COC scanning label here

**Cooler/Sample Receipt and Temperature Log Form**

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<b>Client Information</b>	
Client: <u>Omaha Public Power District</u>	
City/State: <u>Omaha NE</u>	Project: <u>North Omaha Station</u> <i>CR</i>
<b>Receipt Information</b>	
Date/Time Received: <u>6-21-17 9:35</u>	Received By: <u>KP</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler ID: <u>CF 117</u></i>
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler # <u>2</u> of <u>2</u></i>
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes: Cooler custody seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</i>
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No</i>
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Which VOA samples are in cooler? ↓</i>
<b>Temperature Record</b>	
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE	
Thermometer ID: <u>H</u>	Correction Factor (°C): <u>+0.0</u>
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature	
Uncorrected Temp (°C): <u>2.1</u>	Corrected Temp (°C): <u>2.1</u>
• Sample Container Temperature	
Sample ID(s) & bottle type used:	<u>CONTAINER 1</u> <u>CONTAINER 2</u>
Uncorrected Temp (°C):	Corrected Temp (°C):
TEMP 1	TEMP 1
TEMP 2	TEMP 2
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) <i>If yes:</i> Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	
<u>Received 1 empty set of bottles</u>	
<u>AW 16, 2, 13, 9</u>	

**Chain of Custody Record**

<b>Client Information</b>		Lab PM: Hayes, Shawn M		Carrier Tracking No(s):	
Client Contact: Brad Sojka		E-Mail: shawn.hayes@testamericainc.com		Page:	
Company: Omaha Public Power District		Phone: 402-636-2515		Job #:	
Address: 444 South 16th Street Mall 9E/EP1		City: Omaha		State, Zip: NE, 68102-2247	
Phone: 402-636-2515(Tel)		PO #:		WO #:	
Email: bsojka@oppd.com		Project Name: North Omaha Station CCR		Site:	
Project Name: North Omaha Station CCR		TestAmerica Project #: 31007560		SSOW#:	
Due Date Requested:		TAT Requested (days):		Analysis Requested	
Sample Date		Sample Time		Sample Type (C=comp, G=grab)	
Sample Identification		Sample Date		Sample Time	
Matrix (W=water, S=solid, O=water/oil)		Preservation Code:		Field Filtered Sample (Yes or No)	
Perform MS/MSD (Yes or No)		9315_Raz26, 9320_Raz28, Combined Raz26 and Raz28		6010C Lithium, 6020A CCR List, 7470A Mercury	
2540C TDS, 9056A Chloride, Fluoride, Sulfate		D		N	
MW2		6/14/17		1026	
MW5					
MW6					
MW8					
MW9					
MW13					
MW15					
MW16					
MW17					
MW18					
MW19					
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Radiological		<input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Deliverable Requested: I, II, III, IV, Other (specify)		Empty Kit Relinquished by:		Method of Shipment:	
Relinquished by: <i>[Signature]</i>		Date: 6/20/17		Received by: <i>[Signature]</i>	
Relinquished by:		Date: 1000		Received by:	
Relinquished by:		Date:		Received by:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	









Temperature readings: \_\_\_\_\_

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u> pH	<u>Preservative</u> Added (mls)	<u>Lot #</u>
MW2	310-108269-A-1	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW2	310-108269-C-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-108269-D-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-108269-A-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW9	310-108269-C-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-108269-D-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-108269-A-3	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW13	310-108269-C-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-108269-D-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW15	310-108269-A-4	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW15	310-108269-C-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW15	310-108269-D-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW16	310-108269-A-5	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW16	310-108269-C-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW16	310-108269-D-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW17	310-108269-A-6	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW17	310-108269-C-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW17	310-108269-D-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW18	310-108269-A-7	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW18	310-108269-C-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW18	310-108269-D-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW19	310-108269-A-8	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW19	310-108269-C-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW19	310-108269-D-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-1	310-108269-A-9	Plastic 250ml - with Nitric Acid	<2	_____	_____
DUP-1	310-108269-C-9	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-1	310-108269-D-9	Plastic 1 liter - Nitric Acid	<2	_____	_____

## Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-108269-1

**Login Number: 108269**

**List Source: TestAmerica Cedar Falls**

**List Number: 1**

**Creator: Worthy, Ashley L**

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



# 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: 310-108269-2

Client Project/Site: North Omaha Station 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 11:58:44 AM

Shawn Hayes, Senior Project Manager

(319)277-2401

[shawn.hayes@testamericainc.com](mailto:shawn.hayes@testamericainc.com)

### LINKS

Review your project  
results through

Total Access

Have a Question?



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[www.testamericainc.com](http://www.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: North Omaha Station CCR

TestAmerica Job ID: 310-108269-2

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**Job ID: 310-108269-2**

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**Laboratory: TestAmerica Cedar Falls**

## Narrative

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**Job Narrative  
310-108269-2**

## 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 2.1° C and 4.2° C.

## RAD

Method(s) PrecSep\_0: Radium 228 Prep Batch 160-315310

The following sample was reduced due to heavy amounts of sediment making sample murky and gray: MW9 (310-108269-2)

Method(s) PrecSep-21: Radium 226 Prep Batch 160-315196

The following sample was reduced due to heavy amounts of sediment making sample murky and gray: MW9 (310-108269-2)

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: North Omaha Station CCR

TestAmerica Job ID: 310-108269-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-108269-1	MW2	Ground Water	06/19/17 10:26	06/21/17 09:35
310-108269-2	MW9	Ground Water	06/19/17 09:27	06/21/17 09:35
310-108269-3	MW13	Ground Water	06/19/17 11:00	06/21/17 09:35
310-108269-4	MW15	Ground Water	06/19/17 11:30	06/21/17 09:35
310-108269-5	MW16	Ground Water	06/19/17 09:58	06/21/17 09:35
310-108269-6	MW17	Ground Water	06/19/17 12:14	06/21/17 09:35
310-108269-7	MW18	Ground Water	06/19/17 08:16	06/21/17 09:35
310-108269-8	MW19	Ground Water	06/19/17 08:54	06/21/17 09:35
310-108269-9	DUP-1	Ground Water	06/19/17 11:02	06/21/17 09:35



# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-2

**Client Sample ID: MW2**  
**Date Collected: 06/19/17 10:26**  
**Date Received: 06/21/17 09:35**

**Lab Sample ID: 310-108269-1**  
**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	0.175		0.0728	0.0745	1.00	0.0648	pCi/L	06/26/17 08:54	07/18/17 06:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					06/26/17 08:54	07/18/17 06:33	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.294	U	0.208	0.210	1.00	0.323	pCi/L	06/26/17 09:17	07/07/17 14:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					06/26/17 09:17	07/07/17 14:30	1
Y Carrier	89.3		40 - 110					06/26/17 09:17	07/07/17 14:30	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	0.469		0.220	0.223	5.00	0.323	pCi/L		07/19/17 09:48	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-2

**Client Sample ID: MW9**

**Lab Sample ID: 310-108269-2**

Date Collected: 06/19/17 09:27

Matrix: Ground Water

Date Received: 06/21/17 09:35

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.799		0.220	0.231	1.00	0.134	pCi/L	06/26/17 08:54	07/18/17 06:33	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	89.7		40 - 110					06/26/17 08:54	07/18/17 06:33	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.82		0.586	0.609	1.00	0.778	pCi/L	06/26/17 09:17	07/07/17 14:30	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	89.7		40 - 110					06/26/17 09:17	07/07/17 14:30	1
Y Carrier	90.1		40 - 110					06/26/17 09:17	07/07/17 14:30	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	2.62		0.626	0.652	5.00	0.778	pCi/L		07/19/17 09:48	1



# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-2

**Client Sample ID: MW13**

**Lab Sample ID: 310-108269-3**

Date Collected: 06/19/17 11:00

Matrix: Ground Water

Date Received: 06/21/17 09:35

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.190		0.0752	0.0771	1.00	0.0613	pCi/L	06/26/17 08:54	07/18/17 06:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.9		40 - 110					06/26/17 08:54	07/18/17 06:33	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	0.184	0.184	1.00	0.312	pCi/L	06/26/17 09:17	07/07/17 14:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.9		40 - 110					06/26/17 09:17	07/07/17 14:30	1
Y Carrier	93.1		40 - 110					06/26/17 09:17	07/07/17 14:30	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	0.300	U	0.199	0.200	5.00	0.312	pCi/L		07/19/17 09:48	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-2

**Client Sample ID: MW15**

**Lab Sample ID: 310-108269-4**

Date Collected: 06/19/17 11:30

Matrix: Ground Water

Date Received: 06/21/17 09:35

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0759		0.0499	0.0504	1.00	0.0579	pCi/L	06/26/17 08:54	07/18/17 06:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					06/26/17 08:54	07/18/17 06:33	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.154	U	0.177	0.177	1.00	0.291	pCi/L	06/26/17 09:17	07/07/17 14:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					06/26/17 09:17	07/07/17 14:30	1
Y Carrier	93.1		40 - 110					06/26/17 09:17	07/07/17 14:30	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	0.229	U	0.184	0.185	5.00	0.291	pCi/L		07/19/17 09:48	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-2

**Client Sample ID: MW16**

**Lab Sample ID: 310-108269-5**

Date Collected: 06/19/17 09:58

Matrix: Ground Water

Date Received: 06/21/17 09:35

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0686		0.0485	0.0489	1.00	0.0594	pCi/L	06/26/17 08:54	07/18/17 06:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					06/26/17 08:54	07/18/17 06:33	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		0.209	0.212	1.00	0.307	pCi/L	06/26/17 09:17	07/07/17 14:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					06/26/17 09:17	07/07/17 14:30	1
Y Carrier	91.2		40 - 110					06/26/17 09:17	07/07/17 14:30	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	0.463		0.214	0.217	5.00	0.307	pCi/L		07/19/17 09:48	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-2

**Client Sample ID: MW17**

**Lab Sample ID: 310-108269-6**

Date Collected: 06/19/17 12:14

Matrix: Ground Water

Date Received: 06/21/17 09:35

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.113		0.0672	0.0679	1.00	0.0725	pCi/L	06/26/17 08:54	07/18/17 06:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.6		40 - 110					06/26/17 08:54	07/18/17 06:33	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.664		0.272	0.279	1.00	0.384	pCi/L	06/26/17 09:17	07/07/17 14:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.6		40 - 110					06/26/17 09:17	07/07/17 14:30	1
Y Carrier	89.0		40 - 110					06/26/17 09:17	07/07/17 14:30	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	0.777		0.280	0.287	5.00	0.384	pCi/L		07/19/17 09:48	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-2

**Client Sample ID: MW18**

**Lab Sample ID: 310-108269-7**

**Date Collected: 06/19/17 08:16**

**Matrix: Ground Water**

**Date Received: 06/21/17 09:35**

**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		0.0916	0.0946	1.00	0.0610	pCi/L	06/26/17 08:54	07/18/17 06:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					06/26/17 08:54	07/18/17 06:33	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.201	U	0.186	0.187	1.00	0.299	pCi/L	06/26/17 09:17	07/07/17 14:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					06/26/17 09:17	07/07/17 14:35	1
Y Carrier	92.7		40 - 110					06/26/17 09:17	07/07/17 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	0.465		0.208	0.210	5.00	0.299	pCi/L		07/19/17 09:48	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-2

**Client Sample ID: MW19**

**Lab Sample ID: 310-108269-8**

Date Collected: 06/19/17 08:54

Matrix: Ground Water

Date Received: 06/21/17 09:35

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.480		0.119	0.127	1.00	0.0633	pCi/L	06/26/17 08:54	07/18/17 06:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.7		40 - 110					06/26/17 08:54	07/18/17 06:34	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.264	U	0.217	0.218	1.00	0.344	pCi/L	06/26/17 09:17	07/07/17 14:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.7		40 - 110					06/26/17 09:17	07/07/17 14:35	1
Y Carrier	90.1		40 - 110					06/26/17 09:17	07/07/17 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	0.744		0.248	0.253	5.00	0.344	pCi/L		07/19/17 09:48	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-2

**Client Sample ID: DUP-1**

**Lab Sample ID: 310-108269-9**

Date Collected: 06/19/17 11:02

Matrix: Ground Water

Date Received: 06/21/17 09:35

**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		0.0811	0.0831	1.00	0.0706	pCi/L	06/26/17 08:54	07/18/17 06:34	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	95.3		40 - 110					06/26/17 08:54	07/18/17 06:34	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.398		0.221	0.224	1.00	0.330	pCi/L	06/26/17 09:17	07/07/17 14:30	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	95.3		40 - 110					06/26/17 09:17	07/07/17 14:30	1
Y Carrier	92.3		40 - 110					06/26/17 09:17	07/07/17 14:30	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	0.600		0.236	0.239	5.00	0.330	pCi/L		07/19/17 09:48	1

# Definitions/Glossary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-2

## 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)



# QC Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-2

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

**Lab Sample ID: MB 160-315196/1-A**  
**Matrix: Water**  
**Analysis Batch: 317955**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 315196**

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.01625	U	0.0355	0.0355	1.00	0.0671	pCi/L	06/26/17 08:54	07/18/17 06:32	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	Limits							
Ba Carrier	98.8		40 - 110		06/26/17 08:54	07/18/17 06:32	1			

**Lab Sample ID: LCS 160-315196/2-A**  
**Matrix: Water**  
**Analysis Batch: 317955**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 315196**

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.4	10.62		1.09	1.00	0.0692	pCi/L	93	68 - 137
Carrier	LCS LCS		Limits		Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier	Limits						
Ba Carrier	100		40 - 110						

**Lab Sample ID: LCSD 160-315196/3-A**  
**Matrix: Water**  
**Analysis Batch: 317955**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 315196**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
				Uncert. (2σ+/-)							
Radium-226	11.4	8.897		0.936	1.00	0.0663	pCi/L	78	68 - 137	0.85	1
Carrier	LCSD LCSD		Limits		Prepared	Analyzed	Dil Fac				
Ba Carrier	%Yield	Qualifier	Limits								
Ba Carrier	98.5		40 - 110								

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

**Lab Sample ID: MB 160-315310/1-A**  
**Matrix: Water**  
**Analysis Batch: 316539**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 315310**

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.2225	U	0.202	0.203	1.00	0.325	pCi/L	06/26/17 09:17	07/07/17 14:29	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	Limits							
Ba Carrier	98.8		40 - 110		06/26/17 09:17	07/07/17 14:29	1			
Y Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Y Carrier	%Yield	Qualifier	Limits							
Y Carrier	88.2		40 - 110		06/26/17 09:17	07/07/17 14:29	1			

TestAmerica Cedar Falls

# QC Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-2

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

**Lab Sample ID: LCS 160-315310/2-A**

**Matrix: Water**

**Analysis Batch: 316539**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 315310**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.2	13.58		1.45	1.00	0.309	pCi/L	103	56 - 140
<b>Carrier</b>		<b>LCS %Yield</b>	<b>LCS Qualifier</b>	<b>Limits</b>					
Ba Carrier		100		40 - 110					
Y Carrier		90.8		40 - 110					

**Lab Sample ID: LCSD 160-315310/3-A**

**Matrix: Water**

**Analysis Batch: 316539**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 315310**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	13.2	14.06		1.49	1.00	0.326	pCi/L	106	56 - 140	0.16	1
<b>Carrier</b>		<b>LCSD %Yield</b>	<b>LCSD Qualifier</b>	<b>Limits</b>							
Ba Carrier		98.5		40 - 110							
Y Carrier		92.7		40 - 110							

# QC Association Summary

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-2

## Rad

### Prep Batch: 315196

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108269-1	MW2	Total/NA	Ground Water	PrecSep-21	
310-108269-2	MW9	Total/NA	Ground Water	PrecSep-21	
310-108269-3	MW13	Total/NA	Ground Water	PrecSep-21	
310-108269-4	MW15	Total/NA	Ground Water	PrecSep-21	
310-108269-5	MW16	Total/NA	Ground Water	PrecSep-21	
310-108269-6	MW17	Total/NA	Ground Water	PrecSep-21	
310-108269-7	MW18	Total/NA	Ground Water	PrecSep-21	
310-108269-8	MW19	Total/NA	Ground Water	PrecSep-21	
310-108269-9	DUP-1	Total/NA	Ground Water	PrecSep-21	
MB 160-315196/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-315196/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-315196/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

### Prep Batch: 315310

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-108269-1	MW2	Total/NA	Ground Water	PrecSep_0	
310-108269-2	MW9	Total/NA	Ground Water	PrecSep_0	
310-108269-3	MW13	Total/NA	Ground Water	PrecSep_0	
310-108269-4	MW15	Total/NA	Ground Water	PrecSep_0	
310-108269-5	MW16	Total/NA	Ground Water	PrecSep_0	
310-108269-6	MW17	Total/NA	Ground Water	PrecSep_0	
310-108269-7	MW18	Total/NA	Ground Water	PrecSep_0	
310-108269-8	MW19	Total/NA	Ground Water	PrecSep_0	
310-108269-9	DUP-1	Total/NA	Ground Water	PrecSep_0	
MB 160-315310/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-315310/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-315310/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

# Lab Chronicle

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-2

## Client Sample ID: MW2

Lab Sample ID: 310-108269-1

Date Collected: 06/19/17 10:26

Matrix: Ground Water

Date Received: 06/21/17 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			315196	06/26/17 08:54	LDE	TAL SL
Total/NA	Analysis	9315		1	317955	07/18/17 06:33	RTM	TAL SL
Total/NA	Prep	PrecSep_0			315310	06/26/17 09:17	LDE	TAL SL
Total/NA	Analysis	9320		1	316539	07/07/17 14:30	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	318131	07/19/17 09:48	RTM	TAL SL

## Client Sample ID: MW9

Lab Sample ID: 310-108269-2

Date Collected: 06/19/17 09:27

Matrix: Ground Water

Date Received: 06/21/17 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			315196	06/26/17 08:54	LDE	TAL SL
Total/NA	Analysis	9315		1	317955	07/18/17 06:33	RTM	TAL SL
Total/NA	Prep	PrecSep_0			315310	06/26/17 09:17	LDE	TAL SL
Total/NA	Analysis	9320		1	316539	07/07/17 14:30	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	318131	07/19/17 09:48	RTM	TAL SL

## Client Sample ID: MW13

Lab Sample ID: 310-108269-3

Date Collected: 06/19/17 11:00

Matrix: Ground Water

Date Received: 06/21/17 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			315196	06/26/17 08:54	LDE	TAL SL
Total/NA	Analysis	9315		1	317955	07/18/17 06:33	RTM	TAL SL
Total/NA	Prep	PrecSep_0			315310	06/26/17 09:17	LDE	TAL SL
Total/NA	Analysis	9320		1	316539	07/07/17 14:30	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	318131	07/19/17 09:48	RTM	TAL SL

## Client Sample ID: MW15

Lab Sample ID: 310-108269-4

Date Collected: 06/19/17 11:30

Matrix: Ground Water

Date Received: 06/21/17 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			315196	06/26/17 08:54	LDE	TAL SL
Total/NA	Analysis	9315		1	317955	07/18/17 06:33	RTM	TAL SL
Total/NA	Prep	PrecSep_0			315310	06/26/17 09:17	LDE	TAL SL
Total/NA	Analysis	9320		1	316539	07/07/17 14:30	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: North Omaha Station CCR

TestAmerica Job ID: 310-108269-2

## Client Sample ID: MW16

Lab Sample ID: 310-108269-5

Date Collected: 06/19/17 09:58

Matrix: Ground Water

Date Received: 06/21/17 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			315196	06/26/17 08:54	LDE	TAL SL
Total/NA	Analysis	9315		1	317955	07/18/17 06:33	RTM	TAL SL
Total/NA	Prep	PrecSep_0			315310	06/26/17 09:17	LDE	TAL SL
Total/NA	Analysis	9320		1	316539	07/07/17 14:30	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	318131	07/19/17 09:48	RTM	TAL SL

## Client Sample ID: MW17

Lab Sample ID: 310-108269-6

Date Collected: 06/19/17 12:14

Matrix: Ground Water

Date Received: 06/21/17 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			315196	06/26/17 08:54	LDE	TAL SL
Total/NA	Analysis	9315		1	317955	07/18/17 06:33	RTM	TAL SL
Total/NA	Prep	PrecSep_0			315310	06/26/17 09:17	LDE	TAL SL
Total/NA	Analysis	9320		1	316539	07/07/17 14:30	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	318131	07/19/17 09:48	RTM	TAL SL

## Client Sample ID: MW18

Lab Sample ID: 310-108269-7

Date Collected: 06/19/17 08:16

Matrix: Ground Water

Date Received: 06/21/17 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			315196	06/26/17 08:54	LDE	TAL SL
Total/NA	Analysis	9315		1	317955	07/18/17 06:33	RTM	TAL SL
Total/NA	Prep	PrecSep_0			315310	06/26/17 09:17	LDE	TAL SL
Total/NA	Analysis	9320		1	316538	07/07/17 14:35	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	318131	07/19/17 09:48	RTM	TAL SL

## Client Sample ID: MW19

Lab Sample ID: 310-108269-8

Date Collected: 06/19/17 08:54

Matrix: Ground Water

Date Received: 06/21/17 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			315196	06/26/17 08:54	LDE	TAL SL
Total/NA	Analysis	9315		1	317955	07/18/17 06:34	RTM	TAL SL
Total/NA	Prep	PrecSep_0			315310	06/26/17 09:17	LDE	TAL SL
Total/NA	Analysis	9320		1	316538	07/07/17 14:35	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: North Omaha Station CCR

TestAmerica Job ID: 310-108269-2

**Client Sample ID: DUP-1**

**Lab Sample ID: 310-108269-9**

**Date Collected: 06/19/17 11:02**

**Matrix: Ground Water**

**Date Received: 06/21/17 09:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			315196	06/26/17 08:54	LDE	TAL SL
Total/NA	Analysis	9315		1	317955	07/18/17 06:34	RTM	TAL SL
Total/NA	Prep	PrecSep_0			315310	06/26/17 09:17	LDE	TAL SL
Total/NA	Analysis	9320		1	316539	07/07/17 14:30	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: North Omaha Station CCR

TestAmerica Job ID: 310-108269-2

### 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: North Omaha Station CCR

TestAmerica Job ID: 310-108269-2

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







## Cooler/Sample Receipt and Temperature Log Form

<b>Client Information</b>			
Client: <u>Omaha Public Power District</u>			
City/State: <u>Omaha NE</u>		Project: <u>North Omaha Station</u>	
<b>Receipt Information</b>			
Date/Time Received: <u>6-21-17 935</u>		Received By: <u>KP</u>	
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____			
<b>Condition of Cooler/Containers</b>			
Sample(s) received in Cooler?		If yes: Cooler ID: <u>1813</u>	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Multiple Coolers?		If yes: Cooler # <u>1</u> of <u>2</u>	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Cooler Custody Seals Present?		If yes: Cooler custody seals intact?	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Sample Custody Seals Present?		If yes: Sample custody seals intact?	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank Present?		If yes: Which VOA samples are in cooler? ↓	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
<b>Temperature Record</b>			
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE			
Thermometer ID: <u>H</u>		Correction Factor (°C): <u>+0.0</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>4.2</u>		Corrected Temp (°C): <u>4.2</u>	
• Sample Container Temperature			
Sample ID(s) & bottle type used:		CONTAINER 1 CONTAINER 2	
Uncorrected Temp (°C):		Corrected Temp (°C):	
TEMP 1 TEMP 2		TEMP 1 TEMP 2	
<b>Exceptions Noted</b>			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No			
a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
<b>Additional Comments</b>			
<u>MW 15, 17, 18, 19, Dupl</u>			

Place COC scanning label here

**Cooler/Sample Receipt and Temperature Log Form**

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<b>Client Information</b>	
Client: <u>Omaha Public Power District</u>	
City/State: <u>Omaha NE</u>	Project: <u>North Omaha Station</u> <i>CR</i>
<b>Receipt Information</b>	
Date/Time Received: <u>6-21-17 9:35</u>	Received By: <u>KP</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID: <u>CF 117</u>
Multiple Coolers? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>2</u> of <u>2</u>
Cooler Custody Seals Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Trip Blank Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓
<b>Temperature Record</b>	
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE	
Thermometer ID: <u>H</u>	Correction Factor (°C): <u>+0.0</u>
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature	
Uncorrected Temp (°C): <u>2.1</u>	Corrected Temp (°C): <u>2.1</u>
• Sample Container Temperature	
Sample ID(s) & bottle type used: <u>CONTAINER 1</u>	<u>CONTAINER 2</u>
Uncorrected Temp (°C): <u>TEMP 1</u> <u>TEMP 2</u>	Corrected Temp (°C): <u>TEMP 1</u> <u>TEMP 2</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	
<u>Received 1 empty set of bottles</u>	
<u>AW 16, 2, 13, 9</u>	



**Chain of Custody Record**

<b>Client Information</b> Client Contact: Brad Sojka Phone: 402-636-2515 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: North Omaha Station CCR Site:		Lab PM: Hayes, Shawn M E-Mail: shawn.hayes@testamericainc.com Carrier Tracking No(s): Lab No: Page: Job #:	
Due Date Requested: TAT Requested (days): PO #: WO #: TestAmerica Project #: 31007560 SSOW#:		Analysis Requested 2540C TDS, 9056A Chloride, Fluoride, Sulfate 6010C Lithium, 6020A CCR List, 7470A Mercury 9315_Raz26, 9320_Raz28, Combined Raz26 and Raz28 Perform MS/MSD (Yes or No) Field Filtered Sample (Yes or No)	
Sample Identification MW2 MW5 MW6 MW8 MW9 MW13 MW15 MW16 MW17 MW18 MW19		Sample Date 6/14/17 Sample Time 1026 0927 1100 1130 0958 1214 0816 0854	
Matrix (W=water, S=solid, O=water/oil) Preservation Code: G GW G GW G GW G GW G GW G GW G GW G GW G GW G GW		Special Instructions/Note: Total Number of containers 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 - EDTA Other: M - Hexane N - None O - AsNaO2 P - Na2O/S Q - Na2SO3 R - Na2S2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - NCAA W - ph 4-5 Z - other (specify)	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Deliverable Requested: <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological			
Empty Kit Relinquished by:		Date:	
Relinquished by:		Date: 6/20/17	
Relinquished by:		Date: 1000	
Relinquished by:		Date:	
Custody Seals Intact:		Custody Seal No.:	
Relinquished by:		Date/Time:	
Relinquished by:		Date/Time:	
Relinquished by:		Date/Time:	
Cooler Temperature(s) °C and Other Remarks:		Method of Shipment:	







Temperature readings: \_\_\_\_\_

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u> pH	<u>Preservative</u> Added (mls)	<u>Lot #</u>
MW2	310-108269-A-1	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW2	310-108269-C-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-108269-D-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-108269-A-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW9	310-108269-C-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-108269-D-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-108269-A-3	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW13	310-108269-C-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-108269-D-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW15	310-108269-A-4	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW15	310-108269-C-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW15	310-108269-D-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW16	310-108269-A-5	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW16	310-108269-C-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW16	310-108269-D-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW17	310-108269-A-6	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW17	310-108269-C-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW17	310-108269-D-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW18	310-108269-A-7	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW18	310-108269-C-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW18	310-108269-D-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW19	310-108269-A-8	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW19	310-108269-C-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW19	310-108269-D-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-1	310-108269-A-9	Plastic 250ml - with Nitric Acid	<2	_____	_____
DUP-1	310-108269-C-9	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-1	310-108269-D-9	Plastic 1 liter - Nitric Acid	<2	_____	_____

# Chain of Custody Record



<b>Client Information (Sub Contract Lab)</b>		Sampler: Lab PM: Hayes, Shawn M							
Client Contact: Shipping/Receiving		E-Mail: shawn.hayes@testamericainc.com							
Company: TestAmerica Laboratories, Inc.		State of Origin: Nebraska							
Address: 13715 Rider Trail North,		Page: Page 1 of 1							
City: Earth City		Job #: 310-108269-2							
State, Zip: MO, 63045		Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 R - Na2SO3 F - MeOH S - H2SO4 G - Amchlor T - TSP Dodecahydrate H - Ascorbic Acid U - Acetone I - Ice V - MCAA J - DI Water W - pH 4-5 K - EDTA L - EDA Z - other (specify) Other:							
PO #: 314-298-8566(Tel) 314-298-8757(Fax)		Total Number of Containers: 2							
WO #: _____		Special Instructions/Note:							
Project #: 31007560									
Site: 310 OPPD North Omaha Station									
<b>Due Date Requested:</b> 7/20/2017									
<b>TAT Requested (days):</b> _____									
<b>Sample Identification - Client ID (Lab ID)</b>									
Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Swab, Spill, Soil, Tissue, A=MI)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PreSep_21 Standard Target List	9320_Ra228/PreSep_0 Standard Target List	Analysis Requested	
6/19/17	10:26 Central	Water	Water	X	X	X	X		
6/19/17	09:27 Central	Water	Water	X	X	X	X		
6/19/17	11:00 Central	Water	Water	X	X	X	X		
6/19/17	11:30 Central	Water	Water	X	X	X	X		
6/19/17	09:58 Central	Water	Water	X	X	X	X		
6/19/17	12:14 Central	Water	Water	X	X	X	X		
6/19/17	08:16 Central	Water	Water	X	X	X	X		
6/19/17	08:54 Central	Water	Water	X	X	X	X		
6/19/17	11:02 Central	Water	Water	X	X	X	X		
Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our 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 of 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 compliance to TestAmerica Laboratories, Inc.									
<b>Possible Hazard Identification</b>									
Unconfirmed									
Deliverable Requested: I, II, III, IV, Other (specify) _____									
Empty Kit Relinquished by: _____ Date: _____									
Relinquished by: _____ Date: 5/21/17 11:10									
Relinquished by: _____ Date: _____									
Relinquished by: _____ Date: _____									
Custody Seals Intact: _____ Custody Seal No.: _____									
Cooler Temperature(s) °C and Other Remarks: _____									
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements: _____									



## Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-108269-2

**Login Number: 108269**

**List Source: TestAmerica Cedar Falls**

**List Number: 1**

**Creator: Worthy, Ashley L**

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



## Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-108269-2

**Login Number: 108269**

**List Number: 2**

**Creator: Taylor, Kristene N**

**List Source: TestAmerica St. Louis**

**List Creation: 06/22/17 12:33 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.	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: North Omaha Station CCR

TestAmerica Job ID: 310-108269-2

## 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)
310-108269-1	MW2	99.4
310-108269-2	MW9	89.7
310-108269-3	MW13	95.9
310-108269-4	MW15	99.4
310-108269-5	MW16	99.1
310-108269-6	MW17	92.6
310-108269-7	MW18	98.5
310-108269-8	MW19	94.7
310-108269-9	DUP-1	95.3

**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 160-315196/2-A	Lab Control Sample	100
LCSD 160-315196/3-A	Lab Control Sample Dup	98.5
MB 160-315196/1-A	Method Blank	98.8

**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)
310-108269-1	MW2	99.4	89.3
310-108269-2	MW9	89.7	90.1
310-108269-3	MW13	95.9	93.1
310-108269-4	MW15	99.4	93.1
310-108269-5	MW16	99.1	91.2
310-108269-6	MW17	92.6	89.0
310-108269-7	MW18	98.5	92.7
310-108269-8	MW19	94.7	90.1
310-108269-9	DUP-1	95.3	92.3

**Tracer/Carrier Legend**

Ba = Ba Carrier

Y = Y Carrier

# Tracer/Carrier Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-108269-2

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

**Matrix: Water**

**Prep Type: Total/NA**

**Percent Yield (Acceptance Limits)**

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Ba (40-110)</b>	<b>Y (40-110)</b>						
LCS 160-315310/2-A	Lab Control Sample	100	90.8						
LCSD 160-315310/3-A	Lab Control Sample Dup	98.5	92.7						
MB 160-315310/1-A	Method Blank	98.8	88.2						

**Tracer/Carrier Legend**

Ba = Ba Carrier

Y = Y Carrier

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

# 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: 310-111478-1

Client Project/Site: North Omaha Station 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:

8/11/2017 11:42:41 AM

Shawn Hayes, Senior Project Manager

(319)277-2401

[shawn.hayes@testamericainc.com](mailto:shawn.hayes@testamericainc.com)

### LINKS

Review your project  
results through

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Have a Question?



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*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.*

1

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# Case Narrative

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-1

**Job ID: 310-111478-1**

**Laboratory: TestAmerica Cedar Falls**

## Narrative

**Job Narrative**  
**310-111478-1**

## Comments

No additional comments.

## Receipt

The samples were received on 8/4/2017 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 3.8° C and 10.0° C.

## Receipt Exceptions

The following samples were received at the laboratory outside the required temperature criteria: MW2 (310-111478-1), MW9 (310-111478-2), MW16 (310-111478-5), MW18 (310-111478-7) and MW19 (310-111478-8). 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: North Omaha Station CCR

TestAmerica Job ID: 310-111478-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-111478-1	MW2	Ground Water	07/31/17 10:58	08/04/17 09:35
310-111478-2	MW9	Ground Water	07/31/17 09:45	08/04/17 09:35
310-111478-3	MW13	Ground Water	07/31/17 11:58	08/04/17 09:35
310-111478-4	MW15	Ground Water	07/31/17 12:35	08/04/17 09:35
310-111478-5	MW16	Ground Water	07/31/17 10:30	08/04/17 09:35
310-111478-6	MW17	Ground Water	07/31/17 13:30	08/04/17 09:35
310-111478-7	MW18	Ground Water	07/31/17 08:45	08/04/17 09:35
310-111478-8	MW19	Ground Water	07/31/17 09:12	08/04/17 09:35
310-111478-9	DUP-1	Ground Water	07/31/17 08:00	08/04/17 09:35



# Detection Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-1

## Client Sample ID: MW2

## Lab Sample ID: 310-111478-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	24.8		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.583		0.500		mg/L	5		9056A	Total/NA
Sulfate	799		20.0		mg/L	20		9056A	Total/NA
Arsenic	0.217		0.00200		mg/L	1		6020A	Total/NA
Barium	0.117		0.00200		mg/L	1		6020A	Total/NA
Boron	1.81		0.200		mg/L	1		6020A	Total/NA
Calcium	299		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000953		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1850		150		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW9

## Lab Sample ID: 310-111478-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	275		10.0		mg/L	10		9056A	Total/NA
Fluoride	0.617		0.500		mg/L	5		9056A	Total/NA
Sulfate	57.1		5.00		mg/L	5		9056A	Total/NA
Lithium	0.0505		0.0500		mg/L	1		6010C	Total/NA
Arsenic	0.00662		0.00200		mg/L	1		6020A	Total/NA
Barium	0.624		0.00200		mg/L	1		6020A	Total/NA
Calcium	190		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.00195		0.000500		mg/L	1		6020A	Total/NA
Lead	0.00474		0.000500		mg/L	1		6020A	Total/NA
Mercury	0.000220		0.000200		mg/L	1		7470A	Total/NA
Total Dissolved Solids	1180		150		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW13

## Lab Sample ID: 310-111478-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.30		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.587		0.500		mg/L	5		9056A	Total/NA
Sulfate	512		20.0		mg/L	20		9056A	Total/NA
Arsenic	0.274		0.00200		mg/L	1		6020A	Total/NA
Barium	0.112		0.00200		mg/L	1		6020A	Total/NA
Boron	2.26		0.200		mg/L	1		6020A	Total/NA
Calcium	133		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.839		0.00200		mg/L	1		6020A	Total/NA
Selenium	0.0233		0.00500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1150		60.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW15

## Lab Sample ID: 310-111478-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	11.4		5.00		mg/L	5		9056A	Total/NA
Sulfate	641		20.0		mg/L	20		9056A	Total/NA
Antimony	0.00131		0.00100		mg/L	1		6020A	Total/NA
Barium	0.0467		0.00200		mg/L	1		6020A	Total/NA
Boron	3.01		0.200		mg/L	1		6020A	Total/NA
Calcium	247		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.264		0.00200		mg/L	1		6020A	Total/NA
Selenium	0.0699		0.00500		mg/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Cedar Falls

# Detection Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-1

## Client Sample ID: MW15 (Continued)

Lab Sample ID: 310-111478-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	1140		60.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW16

Lab Sample ID: 310-111478-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	57.9		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.528		0.500		mg/L	5		9056A	Total/NA
Sulfate	352		20.0		mg/L	20		9056A	Total/NA
Barium	0.0722		0.00200		mg/L	1		6020A	Total/NA
Boron	0.423		0.200		mg/L	1		6020A	Total/NA
Calcium	200		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.000519		0.000500		mg/L	1		6020A	Total/NA
Molybdenum	0.0185		0.00200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1200		60.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW17

Lab Sample ID: 310-111478-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	44.4		5.00		mg/L	5		9056A	Total/NA
Sulfate	913		20.0		mg/L	20		9056A	Total/NA
Lithium	0.109		0.0500		mg/L	1		6010C	Total/NA
Arsenic	0.0159		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0373		0.00200		mg/L	1		6020A	Total/NA
Boron	0.753		0.200		mg/L	1		6020A	Total/NA
Calcium	365		0.200		mg/L	1		6020A	Total/NA
Cobalt	0.0123		0.000500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	2300		150		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW18

Lab Sample ID: 310-111478-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.632		0.500		mg/L	5		9056A	Total/NA
Barium	0.309		0.00200		mg/L	1		6020A	Total/NA
Calcium	98.8		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	468		30.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW19

Lab Sample ID: 310-111478-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.693		0.500		mg/L	5		9056A	Total/NA
Sulfate	8.35		5.00		mg/L	5		9056A	Total/NA
Barium	0.296		0.00200		mg/L	1		6020A	Total/NA
Calcium	105		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	480		30.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: DUP-1

Lab Sample ID: 310-111478-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	12.7		5.00		mg/L	5		9056A	Total/NA
Sulfate	633		20.0		mg/L	20		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Cedar Falls



# Detection Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-1

**Client Sample ID: DUP-1 (Continued)**

**Lab Sample ID: 310-111478-9**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.00125		0.00100		mg/L	1		6020A	Total/NA
Barium	0.0435		0.00200		mg/L	1		6020A	Total/NA
Boron	2.80		0.200		mg/L	1		6020A	Total/NA
Calcium	235		0.200		mg/L	1		6020A	Total/NA
Molybdenum	0.249		0.00200		mg/L	1		6020A	Total/NA
Selenium	0.0655		0.00500		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1180		60.0		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Cedar Falls

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-1

**Client Sample ID: MW2**  
**Date Collected: 07/31/17 10:58**  
**Date Received: 08/04/17 09:35**

**Lab Sample ID: 310-111478-1**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24.8		5.00		mg/L			08/08/17 13:58	5
Fluoride	0.583		0.500		mg/L			08/08/17 13:58	5
Sulfate	799		20.0		mg/L			08/08/17 14:13	20

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		08/07/17 10:00	08/07/17 18:06	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		08/07/17 10:00	08/08/17 15:55	1
Arsenic	0.217		0.00200		mg/L		08/07/17 10:00	08/08/17 15:55	1
Barium	0.117		0.00200		mg/L		08/07/17 10:00	08/08/17 15:55	1
Beryllium	<0.00100		0.00100		mg/L		08/07/17 10:00	08/08/17 15:55	1
Boron	1.81		0.200		mg/L		08/07/17 10:00	08/08/17 15:55	1
Cadmium	<0.000500		0.000500		mg/L		08/07/17 10:00	08/08/17 15:55	1
Calcium	299		0.200		mg/L		08/07/17 10:00	08/08/17 15:55	1
Chromium	<0.00500		0.00500		mg/L		08/07/17 10:00	08/08/17 15:55	1
Cobalt	0.000953		0.000500		mg/L		08/07/17 10:00	08/08/17 15:55	1
Lead	<0.000500		0.000500		mg/L		08/07/17 10:00	08/08/17 15:55	1
Molybdenum	<0.00200		0.00200		mg/L		08/07/17 10:00	08/08/17 15:55	1
Selenium	<0.00500		0.00500		mg/L		08/07/17 10:00	08/08/17 15:55	1
Thallium	<0.00100		0.00100		mg/L		08/07/17 10:00	08/08/17 15:55	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		08/09/17 10:49	08/10/17 13:39	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1850		150		mg/L			08/04/17 16:12	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-1

**Client Sample ID: MW9**  
**Date Collected: 07/31/17 09:45**  
**Date Received: 08/04/17 09:35**

**Lab Sample ID: 310-111478-2**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	275		10.0		mg/L			08/08/17 22:17	10
Fluoride	0.617		0.500		mg/L			08/08/17 14:29	5
Sulfate	57.1		5.00		mg/L			08/08/17 14:29	5

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.0505		0.0500		mg/L		08/07/17 10:00	08/07/17 18:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		08/07/17 10:00	08/08/17 15:58	1
Arsenic	0.00662		0.00200		mg/L		08/07/17 10:00	08/08/17 15:58	1
Barium	0.624		0.00200		mg/L		08/07/17 10:00	08/08/17 15:58	1
Beryllium	<0.00100		0.00100		mg/L		08/07/17 10:00	08/08/17 15:58	1
Boron	<0.200		0.200		mg/L		08/07/17 10:00	08/08/17 15:58	1
Cadmium	<0.000500		0.000500		mg/L		08/07/17 10:00	08/08/17 15:58	1
Calcium	190		0.200		mg/L		08/07/17 10:00	08/08/17 15:58	1
Chromium	<0.00500		0.00500		mg/L		08/07/17 10:00	08/08/17 15:58	1
Cobalt	0.00195		0.000500		mg/L		08/07/17 10:00	08/08/17 15:58	1
Lead	0.00474		0.000500		mg/L		08/07/17 10:00	08/08/17 15:58	1
Molybdenum	<0.00200		0.00200		mg/L		08/07/17 10:00	08/08/17 15:58	1
Selenium	<0.00500		0.00500		mg/L		08/07/17 10:00	08/08/17 15:58	1
Thallium	<0.00100		0.00100		mg/L		08/07/17 10:00	08/08/17 15:58	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000220		0.000200		mg/L		08/09/17 10:49	08/10/17 13:41	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1180		150		mg/L			08/04/17 16:12	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-1

**Client Sample ID: MW13**  
**Date Collected: 07/31/17 11:58**  
**Date Received: 08/04/17 09:35**

**Lab Sample ID: 310-111478-3**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.30		5.00		mg/L			08/08/17 22:33	5
Fluoride	0.587		0.500		mg/L			08/08/17 22:33	5
Sulfate	512		20.0		mg/L			08/08/17 22:48	20

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		08/07/17 10:00	08/07/17 18:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		08/07/17 10:00	08/08/17 16:02	1
Arsenic	0.274		0.00200		mg/L		08/07/17 10:00	08/08/17 16:02	1
Barium	0.112		0.00200		mg/L		08/07/17 10:00	08/08/17 16:02	1
Beryllium	<0.00100		0.00100		mg/L		08/07/17 10:00	08/08/17 16:02	1
Boron	2.26		0.200		mg/L		08/07/17 10:00	08/08/17 16:02	1
Cadmium	<0.000500		0.000500		mg/L		08/07/17 10:00	08/08/17 16:02	1
Calcium	133		0.200		mg/L		08/07/17 10:00	08/08/17 16:02	1
Chromium	<0.00500		0.00500		mg/L		08/07/17 10:00	08/08/17 16:02	1
Cobalt	<0.000500		0.000500		mg/L		08/07/17 10:00	08/08/17 16:02	1
Lead	<0.000500		0.000500		mg/L		08/07/17 10:00	08/08/17 16:02	1
Molybdenum	0.839		0.00200		mg/L		08/07/17 10:00	08/08/17 16:02	1
Selenium	0.0233		0.00500		mg/L		08/07/17 10:00	08/08/17 16:02	1
Thallium	<0.00100		0.00100		mg/L		08/07/17 10:00	08/08/17 16:02	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		08/09/17 10:49	08/10/17 13:42	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1150		60.0		mg/L			08/04/17 16:12	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-1

**Client Sample ID: MW15**  
**Date Collected: 07/31/17 12:35**  
**Date Received: 08/04/17 09:35**

**Lab Sample ID: 310-111478-4**  
**Matrix: Ground Water**

**Method: 9056A - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>11.4</b>		5.00		mg/L			08/09/17 07:42	5
Fluoride	<0.500		0.500		mg/L			08/09/17 07:42	5
<b>Sulfate</b>	<b>641</b>		20.0		mg/L			08/09/17 07:57	20

**Method: 6010C - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		08/07/17 10:00	08/07/17 18:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.00131</b>		0.00100		mg/L		08/07/17 10:00	08/08/17 16:05	1
Arsenic	<0.00200		0.00200		mg/L		08/07/17 10:00	08/08/17 16:05	1
<b>Barium</b>	<b>0.0467</b>		0.00200		mg/L		08/07/17 10:00	08/08/17 16:05	1
Beryllium	<0.00100		0.00100		mg/L		08/07/17 10:00	08/08/17 16:05	1
<b>Boron</b>	<b>3.01</b>		0.200		mg/L		08/07/17 10:00	08/08/17 16:05	1
Cadmium	<0.000500		0.000500		mg/L		08/07/17 10:00	08/08/17 16:05	1
<b>Calcium</b>	<b>247</b>		0.200		mg/L		08/07/17 10:00	08/08/17 16:05	1
Chromium	<0.00500		0.00500		mg/L		08/07/17 10:00	08/08/17 16:05	1
Cobalt	<0.000500		0.000500		mg/L		08/07/17 10:00	08/08/17 16:05	1
Lead	<0.000500		0.000500		mg/L		08/07/17 10:00	08/08/17 16:05	1
<b>Molybdenum</b>	<b>0.264</b>		0.00200		mg/L		08/07/17 10:00	08/08/17 16:05	1
<b>Selenium</b>	<b>0.0699</b>		0.00500		mg/L		08/07/17 10:00	08/08/17 16:05	1
Thallium	<0.00100		0.00100		mg/L		08/07/17 10:00	08/08/17 16:05	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		08/09/17 10:49	08/10/17 13:44	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>1140</b>		60.0		mg/L			08/04/17 16:12	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-1

**Client Sample ID: MW16**  
**Date Collected: 07/31/17 10:30**  
**Date Received: 08/04/17 09:35**

**Lab Sample ID: 310-111478-5**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	57.9		5.00		mg/L			08/08/17 16:08	5
Fluoride	0.528		0.500		mg/L			08/08/17 16:08	5
Sulfate	352		20.0		mg/L			08/08/17 16:23	20

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		08/07/17 10:00	08/07/17 18:15	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		08/07/17 10:00	08/08/17 16:08	1
Arsenic	<0.00200		0.00200		mg/L		08/07/17 10:00	08/08/17 16:08	1
Barium	0.0722		0.00200		mg/L		08/07/17 10:00	08/08/17 16:08	1
Beryllium	<0.00100		0.00100		mg/L		08/07/17 10:00	08/08/17 16:08	1
Boron	0.423		0.200		mg/L		08/07/17 10:00	08/08/17 16:08	1
Cadmium	<0.000500		0.000500		mg/L		08/07/17 10:00	08/08/17 16:08	1
Calcium	200		0.200		mg/L		08/07/17 10:00	08/08/17 16:08	1
Chromium	<0.00500		0.00500		mg/L		08/07/17 10:00	08/08/17 16:08	1
Cobalt	0.000519		0.000500		mg/L		08/07/17 10:00	08/08/17 16:08	1
Lead	<0.000500		0.000500		mg/L		08/07/17 10:00	08/08/17 16:08	1
Molybdenum	0.0185		0.00200		mg/L		08/07/17 10:00	08/08/17 16:08	1
Selenium	<0.00500		0.00500		mg/L		08/07/17 10:00	08/08/17 16:08	1
Thallium	<0.00100		0.00100		mg/L		08/07/17 10:00	08/08/17 16:08	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		08/09/17 10:49	08/10/17 13:45	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1200		60.0		mg/L			08/04/17 16:12	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-1

**Client Sample ID: MW17**  
**Date Collected: 07/31/17 13:30**  
**Date Received: 08/04/17 09:35**

**Lab Sample ID: 310-111478-6**  
**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>44.4</b>		5.00		mg/L			08/08/17 16:38	5
Fluoride	<0.500		0.500		mg/L			08/08/17 16:38	5
<b>Sulfate</b>	<b>913</b>		20.0		mg/L			08/08/17 16:54	20

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Lithium</b>	<b>0.109</b>		0.0500		mg/L		08/07/17 10:00	08/07/17 18:17	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		08/07/17 10:00	08/08/17 16:11	1
<b>Arsenic</b>	<b>0.0159</b>		0.00200		mg/L		08/07/17 10:00	08/08/17 16:11	1
<b>Barium</b>	<b>0.0373</b>		0.00200		mg/L		08/07/17 10:00	08/08/17 16:11	1
Beryllium	<0.00100		0.00100		mg/L		08/07/17 10:00	08/08/17 16:11	1
<b>Boron</b>	<b>0.753</b>		0.200		mg/L		08/07/17 10:00	08/08/17 16:11	1
Cadmium	<0.000500		0.000500		mg/L		08/07/17 10:00	08/08/17 16:11	1
<b>Calcium</b>	<b>365</b>		0.200		mg/L		08/07/17 10:00	08/08/17 16:11	1
Chromium	<0.00500		0.00500		mg/L		08/07/17 10:00	08/08/17 16:11	1
<b>Cobalt</b>	<b>0.0123</b>		0.000500		mg/L		08/07/17 10:00	08/08/17 16:11	1
Lead	<0.000500		0.000500		mg/L		08/07/17 10:00	08/08/17 16:11	1
Molybdenum	<0.00200		0.00200		mg/L		08/07/17 10:00	08/08/17 16:11	1
Selenium	<0.00500		0.00500		mg/L		08/07/17 10:00	08/08/17 16:11	1
Thallium	<0.00100		0.00100		mg/L		08/07/17 10:00	08/08/17 16:11	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		08/09/17 10:49	08/10/17 13:47	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>2300</b>		150		mg/L			08/04/17 16:12	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-1

**Client Sample ID: MW18**

**Date Collected: 07/31/17 08:45**

**Date Received: 08/04/17 09:35**

**Lab Sample ID: 310-111478-7**

**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			08/08/17 17:09	5
<b>Fluoride</b>	<b>0.632</b>		0.500		mg/L			08/08/17 17:09	5
Sulfate	<5.00		5.00		mg/L			08/08/17 17:09	5

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		08/07/17 10:00	08/07/17 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		08/07/17 10:00	08/08/17 16:14	1
Arsenic	<0.00200		0.00200		mg/L		08/07/17 10:00	08/08/17 16:14	1
<b>Barium</b>	<b>0.309</b>		0.00200		mg/L		08/07/17 10:00	08/08/17 16:14	1
Beryllium	<0.00100		0.00100		mg/L		08/07/17 10:00	08/08/17 16:14	1
Boron	<0.200		0.200		mg/L		08/07/17 10:00	08/08/17 16:14	1
Cadmium	<0.000500		0.000500		mg/L		08/07/17 10:00	08/08/17 16:14	1
<b>Calcium</b>	<b>98.8</b>		0.200		mg/L		08/07/17 10:00	08/08/17 16:14	1
Chromium	<0.00500		0.00500		mg/L		08/07/17 10:00	08/08/17 16:14	1
Cobalt	<0.000500		0.000500		mg/L		08/07/17 10:00	08/08/17 16:14	1
Lead	<0.000500		0.000500		mg/L		08/07/17 10:00	08/08/17 16:14	1
Molybdenum	<0.00200		0.00200		mg/L		08/07/17 10:00	08/08/17 16:14	1
Selenium	<0.00500		0.00500		mg/L		08/07/17 10:00	08/08/17 16:14	1
Thallium	<0.00100		0.00100		mg/L		08/07/17 10:00	08/08/17 16:14	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		08/09/17 10:49	08/10/17 13:52	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>468</b>		30.0		mg/L			08/04/17 16:12	1



# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-1

**Client Sample ID: MW19**  
**Date Collected: 07/31/17 09:12**  
**Date Received: 08/04/17 09:35**

**Lab Sample ID: 310-111478-8**  
**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			08/08/17 17:25	5
<b>Fluoride</b>	<b>0.693</b>		0.500		mg/L			08/08/17 17:25	5
<b>Sulfate</b>	<b>8.35</b>		5.00		mg/L			08/08/17 17:25	5

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		08/07/17 10:00	08/07/17 18:28	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		08/07/17 10:00	08/08/17 16:20	1
Arsenic	<0.00200		0.00200		mg/L		08/07/17 10:00	08/08/17 16:20	1
<b>Barium</b>	<b>0.296</b>		0.00200		mg/L		08/07/17 10:00	08/08/17 16:20	1
Beryllium	<0.00100		0.00100		mg/L		08/07/17 10:00	08/08/17 16:20	1
Boron	<0.200		0.200		mg/L		08/07/17 10:00	08/08/17 16:20	1
Cadmium	<0.000500		0.000500		mg/L		08/07/17 10:00	08/08/17 16:20	1
<b>Calcium</b>	<b>105</b>		0.200		mg/L		08/07/17 10:00	08/08/17 16:20	1
Chromium	<0.00500		0.00500		mg/L		08/07/17 10:00	08/08/17 16:20	1
Cobalt	<0.000500		0.000500		mg/L		08/07/17 10:00	08/08/17 16:20	1
Lead	<0.000500		0.000500		mg/L		08/07/17 10:00	08/08/17 16:20	1
Molybdenum	<0.00200		0.00200		mg/L		08/07/17 10:00	08/08/17 16:20	1
Selenium	<0.00500		0.00500		mg/L		08/07/17 10:00	08/08/17 16:20	1
Thallium	<0.00100		0.00100		mg/L		08/07/17 10:00	08/08/17 16:20	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		08/09/17 10:49	08/10/17 13:53	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>480</b>		30.0		mg/L			08/04/17 16:12	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-1

**Client Sample ID: DUP-1**

**Date Collected: 07/31/17 08:00**

**Date Received: 08/04/17 09:35**

**Lab Sample ID: 310-111478-9**

**Matrix: Ground Water**

### Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>12.7</b>		5.00		mg/L			08/08/17 17:40	5
Fluoride	<0.500		0.500		mg/L			08/08/17 17:40	5
<b>Sulfate</b>	<b>633</b>		20.0		mg/L			08/08/17 17:55	20

### Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		08/07/17 10:00	08/07/17 18:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.00125</b>		0.00100		mg/L		08/07/17 10:00	08/08/17 16:23	1
Arsenic	<0.00200		0.00200		mg/L		08/07/17 10:00	08/08/17 16:23	1
<b>Barium</b>	<b>0.0435</b>		0.00200		mg/L		08/07/17 10:00	08/08/17 16:23	1
Beryllium	<0.00100		0.00100		mg/L		08/07/17 10:00	08/08/17 16:23	1
<b>Boron</b>	<b>2.80</b>		0.200		mg/L		08/07/17 10:00	08/08/17 16:23	1
Cadmium	<0.000500		0.000500		mg/L		08/07/17 10:00	08/08/17 16:23	1
<b>Calcium</b>	<b>235</b>		0.200		mg/L		08/07/17 10:00	08/08/17 16:23	1
Chromium	<0.00500		0.00500		mg/L		08/07/17 10:00	08/08/17 16:23	1
Cobalt	<0.000500		0.000500		mg/L		08/07/17 10:00	08/08/17 16:23	1
Lead	<0.000500		0.000500		mg/L		08/07/17 10:00	08/08/17 16:23	1
<b>Molybdenum</b>	<b>0.249</b>		0.00200		mg/L		08/07/17 10:00	08/08/17 16:23	1
<b>Selenium</b>	<b>0.0655</b>		0.00500		mg/L		08/07/17 10:00	08/08/17 16:23	1
Thallium	<0.00100		0.00100		mg/L		08/07/17 10:00	08/08/17 16:23	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		08/09/17 10:49	08/10/17 13:55	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>1180</b>		60.0		mg/L			08/04/17 16:12	1

# Definitions/Glossary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-1

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)

# QC Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-1

## Method: 9056A - Anions, Ion Chromatography

**Lab Sample ID: MB 310-175025/3**  
**Matrix: Water**  
**Analysis Batch: 175025**

**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			08/08/17 13:12	1
Fluoride	<0.100		0.100		mg/L			08/08/17 13:12	1
Sulfate	<1.00		1.00		mg/L			08/08/17 13:12	1

**Lab Sample ID: LCS 310-175025/4**  
**Matrix: Water**  
**Analysis Batch: 175025**

**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	7.953		mg/L		106	90 - 110
Fluoride	1.50	1.577		mg/L		105	90 - 110
Sulfate	7.50	7.427		mg/L		99	90 - 110

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 310-174684/1-A**  
**Matrix: Water**  
**Analysis Batch: 174882**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 174684**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0500		0.0500		mg/L		08/07/17 10:00	08/07/17 17:42	1

**Lab Sample ID: LCS 310-174684/2-A**  
**Matrix: Water**  
**Analysis Batch: 174882**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 174684**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	2.00	1.793		mg/L		90	80 - 120

**Lab Sample ID: 310-111478-6 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 174882**

**Client Sample ID: MW17**  
**Prep Type: Total/NA**  
**Prep Batch: 174684**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Lithium	0.109		0.1069		mg/L		1	20

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

**Lab Sample ID: MB 310-174685/1-A**  
**Matrix: Water**  
**Analysis Batch: 175009**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 174685**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		08/07/17 10:00	08/08/17 15:14	1
Arsenic	<0.00200		0.00200		mg/L		08/07/17 10:00	08/08/17 15:14	1
Barium	<0.00200		0.00200		mg/L		08/07/17 10:00	08/08/17 15:14	1
Beryllium	<0.00100		0.00100		mg/L		08/07/17 10:00	08/08/17 15:14	1
Boron	<0.200		0.200		mg/L		08/07/17 10:00	08/08/17 15:14	1
Cadmium	<0.000500		0.000500		mg/L		08/07/17 10:00	08/08/17 15:14	1

TestAmerica Cedar Falls

# QC Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-1

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

**Lab Sample ID: MB 310-174685/1-A**  
**Matrix: Water**  
**Analysis Batch: 175009**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 174685**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	<0.200		0.200		mg/L		08/07/17 10:00	08/08/17 15:14	1
Chromium	<0.00500		0.00500		mg/L		08/07/17 10:00	08/08/17 15:14	1
Cobalt	<0.000500		0.000500		mg/L		08/07/17 10:00	08/08/17 15:14	1
Lead	<0.000500		0.000500		mg/L		08/07/17 10:00	08/08/17 15:14	1
Molybdenum	<0.00200		0.00200		mg/L		08/07/17 10:00	08/08/17 15:14	1
Selenium	<0.00500		0.00500		mg/L		08/07/17 10:00	08/08/17 15:14	1
Thallium	<0.00100		0.00100		mg/L		08/07/17 10:00	08/08/17 15:14	1

**Lab Sample ID: LCS 310-174685/2-A**  
**Matrix: Water**  
**Analysis Batch: 175009**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 174685**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0200	0.02014		mg/L		101	80 - 120
Arsenic	0.0400	0.03924		mg/L		98	80 - 120
Barium	0.0400	0.04287		mg/L		107	80 - 120
Beryllium	0.0200	0.02226		mg/L		111	80 - 120
Boron	0.880	0.8940		mg/L		102	80 - 120
Cadmium	0.0200	0.02115		mg/L		106	80 - 120
Calcium	2.00	2.145		mg/L		107	80 - 120
Chromium	0.0400	0.04224		mg/L		106	80 - 120
Cobalt	0.0200	0.02081		mg/L		104	80 - 120
Lead	0.0200	0.02091		mg/L		105	80 - 120
Molybdenum	0.0400	0.04045		mg/L		101	80 - 120
Selenium	0.0400	0.04057		mg/L		101	80 - 120
Thallium	0.0160	0.01673		mg/L		105	80 - 120

**Lab Sample ID: 310-111478-7 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 175009**

**Client Sample ID: MW18**  
**Prep Type: Total/NA**  
**Prep Batch: 174685**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Antimony	<0.00100		<0.00100		mg/L		NC	20
Arsenic	<0.00200		<0.00200		mg/L		NC	20
Barium	0.309		0.3061		mg/L		0.8	20
Beryllium	<0.00100		<0.00100		mg/L		NC	20
Boron	<0.200		<0.200		mg/L		NC	20
Cadmium	<0.000500		<0.000500		mg/L		NC	20
Calcium	98.8		99.05		mg/L		0.2	20
Chromium	<0.00500		<0.00500		mg/L		NC	20
Cobalt	<0.000500		<0.000500		mg/L		NC	20
Lead	<0.000500		<0.000500		mg/L		NC	20
Molybdenum	<0.00200		<0.00200		mg/L		NC	20
Selenium	<0.00500		<0.00500		mg/L		NC	20
Thallium	<0.00100		<0.00100		mg/L		NC	20

TestAmerica Cedar Falls

# QC Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-1

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 310-175056/1-A**  
**Matrix: Water**  
**Analysis Batch: 175233**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 175056**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		08/09/17 10:49	08/10/17 13:28	1

**Lab Sample ID: LCS 310-175056/2-A**  
**Matrix: Water**  
**Analysis Batch: 175233**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 175056**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00167	0.001639		mg/L		98	80 - 120

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

**Lab Sample ID: MB 310-174699/1**  
**Matrix: Water**  
**Analysis Batch: 174699**

**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			08/04/17 16:12	1

**Lab Sample ID: LCS 310-174699/2**  
**Matrix: Water**  
**Analysis Batch: 174699**

**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	988.0		mg/L		99	90 - 110

**Lab Sample ID: 310-111478-1 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 174699**

**Client Sample ID: MW2**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	1850		2090		mg/L		12	24

# QC Association Summary

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-1

## HPLC/IC

### Analysis Batch: 175025

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-111478-1	MW2	Total/NA	Ground Water	9056A	
310-111478-1	MW2	Total/NA	Ground Water	9056A	
310-111478-2	MW9	Total/NA	Ground Water	9056A	
310-111478-2	MW9	Total/NA	Ground Water	9056A	
310-111478-3	MW13	Total/NA	Ground Water	9056A	
310-111478-3	MW13	Total/NA	Ground Water	9056A	
310-111478-4	MW15	Total/NA	Ground Water	9056A	
310-111478-4	MW15	Total/NA	Ground Water	9056A	
310-111478-5	MW16	Total/NA	Ground Water	9056A	
310-111478-5	MW16	Total/NA	Ground Water	9056A	
310-111478-6	MW17	Total/NA	Ground Water	9056A	
310-111478-6	MW17	Total/NA	Ground Water	9056A	
310-111478-7	MW18	Total/NA	Ground Water	9056A	
310-111478-8	MW19	Total/NA	Ground Water	9056A	
310-111478-9	DUP-1	Total/NA	Ground Water	9056A	
310-111478-9	DUP-1	Total/NA	Ground Water	9056A	
MB 310-175025/3	Method Blank	Total/NA	Water	9056A	
LCS 310-175025/4	Lab Control Sample	Total/NA	Water	9056A	

## Metals

### Prep Batch: 174684

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-111478-1	MW2	Total/NA	Ground Water	3010A	
310-111478-2	MW9	Total/NA	Ground Water	3010A	
310-111478-3	MW13	Total/NA	Ground Water	3010A	
310-111478-4	MW15	Total/NA	Ground Water	3010A	
310-111478-5	MW16	Total/NA	Ground Water	3010A	
310-111478-6	MW17	Total/NA	Ground Water	3010A	
310-111478-7	MW18	Total/NA	Ground Water	3010A	
310-111478-8	MW19	Total/NA	Ground Water	3010A	
310-111478-9	DUP-1	Total/NA	Ground Water	3010A	
MB 310-174684/1-A	Method Blank	Total/NA	Water	3010A	
LCS 310-174684/2-A	Lab Control Sample	Total/NA	Water	3010A	
310-111478-6 DU	MW17	Total/NA	Ground Water	3010A	

### Prep Batch: 174685

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-111478-1	MW2	Total/NA	Ground Water	3010A	
310-111478-2	MW9	Total/NA	Ground Water	3010A	
310-111478-3	MW13	Total/NA	Ground Water	3010A	
310-111478-4	MW15	Total/NA	Ground Water	3010A	
310-111478-5	MW16	Total/NA	Ground Water	3010A	
310-111478-6	MW17	Total/NA	Ground Water	3010A	
310-111478-7	MW18	Total/NA	Ground Water	3010A	
310-111478-8	MW19	Total/NA	Ground Water	3010A	
310-111478-9	DUP-1	Total/NA	Ground Water	3010A	
MB 310-174685/1-A	Method Blank	Total/NA	Water	3010A	
LCS 310-174685/2-A	Lab Control Sample	Total/NA	Water	3010A	
310-111478-7 DU	MW18	Total/NA	Ground Water	3010A	

TestAmerica Cedar Falls

# QC Association Summary

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-1

## Metals (Continued)

### Analysis Batch: 174882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-111478-1	MW2	Total/NA	Ground Water	6010C	174684
310-111478-2	MW9	Total/NA	Ground Water	6010C	174684
310-111478-3	MW13	Total/NA	Ground Water	6010C	174684
310-111478-4	MW15	Total/NA	Ground Water	6010C	174684
310-111478-5	MW16	Total/NA	Ground Water	6010C	174684
310-111478-6	MW17	Total/NA	Ground Water	6010C	174684
310-111478-7	MW18	Total/NA	Ground Water	6010C	174684
310-111478-8	MW19	Total/NA	Ground Water	6010C	174684
310-111478-9	DUP-1	Total/NA	Ground Water	6010C	174684
MB 310-174684/1-A	Method Blank	Total/NA	Water	6010C	174684
LCS 310-174684/2-A	Lab Control Sample	Total/NA	Water	6010C	174684
310-111478-6 DU	MW17	Total/NA	Ground Water	6010C	174684

### Analysis Batch: 175009

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-111478-1	MW2	Total/NA	Ground Water	6020A	174685
310-111478-2	MW9	Total/NA	Ground Water	6020A	174685
310-111478-3	MW13	Total/NA	Ground Water	6020A	174685
310-111478-4	MW15	Total/NA	Ground Water	6020A	174685
310-111478-5	MW16	Total/NA	Ground Water	6020A	174685
310-111478-6	MW17	Total/NA	Ground Water	6020A	174685
310-111478-7	MW18	Total/NA	Ground Water	6020A	174685
310-111478-8	MW19	Total/NA	Ground Water	6020A	174685
310-111478-9	DUP-1	Total/NA	Ground Water	6020A	174685
MB 310-174685/1-A	Method Blank	Total/NA	Water	6020A	174685
LCS 310-174685/2-A	Lab Control Sample	Total/NA	Water	6020A	174685
310-111478-7 DU	MW18	Total/NA	Ground Water	6020A	174685

### Prep Batch: 175056

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-111478-1	MW2	Total/NA	Ground Water	7470A	
310-111478-2	MW9	Total/NA	Ground Water	7470A	
310-111478-3	MW13	Total/NA	Ground Water	7470A	
310-111478-4	MW15	Total/NA	Ground Water	7470A	
310-111478-5	MW16	Total/NA	Ground Water	7470A	
310-111478-6	MW17	Total/NA	Ground Water	7470A	
310-111478-7	MW18	Total/NA	Ground Water	7470A	
310-111478-8	MW19	Total/NA	Ground Water	7470A	
310-111478-9	DUP-1	Total/NA	Ground Water	7470A	
MB 310-175056/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-175056/2-A	Lab Control Sample	Total/NA	Water	7470A	

### Analysis Batch: 175233

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-111478-1	MW2	Total/NA	Ground Water	7470A	175056
310-111478-2	MW9	Total/NA	Ground Water	7470A	175056
310-111478-3	MW13	Total/NA	Ground Water	7470A	175056
310-111478-4	MW15	Total/NA	Ground Water	7470A	175056
310-111478-5	MW16	Total/NA	Ground Water	7470A	175056
310-111478-6	MW17	Total/NA	Ground Water	7470A	175056
310-111478-7	MW18	Total/NA	Ground Water	7470A	175056

TestAmerica Cedar Falls



# QC Association Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-1

## Metals (Continued)

### Analysis Batch: 175233 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-111478-8	MW19	Total/NA	Ground Water	7470A	175056
310-111478-9	DUP-1	Total/NA	Ground Water	7470A	175056
MB 310-175056/1-A	Method Blank	Total/NA	Water	7470A	175056
LCS 310-175056/2-A	Lab Control Sample	Total/NA	Water	7470A	175056

## General Chemistry

### Analysis Batch: 174699

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-111478-1	MW2	Total/NA	Ground Water	SM 2540C	
310-111478-2	MW9	Total/NA	Ground Water	SM 2540C	
310-111478-3	MW13	Total/NA	Ground Water	SM 2540C	
310-111478-4	MW15	Total/NA	Ground Water	SM 2540C	
310-111478-5	MW16	Total/NA	Ground Water	SM 2540C	
310-111478-6	MW17	Total/NA	Ground Water	SM 2540C	
310-111478-7	MW18	Total/NA	Ground Water	SM 2540C	
310-111478-8	MW19	Total/NA	Ground Water	SM 2540C	
310-111478-9	DUP-1	Total/NA	Ground Water	SM 2540C	
MB 310-174699/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-174699/2	Lab Control Sample	Total/NA	Water	SM 2540C	
310-111478-1 DU	MW2	Total/NA	Ground Water	SM 2540C	

# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-1

**Client Sample ID: MW2**  
**Date Collected: 07/31/17 10:58**  
**Date Received: 08/04/17 09:35**

**Lab Sample ID: 310-111478-1**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	175025	08/08/17 13:58	SAD	TAL CF
Total/NA	Analysis	9056A		20	175025	08/08/17 14:13	SAD	TAL CF
Total/NA	Prep	3010A			174684	08/07/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	174882	08/07/17 18:06	OAD	TAL CF
Total/NA	Prep	3010A			174685	08/07/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	175009	08/08/17 15:55	OAD	TAL CF
Total/NA	Prep	7470A			175056	08/09/17 10:49	MEG	TAL CF
Total/NA	Analysis	7470A		1	175233	08/10/17 13:39	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	174699	08/04/17 16:12	MDK	TAL CF

**Client Sample ID: MW9**  
**Date Collected: 07/31/17 09:45**  
**Date Received: 08/04/17 09:35**

**Lab Sample ID: 310-111478-2**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	175025	08/08/17 14:29	SAD	TAL CF
Total/NA	Analysis	9056A		10	175025	08/08/17 22:17	SAD	TAL CF
Total/NA	Prep	3010A			174684	08/07/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	174882	08/07/17 18:08	OAD	TAL CF
Total/NA	Prep	3010A			174685	08/07/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	175009	08/08/17 15:58	OAD	TAL CF
Total/NA	Prep	7470A			175056	08/09/17 10:49	MEG	TAL CF
Total/NA	Analysis	7470A		1	175233	08/10/17 13:41	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	174699	08/04/17 16:12	MDK	TAL CF

**Client Sample ID: MW13**  
**Date Collected: 07/31/17 11:58**  
**Date Received: 08/04/17 09:35**

**Lab Sample ID: 310-111478-3**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	175025	08/08/17 22:33	SAD	TAL CF
Total/NA	Analysis	9056A		20	175025	08/08/17 22:48	SAD	TAL CF
Total/NA	Prep	3010A			174684	08/07/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	174882	08/07/17 18:10	OAD	TAL CF
Total/NA	Prep	3010A			174685	08/07/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	175009	08/08/17 16:02	OAD	TAL CF
Total/NA	Prep	7470A			175056	08/09/17 10:49	MEG	TAL CF
Total/NA	Analysis	7470A		1	175233	08/10/17 13:42	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	174699	08/04/17 16:12	MDK	TAL CF

# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-1

**Client Sample ID: MW15**

**Date Collected: 07/31/17 12:35**

**Date Received: 08/04/17 09:35**

**Lab Sample ID: 310-111478-4**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	175025	08/09/17 07:42	SAD	TAL CF
Total/NA	Analysis	9056A		20	175025	08/09/17 07:57	SAD	TAL CF
Total/NA	Prep	3010A			174684	08/07/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	174882	08/07/17 18:13	OAD	TAL CF
Total/NA	Prep	3010A			174685	08/07/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	175009	08/08/17 16:05	OAD	TAL CF
Total/NA	Prep	7470A			175056	08/09/17 10:49	MEG	TAL CF
Total/NA	Analysis	7470A		1	175233	08/10/17 13:44	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	174699	08/04/17 16:12	MDK	TAL CF

**Client Sample ID: MW16**

**Date Collected: 07/31/17 10:30**

**Date Received: 08/04/17 09:35**

**Lab Sample ID: 310-111478-5**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	175025	08/08/17 16:08	SAD	TAL CF
Total/NA	Analysis	9056A		20	175025	08/08/17 16:23	SAD	TAL CF
Total/NA	Prep	3010A			174684	08/07/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	174882	08/07/17 18:15	OAD	TAL CF
Total/NA	Prep	3010A			174685	08/07/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	175009	08/08/17 16:08	OAD	TAL CF
Total/NA	Prep	7470A			175056	08/09/17 10:49	MEG	TAL CF
Total/NA	Analysis	7470A		1	175233	08/10/17 13:45	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	174699	08/04/17 16:12	MDK	TAL CF

**Client Sample ID: MW17**

**Date Collected: 07/31/17 13:30**

**Date Received: 08/04/17 09:35**

**Lab Sample ID: 310-111478-6**

**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	175025	08/08/17 16:38	SAD	TAL CF
Total/NA	Analysis	9056A		20	175025	08/08/17 16:54	SAD	TAL CF
Total/NA	Prep	3010A			174684	08/07/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	174882	08/07/17 18:17	OAD	TAL CF
Total/NA	Prep	3010A			174685	08/07/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	175009	08/08/17 16:11	OAD	TAL CF
Total/NA	Prep	7470A			175056	08/09/17 10:49	MEG	TAL CF
Total/NA	Analysis	7470A		1	175233	08/10/17 13:47	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	174699	08/04/17 16:12	MDK	TAL CF

TestAmerica Cedar Falls

# Lab Chronicle

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-1

**Client Sample ID: MW18**  
**Date Collected: 07/31/17 08:45**  
**Date Received: 08/04/17 09:35**

**Lab Sample ID: 310-111478-7**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	175025	08/08/17 17:09	SAD	TAL CF
Total/NA	Prep	3010A			174684	08/07/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	174882	08/07/17 18:25	OAD	TAL CF
Total/NA	Prep	3010A			174685	08/07/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	175009	08/08/17 16:14	OAD	TAL CF
Total/NA	Prep	7470A			175056	08/09/17 10:49	MEG	TAL CF
Total/NA	Analysis	7470A		1	175233	08/10/17 13:52	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	174699	08/04/17 16:12	MDK	TAL CF

**Client Sample ID: MW19**  
**Date Collected: 07/31/17 09:12**  
**Date Received: 08/04/17 09:35**

**Lab Sample ID: 310-111478-8**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	175025	08/08/17 17:25	SAD	TAL CF
Total/NA	Prep	3010A			174684	08/07/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	174882	08/07/17 18:28	OAD	TAL CF
Total/NA	Prep	3010A			174685	08/07/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	175009	08/08/17 16:20	OAD	TAL CF
Total/NA	Prep	7470A			175056	08/09/17 10:49	MEG	TAL CF
Total/NA	Analysis	7470A		1	175233	08/10/17 13:53	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	174699	08/04/17 16:12	MDK	TAL CF

**Client Sample ID: DUP-1**  
**Date Collected: 07/31/17 08:00**  
**Date Received: 08/04/17 09:35**

**Lab Sample ID: 310-111478-9**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	175025	08/08/17 17:40	SAD	TAL CF
Total/NA	Analysis	9056A		20	175025	08/08/17 17:55	SAD	TAL CF
Total/NA	Prep	3010A			174684	08/07/17 10:00	JNR	TAL CF
Total/NA	Analysis	6010C		1	174882	08/07/17 18:30	OAD	TAL CF
Total/NA	Prep	3010A			174685	08/07/17 10:00	JNR	TAL CF
Total/NA	Analysis	6020A		1	175009	08/08/17 16:23	OAD	TAL CF
Total/NA	Prep	7470A			175056	08/09/17 10:49	MEG	TAL CF
Total/NA	Analysis	7470A		1	175233	08/10/17 13:55	MEG	TAL CF
Total/NA	Analysis	SM 2540C		1	174699	08/04/17 16:12	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: North Omaha Station CCR

TestAmerica Job ID: 310-111478-1

## 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: North Omaha Station CCR

TestAmerica Job ID: 310-111478-1

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







## Cooler/Sample Receipt and Temperature Log Form

<b>Client Information</b>	
Client: <u>Omaha Public Power District</u>	
City/State: <u>Omaha NE</u>	Project: <u>North Omaha Station CCR</u>
<b>Receipt Information</b>	
Date/Time Received: <u>8-4-17 9:35</u>	Received By: <u>KJP</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: Cooler ID: _____
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: Cooler # <u>1</u> of <u>2</u>
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes: Which VOA samples are in cooler? ↓
<b>Temperature Record</b>	
Coolant: <input type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input checked="" type="checkbox"/> Other: <u>Melted ice</u> <input type="checkbox"/> NONE	
Thermometer ID: <u>G</u>	Correction Factor (°C): <u>-0.1</u>
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature	
Uncorrected Temp (°C): <u>10.3</u>	Corrected Temp (°C): <u>10.2</u>
• Sample Container Temperature	
Sample ID(s) & bottle type used: <u>CONTAINER 1 PIC HNO<sub>3</sub> Dup-1 CONTAINER 2</u>	
Uncorrected Temp (°C): <u>TEMP 1 3.9 TEMP 2</u>	Corrected Temp (°C): <u>TEMP 1 3.8 TEMP 2</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	

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## Cooler/Sample Receipt and Temperature Log Form

<b>Client Information</b>	
Client: <u>Omaha Public Power District</u>	
City/State: <u>Omaha NE</u>	Project: <u>North Omaha Station CCR</u>
<b>Receipt Information</b>	
Date/Time Received: <u>8-4-17 9:35</u>	Received By: <u>HP</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID: <u>CC-02</u>
Multiple Coolers? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>2</u> of <u>2</u>
Cooler Custody Seals Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓
<b>Temperature Record</b>	
Coolant: <input type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input checked="" type="checkbox"/> Other: <u>melted ice</u> <input type="checkbox"/> NONE	
Thermometer ID: <u>6</u>	Correction Factor (°C): <u>-0.1</u>
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature	
Uncorrected Temp (°C): <u>10.8</u>	Corrected Temp (°C): <u>10.7</u>
• Sample Container Temperature	
Sample ID(s) & bottle type used: <u>CONTAINER 1: PI 250 HNO<sub>3</sub> MW18</u> <u>CONTAINER 2: PI 1L HNO<sub>3</sub> MW16</u>	
Uncorrected Temp (°C): <u>TEMP 1: 10.8</u> <u>TEMP 2: 10.1</u>	Corrected Temp (°C): <u>TEMP 1: 10.7</u> <u>TEMP 2: 10.0</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	
<u>MW2, MW18, MW16, MW19, MW9</u>	

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**Chain of Custody Record**

<b>Client Information</b>		Sampler: <u>Brad Sojka</u>		Lab PM: <u>Hayes, Shawn M</u>	
Client Contact: <u>Brad Sojka</u>		Phone: <u>402-636-2515</u>		E-Mail: <u>shawn.hayes@testamericainc.com</u>	
Company: <u>Omaha Public Power District</u>		Carrier Tracking No(s):			
Address: <u>444 South 16th Street Mall 9E/EP1</u>		<b>Analysis Requested</b>			
City: <u>Omaha</u>					
State, Zip: <u>NE, 68102-2247</u>					
Phone: <u>402-636-2515(Tel)</u>					
Email: <u>bsojka@oppd.com</u>					
Project Name: <u>North Omaha Station CCR</u>					
Site: <u></u>					
Due Date Requested:					
TAT Requested (days):					
PO #:					
WO #:					
TestAmerica Project #:					
31007560					
SSOW#:					
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Other)	Preservation Code: (B-T-T, A-A)
MW2	7/31/17	1058	G	GW	GW
MW9		0945	G	GW	GW
MW13		1158	G	GW	GW
MW15		1235	G	GW	GW
MW16		1030	G	GW	GW
MW17		1330	G	GW	GW
MW18		0845	G	GW	GW
MW19		0912	G	GW	GW
DUP-1		0800	G	GW	GW
Field Filtered Sample (Yes or No)					
Perform MS/MSD (Yes or No)					
9315_Ra226, 9320_Ra228, Combined Ra226 and Ra228		X X X X X X			
6010C Lithium, 6020A CCR List, 7470A Mercury		X X X X X X			
2540C TDS, 9056A Chloride, Fluoride, Sulfate		X X X X X X			
Total Number of Containers					
Special Instructions/Note:					
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 - EDTA Other:			
M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecalhydrate U - Acetone V - MCAA W - ph 4-5 Z - other (specify)					
<b>Possible Hazard Identification</b> <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological					
Deliverable Requested: I, II, III, IV, Other (specify)					
Empty Kit Relinquished by:					
Relinquished by: <u>[Signature]</u>		Date: <u>8/2/17</u>		Company: <u>1000</u>	
Relinquished by:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Company:	
Custody Seals Intact:		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	
Δ Yes Δ No					



Temperature readings: \_\_\_\_\_

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container pH</u>	<u>Preservative Added (mls)</u>	<u>Lot #</u>
MW2	310-111478-A-1	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW2	310-111478-C-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-111478-D-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-111478-A-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW9	310-111478-C-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-111478-D-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-111478-A-3	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW13	310-111478-C-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-111478-D-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW15	310-111478-A-4	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW15	310-111478-C-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW15	310-111478-D-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW16	310-111478-A-5	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW16	310-111478-C-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW16	310-111478-D-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW17	310-111478-A-6	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW17	310-111478-C-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW17	310-111478-D-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW18	310-111478-A-7	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW18	310-111478-C-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW18	310-111478-D-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW19	310-111478-A-8	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW19	310-111478-C-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW19	310-111478-D-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-1	310-111478-A-9	Plastic 250ml - with Nitric Acid	<2	_____	_____
DUP-1	310-111478-C-9	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-1	310-111478-D-9	Plastic 1 liter - Nitric Acid	<2	_____	_____

## Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-111478-1

**Login Number: 111478**

**List Source: TestAmerica Cedar Falls**

**List Number: 1**

**Creator: Tuladhar, Sushil X**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	Water present in cooler; indicates evidence of melted ice.
Cooler Temperature is acceptable.	False	Cooler temperature 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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# 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: 310-111478-2

Client Project/Site: North Omaha Station 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:

8/31/2017 4:13:20 PM

Shawn Hayes, Senior Project Manager

(319)277-2401

[shawn.hayes@testamericainc.com](mailto:shawn.hayes@testamericainc.com)

### LINKS

Review your project  
results through

Total Access

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[www.testamericainc.com](http://www.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: North Omaha Station CCR

TestAmerica Job ID: 310-111478-2

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**Job ID: 310-111478-2**

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**Laboratory: TestAmerica Cedar Falls**

## Narrative

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**Job Narrative**  
**310-111478-2**

## Comments

No additional comments.

## Receipt

The samples were received on 8/4/2017 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 3.8° C and 10.0° C.

## RAD

Method(s) PrecSep\_0: Radium 228 Prep Batch 160-321467

The following sample was reduced due to heavy amounts of sediment making sample murky and brown: MW9 (310-111478-2)

Method(s) PrecSep-21: Radium 226 Prep Batch 160-321386

The following sample was reduced due to heavy amounts of sediment making sample murky and brown: MW9 (310-111478-2)

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: North Omaha Station CCR

TestAmerica Job ID: 310-111478-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-111478-1	MW2	Ground Water	07/31/17 10:58	08/04/17 09:35
310-111478-2	MW9	Ground Water	07/31/17 09:45	08/04/17 09:35
310-111478-3	MW13	Ground Water	07/31/17 11:58	08/04/17 09:35
310-111478-4	MW15	Ground Water	07/31/17 12:35	08/04/17 09:35
310-111478-5	MW16	Ground Water	07/31/17 10:30	08/04/17 09:35
310-111478-6	MW17	Ground Water	07/31/17 13:30	08/04/17 09:35
310-111478-7	MW18	Ground Water	07/31/17 08:45	08/04/17 09:35
310-111478-8	MW19	Ground Water	07/31/17 09:12	08/04/17 09:35
310-111478-9	DUP-1	Ground Water	07/31/17 08:00	08/04/17 09:35



# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-2

**Client Sample ID: MW2**

**Lab Sample ID: 310-111478-1**

Date Collected: 07/31/17 10:58

Matrix: Ground Water

Date Received: 08/04/17 09:35

**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		0.0868	0.0899	1.00	0.0707	pCi/L	08/09/17 08:46	08/31/17 07:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					08/09/17 08:46	08/31/17 07:00	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.289		0.186	0.188	1.00	0.281	pCi/L	08/09/17 09:12	08/18/17 14:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					08/09/17 09:12	08/18/17 14:19	1
Y Carrier	89.7		40 - 110					08/09/17 09:12	08/18/17 14:19	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	0.549		0.206	0.209	5.00	0.281	pCi/L		08/31/17 13:19	1



# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-2

**Client Sample ID: MW9**

**Lab Sample ID: 310-111478-2**

Date Collected: 07/31/17 09:45

Matrix: Ground Water

Date Received: 08/04/17 09:35

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.801		0.163	0.178	1.00	0.0862	pCi/L	08/09/17 08:46	08/31/17 07:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					08/09/17 08:46	08/31/17 07:00	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.48		0.465	0.518	1.00	0.511	pCi/L	08/09/17 09:12	08/18/17 14:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					08/09/17 09:12	08/18/17 14:19	1
Y Carrier	80.7		40 - 110					08/09/17 09:12	08/18/17 14:19	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	3.28		0.493	0.548	5.00	0.511	pCi/L		08/31/17 13:19	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-2

**Client Sample ID: MW13**

**Lab Sample ID: 310-111478-3**

**Date Collected: 07/31/17 11:58**

**Matrix: Ground Water**

**Date Received: 08/04/17 09:35**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.196		0.0824	0.0843	1.00	0.0705	pCi/L	08/09/17 08:46	08/31/17 07:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.3		40 - 110					08/09/17 08:46	08/31/17 07:00	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.102	U	0.226	0.226	1.00	0.387	pCi/L	08/09/17 09:12	08/18/17 14:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.3		40 - 110					08/09/17 09:12	08/18/17 14:22	1
Y Carrier	86.0		40 - 110					08/09/17 09:12	08/18/17 14:22	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	0.298	U	0.240	0.241	5.00	0.387	pCi/L		08/31/17 13:19	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-2

**Client Sample ID: MW15**

**Lab Sample ID: 310-111478-4**

Date Collected: 07/31/17 12:35

Matrix: Ground Water

Date Received: 08/04/17 09:35

**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		0.0906	0.0939	1.00	0.0776	pCi/L	08/09/17 08:46	08/31/17 07:00	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	104		40 - 110					08/09/17 08:46	08/31/17 07:00	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.179	U	0.198	0.199	1.00	0.325	pCi/L	08/09/17 09:12	08/18/17 14:22	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	104		40 - 110					08/09/17 09:12	08/18/17 14:22	1
Y Carrier	89.0		40 - 110					08/09/17 09:12	08/18/17 14:22	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	0.455		0.218	0.220	5.00	0.325	pCi/L		08/31/17 13:19	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-2

**Client Sample ID: MW16**

**Lab Sample ID: 310-111478-5**

Date Collected: 07/31/17 10:30

Matrix: Ground Water

Date Received: 08/04/17 09:35

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.483		0.121	0.129	1.00	0.0963	pCi/L	08/09/17 08:46	08/31/17 07:00	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	101		40 - 110					08/09/17 08:46	08/31/17 07:00	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.130	U	0.193	0.193	1.00	0.367	pCi/L	08/09/17 09:12	08/18/17 14:22	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	101		40 - 110					08/09/17 09:12	08/18/17 14:22	1
Y Carrier	86.7		40 - 110					08/09/17 09:12	08/18/17 14:22	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	0.353	U	0.228	0.232	5.00	0.367	pCi/L		08/31/17 13:19	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-2

**Client Sample ID: MW17**

**Lab Sample ID: 310-111478-6**

Date Collected: 07/31/17 13:30

Matrix: Ground Water

Date Received: 08/04/17 09:35

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.171		0.0747	0.0762	1.00	0.0648	pCi/L	08/09/17 08:46	08/31/17 07:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					08/09/17 08:46	08/31/17 07:00	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.113	U	0.206	0.206	1.00	0.350	pCi/L	08/09/17 09:12	08/18/17 14:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					08/09/17 09:12	08/18/17 14:22	1
Y Carrier	86.7		40 - 110					08/09/17 09:12	08/18/17 14:22	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	0.284	U	0.219	0.220	5.00	0.350	pCi/L		08/31/17 13:19	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-2

**Client Sample ID: MW18**

**Lab Sample ID: 310-111478-7**

Date Collected: 07/31/17 08:45

Matrix: Ground Water

Date Received: 08/04/17 09:35

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.588		0.131	0.142	1.00	0.0659	pCi/L	08/09/17 08:46	08/31/17 07:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					08/09/17 08:46	08/31/17 07:00	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.311	U	0.232	0.234	1.00	0.366	pCi/L	08/09/17 09:12	08/18/17 14:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					08/09/17 09:12	08/18/17 14:23	1
Y Carrier	91.2		40 - 110					08/09/17 09:12	08/18/17 14:23	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	0.899		0.267	0.273	5.00	0.366	pCi/L		08/31/17 13:19	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-2

**Client Sample ID: MW19**

**Lab Sample ID: 310-111478-8**

Date Collected: 07/31/17 09:12

Matrix: Ground Water

Date Received: 08/04/17 09:35

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.742		0.148	0.162	1.00	0.0869	pCi/L	08/09/17 08:46	08/31/17 07:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					08/09/17 08:46	08/31/17 07:07	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.262	U	0.244	0.245	1.00	0.394	pCi/L	08/09/17 09:12	08/18/17 14:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					08/09/17 09:12	08/18/17 14:23	1
Y Carrier	87.1		40 - 110					08/09/17 09:12	08/18/17 14:23	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	1.00		0.285	0.294	5.00	0.394	pCi/L		08/31/17 13:19	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-2

**Client Sample ID: DUP-1**

**Lab Sample ID: 310-111478-9**

Date Collected: 07/31/17 08:00

Matrix: Ground Water

Date Received: 08/04/17 09:35

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.290		0.101	0.104	1.00	0.0881	pCi/L	08/09/17 08:46	08/31/17 07:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					08/09/17 08:46	08/31/17 07:07	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.181	U	0.218	0.218	1.00	0.359	pCi/L	08/09/17 09:12	08/18/17 14:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					08/09/17 09:12	08/18/17 14:23	1
Y Carrier	91.6		40 - 110					08/09/17 09:12	08/18/17 14:23	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	0.471		0.240	0.242	5.00	0.359	pCi/L		08/31/17 13:19	1



# Definitions/Glossary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-2

## 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)

# QC Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-2

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

**Lab Sample ID: MB 160-321386/1-A**  
**Matrix: Water**  
**Analysis Batch: 325306**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 321386**

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert.	Uncert.						
Radium-226	0.04284	U	0.0409	0.0410	1.00	0.0602	pCi/L	08/09/17 08:46	08/31/17 06:59	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	Limits							
Ba Carrier	109		40 - 110		08/09/17 08:46	08/31/17 06:59	1			

**Lab Sample ID: LCS 160-321386/2-A**  
**Matrix: Water**  
**Analysis Batch: 325306**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 321386**

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	9.60	9.103		0.943	1.00	0.0632	pCi/L	95	68 - 137
Carrier	LCS LCS		Limits		Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier	Limits						
Ba Carrier	103		40 - 110		08/09/17 08:46	08/31/17 06:59	1		

**Lab Sample ID: LCSD 160-321386/3-A**  
**Matrix: Water**  
**Analysis Batch: 325306**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 321386**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
				Uncert. (2σ+/-)							
Radium-226	9.60	7.717		0.812	1.00	0.0563	pCi/L	80	68 - 137	0.79	1
Carrier	LCSD LCSD		Limits		Prepared	Analyzed	Dil Fac				
Ba Carrier	%Yield	Qualifier	Limits								
Ba Carrier	109		40 - 110		08/09/17 09:12	08/18/17 14:18	1				

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

**Lab Sample ID: MB 160-321467/1-A**  
**Matrix: Water**  
**Analysis Batch: 322960**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 321467**

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert.	Uncert.						
Radium-228	-0.1154	U	0.186	0.187	1.00	0.362	pCi/L	08/09/17 09:12	08/18/17 14:18	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	Limits							
Ba Carrier	109		40 - 110		08/09/17 09:12	08/18/17 14:18	1			
Y Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Y Carrier	%Yield	Qualifier	Limits							
Y Carrier	73.3		40 - 110		08/09/17 09:12	08/18/17 14:18	1			

TestAmerica Cedar Falls

# QC Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-2

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

**Lab Sample ID: LCS 160-321467/2-A**

**Matrix: Water**

**Analysis Batch: 322960**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 321467**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.0	12.89		1.39	1.00	0.345	pCi/L	99	56 - 140
<b>Carrier</b>		<b>LCS %Yield</b>	<b>LCS Qualifier</b>	<b>Limits</b>					
Ba Carrier		103		40 - 110					
Y Carrier		89.0		40 - 110					

**Lab Sample ID: LCSD 160-321467/3-A**

**Matrix: Water**

**Analysis Batch: 322960**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 321467**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	13.0	13.04		1.39	1.00	0.291	pCi/L	100	56 - 140	0.06	1
<b>Carrier</b>		<b>LCSD %Yield</b>	<b>LCSD Qualifier</b>	<b>Limits</b>							
Ba Carrier		109		40 - 110							
Y Carrier		91.2		40 - 110							

# QC Association Summary

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-2

## Rad

### Prep Batch: 321386

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-111478-1	MW2	Total/NA	Ground Water	PrecSep-21	
310-111478-2	MW9	Total/NA	Ground Water	PrecSep-21	
310-111478-3	MW13	Total/NA	Ground Water	PrecSep-21	
310-111478-4	MW15	Total/NA	Ground Water	PrecSep-21	
310-111478-5	MW16	Total/NA	Ground Water	PrecSep-21	
310-111478-6	MW17	Total/NA	Ground Water	PrecSep-21	
310-111478-7	MW18	Total/NA	Ground Water	PrecSep-21	
310-111478-8	MW19	Total/NA	Ground Water	PrecSep-21	
310-111478-9	DUP-1	Total/NA	Ground Water	PrecSep-21	
MB 160-321386/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-321386/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-321386/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

### Prep Batch: 321467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-111478-1	MW2	Total/NA	Ground Water	PrecSep_0	
310-111478-2	MW9	Total/NA	Ground Water	PrecSep_0	
310-111478-3	MW13	Total/NA	Ground Water	PrecSep_0	
310-111478-4	MW15	Total/NA	Ground Water	PrecSep_0	
310-111478-5	MW16	Total/NA	Ground Water	PrecSep_0	
310-111478-6	MW17	Total/NA	Ground Water	PrecSep_0	
310-111478-7	MW18	Total/NA	Ground Water	PrecSep_0	
310-111478-8	MW19	Total/NA	Ground Water	PrecSep_0	
310-111478-9	DUP-1	Total/NA	Ground Water	PrecSep_0	
MB 160-321467/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-321467/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-321467/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

# Lab Chronicle

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-2

## Client Sample ID: MW2

Lab Sample ID: 310-111478-1

Date Collected: 07/31/17 10:58

Matrix: Ground Water

Date Received: 08/04/17 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			321386	08/09/17 08:46	LDE	TAL SL
Total/NA	Analysis	9315		1	325306	08/31/17 07:00	CDR	TAL SL
Total/NA	Prep	PrecSep_0			321467	08/09/17 09:12	LDE	TAL SL
Total/NA	Analysis	9320		1	322960	08/18/17 14:19	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	325320	08/31/17 13:19	RTM	TAL SL

## Client Sample ID: MW9

Lab Sample ID: 310-111478-2

Date Collected: 07/31/17 09:45

Matrix: Ground Water

Date Received: 08/04/17 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			321386	08/09/17 08:46	LDE	TAL SL
Total/NA	Analysis	9315		1	325306	08/31/17 07:00	CDR	TAL SL
Total/NA	Prep	PrecSep_0			321467	08/09/17 09:12	LDE	TAL SL
Total/NA	Analysis	9320		1	322960	08/18/17 14:19	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	325320	08/31/17 13:19	RTM	TAL SL

## Client Sample ID: MW13

Lab Sample ID: 310-111478-3

Date Collected: 07/31/17 11:58

Matrix: Ground Water

Date Received: 08/04/17 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			321386	08/09/17 08:46	LDE	TAL SL
Total/NA	Analysis	9315		1	325306	08/31/17 07:00	CDR	TAL SL
Total/NA	Prep	PrecSep_0			321467	08/09/17 09:12	LDE	TAL SL
Total/NA	Analysis	9320		1	322959	08/18/17 14:22	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	325320	08/31/17 13:19	RTM	TAL SL

## Client Sample ID: MW15

Lab Sample ID: 310-111478-4

Date Collected: 07/31/17 12:35

Matrix: Ground Water

Date Received: 08/04/17 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			321386	08/09/17 08:46	LDE	TAL SL
Total/NA	Analysis	9315		1	325306	08/31/17 07:00	CDR	TAL SL
Total/NA	Prep	PrecSep_0			321467	08/09/17 09:12	LDE	TAL SL
Total/NA	Analysis	9320		1	322959	08/18/17 14:22	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	325320	08/31/17 13:19	RTM	TAL SL

# Lab Chronicle

Client: Omaha Public Power District  
 Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-2

## Client Sample ID: MW16

Lab Sample ID: 310-111478-5

Date Collected: 07/31/17 10:30

Matrix: Ground Water

Date Received: 08/04/17 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			321386	08/09/17 08:46	LDE	TAL SL
Total/NA	Analysis	9315		1	325306	08/31/17 07:00	CDR	TAL SL
Total/NA	Prep	PrecSep_0			321467	08/09/17 09:12	LDE	TAL SL
Total/NA	Analysis	9320		1	322959	08/18/17 14:22	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	325320	08/31/17 13:19	RTM	TAL SL

## Client Sample ID: MW17

Lab Sample ID: 310-111478-6

Date Collected: 07/31/17 13:30

Matrix: Ground Water

Date Received: 08/04/17 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			321386	08/09/17 08:46	LDE	TAL SL
Total/NA	Analysis	9315		1	325306	08/31/17 07:00	CDR	TAL SL
Total/NA	Prep	PrecSep_0			321467	08/09/17 09:12	LDE	TAL SL
Total/NA	Analysis	9320		1	322959	08/18/17 14:22	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	325320	08/31/17 13:19	RTM	TAL SL

## Client Sample ID: MW18

Lab Sample ID: 310-111478-7

Date Collected: 07/31/17 08:45

Matrix: Ground Water

Date Received: 08/04/17 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			321386	08/09/17 08:46	LDE	TAL SL
Total/NA	Analysis	9315		1	325306	08/31/17 07:00	CDR	TAL SL
Total/NA	Prep	PrecSep_0			321467	08/09/17 09:12	LDE	TAL SL
Total/NA	Analysis	9320		1	322959	08/18/17 14:23	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	325320	08/31/17 13:19	RTM	TAL SL

## Client Sample ID: MW19

Lab Sample ID: 310-111478-8

Date Collected: 07/31/17 09:12

Matrix: Ground Water

Date Received: 08/04/17 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			321386	08/09/17 08:46	LDE	TAL SL
Total/NA	Analysis	9315		1	325305	08/31/17 07:07	CDR	TAL SL
Total/NA	Prep	PrecSep_0			321467	08/09/17 09:12	LDE	TAL SL
Total/NA	Analysis	9320		1	322959	08/18/17 14:23	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	325320	08/31/17 13:19	RTM	TAL SL

# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-2

**Client Sample ID: DUP-1**

**Lab Sample ID: 310-111478-9**

**Date Collected: 07/31/17 08:00**

**Matrix: Ground Water**

**Date Received: 08/04/17 09:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			321386	08/09/17 08:46	LDE	TAL SL
Total/NA	Analysis	9315		1	325305	08/31/17 07:07	CDR	TAL SL
Total/NA	Prep	PrecSep_0			321467	08/09/17 09:12	LDE	TAL SL
Total/NA	Analysis	9320		1	322959	08/18/17 14:23	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	325320	08/31/17 13:19	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: North Omaha Station CCR

TestAmerica Job ID: 310-111478-2

### 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
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	08-31-18
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		058448	08-31-18
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: North Omaha Station CCR

TestAmerica Job ID: 310-111478-2

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





**Cooler/Sample Receipt and Temperature Log Form**

<b>Client Information</b>	
Client: <u>Omaha Public Power District</u>	
City/State: <u>Omaha NE</u>	Project: <u>North Omaha Station CCR</u>
<b>Receipt Information</b>	
Date/Time Received: <u>8-4-17 9:35</u>	Received By: <u>KJP</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID: _____
Multiple Coolers? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>1</u> of <u>2</u>
Cooler Custody Seals Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Trip Blank Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓
<b>Temperature Record</b>	
Coolant: <input type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input checked="" type="checkbox"/> Other: <u>Melted ice</u> <input type="checkbox"/> NONE	
Thermometer ID: <u>G</u>	Correction Factor (°C): <u>-0.1</u>
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature	
Uncorrected Temp (°C): <u>10.3</u>	Corrected Temp (°C): <u>10.2</u>
• Sample Container Temperature	
Sample ID(s) & bottle type used: <u>CONTAINER 1 PIC HNO<sub>3</sub> Dup-1 CONTAINER 2</u>	
Uncorrected Temp (°C): <u>TEMP 1 3.9 TEMP 2</u>	Corrected Temp (°C): <u>TEMP 1 3.8 TEMP 2</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	

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## Cooler/Sample Receipt and Temperature Log Form

<b>Client Information</b>	
Client: <u>Omaha Public Power District</u>	
City/State: <u>Omaha NE</u>	Project: <u>North Omaha Station CCR</u>
<b>Receipt Information</b>	
Date/Time Received: <u>8-4-17 9:35</u>	Received By: <u>HP</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____	
<b>Condition of Cooler/Containers</b>	
Sample(s) received in Cooler? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID: <u>CC-02</u>
Multiple Coolers? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>2</u> of <u>2</u>
Cooler Custody Seals Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓
<b>Temperature Record</b>	
Coolant: <input type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input checked="" type="checkbox"/> Other: <u>melted ice</u> <input type="checkbox"/> NONE	
Thermometer ID: <u>6</u>	Correction Factor (°C): <u>-0.1</u>
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature	
Uncorrected Temp (°C): <u>10.8</u>	Corrected Temp (°C): <u>10.7</u>
• Sample Container Temperature	
Sample ID(s) & bottle type used: <u>CONTAINER 1: PI 250 HNO<sub>3</sub> MW18</u> <u>CONTAINER 2: PI 1L HNO<sub>3</sub> MW16</u>	
Uncorrected Temp (°C): <u>TEMP 1: 10.8</u> <u>TEMP 2: 10.1</u>	Corrected Temp (°C): <u>TEMP 1: 10.7</u> <u>TEMP 2: 10.0</u>
<b>Exceptions Noted</b>	
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No	
a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No	
NOTE: If yes, contact PM before proceeding. If no, proceed with login	
<b>Additional Comments</b>	
<u>MW2, MW18, MW16, MW19, MW9</u>	

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**Chain of Custody Record**

<b>Client Information</b>		Sampler: <u>Brad Sojka</u>		Lab PM: <u>Hayes, Shawn M</u>		Carrier Tracking No(s):	
Client Contact: <u>Brad Sojka</u>		Phone: <u>402-636-2515</u>		E-Mail: <u>shawn.hayes@testamericainc.com</u>		Page:	
Company: <u>Omaha Public Power District</u>		Due Date Requested:		Analysis Requested		Job #:	
Address: <u>444 South 16th Street Mall 9E/EP1</u>		TAT Requested (days):		Perform MS/MSD (Yes or No)		Total Number of Containers	
City: <u>Omaha</u>		PO #:		Field Filtered Sample (Yes or No)		Preservation Codes:	
State, Zip: <u>NE, 68102-2247</u>		WO #:		9315 Ra226, 9320 Ra228, Combined Ra226 and Ra228		A - HCL B - Hexane C - NaOH D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - None N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Phone: <u>402-636-2515(Tel)</u>		TestAmerica Project #:		6010C Lithium, 6020A CCR List, 7470A Mercury		Other:	
Email: <u>bsojka@oppd.com</u>		31007560		2540C TDS, 9056A Chloride, Fluoride, Sulfate			
Project Name: <u>North Omaha Station CCR</u>		SSOW#:					
Site:							

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Other)	Preservation Code	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	D	N	Special Instructions/Note:
MW2	7/31/17	1058	G	GW	GW	X	X			
MW9		0945	G	GW	GW	X	X			
MW13		1158	G	GW	GW	X	X			
MW15		1235	G	GW	GW	X	X			
MW16		1030	G	GW	GW	X	X			
MW17		1330	G	GW	GW	X	X			
MW18		0845	G	GW	GW	X	X			
MW19		0912	G	GW	GW	X	X			
DUP-1		0800	G	GW	GW	X	X			

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

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

Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_

Relinquished by: [Signature] Date: 8/2/17 1000 \_\_\_\_\_ Company \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company \_\_\_\_\_

Custody Seals Intact:  Yes  No \_\_\_\_\_ Custody Seal No.: \_\_\_\_\_

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

Special Instructions/QC Requirements:

Received by: [Signature] Date/Time: 8/4/17 935 Company TACF

Received by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company \_\_\_\_\_

Received by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company \_\_\_\_\_

Cooler Temperature(s) °C and Other Remarks:

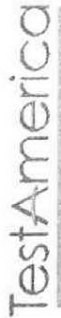




Temperature readings: \_\_\_\_\_

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container pH</u>	<u>Preservative Added (mls)</u>	<u>Lot #</u>
MW2	310-111478-A-1	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW2	310-111478-C-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW2	310-111478-D-1	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-111478-A-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW9	310-111478-C-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW9	310-111478-D-2	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-111478-A-3	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW13	310-111478-C-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW13	310-111478-D-3	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW15	310-111478-A-4	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW15	310-111478-C-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW15	310-111478-D-4	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW16	310-111478-A-5	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW16	310-111478-C-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW16	310-111478-D-5	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW17	310-111478-A-6	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW17	310-111478-C-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW17	310-111478-D-6	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW18	310-111478-A-7	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW18	310-111478-C-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW18	310-111478-D-7	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW19	310-111478-A-8	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW19	310-111478-C-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
MW19	310-111478-D-8	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-1	310-111478-A-9	Plastic 250ml - with Nitric Acid	<2	_____	_____
DUP-1	310-111478-C-9	Plastic 1 liter - Nitric Acid	<2	_____	_____
DUP-1	310-111478-D-9	Plastic 1 liter - Nitric Acid	<2	_____	_____

# Chain of Custody Record



THE TESTAMERICA SYSTEM

<b>Client Information (Sub Contract Lab)</b>		Lab P/V: Hayes, Shawn M		Carrier Tracking Note:					
Client Contact: Shipping/Receiving		E-Vail: shawn.hayes@testamericainc.com		State of Origin: Nebraska					
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		COC No: 310-10192-1					
Address: 13715 Rider Trail North,		Due Date Requested: 8/16/2017		Page: Page 1 of 1					
City: Earth City		TAT Requested (days):		Job #: 310-111478-2					
State/Zip: MO, 63045		FO #:		Preservation Codes:					
Phone: 314-298-8566(Tel) 314-298-8757(Fax)		WO #:		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 Other:					
Project Name: North Omaha Station CCR		Project #: 31007560		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify)					
Site: 310 OPPD North Omaha Station		SSOW#:		Special Instructions/Note:					
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=Alt)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PreSep_21 Standard Target List	9320_Ra228/PreSep_0 Standard Target List	Total Number of Containers
MW2 (310-111478-1)	7/31/17	10:58 Central	Water	Water	X	X	X	X	2
MW9 (310-111478-2)	7/31/17	09:45 Central	Water	Water	X	X	X	X	2
MW13 (310-111478-3)	7/31/17	11:58 Central	Water	Water	X	X	X	X	2
MW15 (310-111478-4)	7/31/17	12:35 Central	Water	Water	X	X	X	X	2
MW16 (310-111478-5)	7/31/17	10:30 Central	Water	Water	X	X	X	X	2
MW17 (310-111478-6)	7/31/17	13:30 Central	Water	Water	X	X	X	X	2
MW18 (310-111478-7)	7/31/17	08:45 Central	Water	Water	X	X	X	X	2
MW19 (310-111478-8)	7/31/17	09:12 Central	Water	Water	X	X	X	X	2
DUP-1 (310-111478-9)	7/31/17	08:00 Central	Water	Water	X	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/retest/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 compliance to TestAmerica Laboratories, Inc.

**Possible Hazard Identification**  
 Unconfirmed  
 Deliverable Requested: I, II, III, IV, Other (specify) \_\_\_\_\_  
 Primary Deliverable Rank: 2

Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Relinquished by: *T. Dehn* Date: 8/17/17  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  
 Disposal By Lab \_\_\_\_\_ Archive For \_\_\_\_\_ Months  
 Special Instructions/QC Requirements:

Method of Shipment: \_\_\_\_\_  
 Received by: *Shawn Clark* Date/Time: 8-5-17  
 Received by: \_\_\_\_\_ Date/Time: 0830  
 Received by: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Cooler Temperature(s) °C and Other Remarks: \_\_\_\_\_



## Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-111478-2

**Login Number: 111478**

**List Source: TestAmerica Cedar Falls**

**List Number: 1**

**Creator: Tuladhar, Sushil X**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	Water present in cooler; indicates evidence of melted ice.
Cooler Temperature is acceptable.	False	Cooler temperature 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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

## Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-111478-2

**Login Number: 111478**

**List Number: 2**

**Creator: Taylor, Kristene N**

**List Source: TestAmerica St. Louis**

**List Creation: 08/05/17 11:43 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	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: North Omaha Station CCR

TestAmerica Job ID: 310-111478-2

## 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)	
310-111478-1	MW2	99.1	
310-111478-2	MW9	105	
310-111478-3	MW13	95.3	
310-111478-4	MW15	104	
310-111478-5	MW16	101	
310-111478-6	MW17	99.1	
310-111478-7	MW18	100	
310-111478-8	MW19	101	
310-111478-9	DUP-1	97.6	

**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 160-321386/2-A	Lab Control Sample	103	
LCS 160-321386/3-A	Lab Control Sample Dup	109	
MB 160-321386/1-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)
310-111478-1	MW2	99.1	89.7
310-111478-2	MW9	105	80.7
310-111478-3	MW13	95.3	86.0
310-111478-4	MW15	104	89.0
310-111478-5	MW16	101	86.7
310-111478-6	MW17	99.1	86.7
310-111478-7	MW18	100	91.2
310-111478-8	MW19	101	87.1
310-111478-9	DUP-1	97.6	91.6

**Tracer/Carrier Legend**  
 Ba = Ba Carrier  
 Y = Y Carrier

# Tracer/Carrier Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station CCR

TestAmerica Job ID: 310-111478-2

## 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 160-321467/2-A	Lab Control Sample	103	89.0
LCSD 160-321467/3-A	Lab Control Sample Dup	109	91.2
MB 160-321467/1-A	Method Blank	109	73.3

#### 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: 310-118603-1  
Client Project/Site: North Omaha Station  
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:  
11/29/2017 4:59:17 PM

Shawn Hayes, Senior Project Manager  
(319)277-2401  
[shawn.hayes@testamericainc.com](mailto:shawn.hayes@testamericainc.com)

### LINKS

Review your project  
results through  
**Total Access**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.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: North Omaha Station

TestAmerica Job ID: 310-118603-1

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**Job ID: 310-118603-1**

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**Laboratory: TestAmerica Cedar Falls**

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**Narrative**

**Job Narrative  
310-118603-1**

**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 1.1° 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.

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# Sample Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-118603-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-118603-1	MW2	Ground Water	11/07/17 12:10	11/10/17 09:43
310-118603-5	MW9	Ground Water	11/07/17 11:08	11/10/17 09:43
310-118603-6	MW13	Ground Water	11/07/17 11:34	11/10/17 09:43
310-118603-7	MW15	Ground Water	11/07/17 13:13	11/10/17 09:43
310-118603-8	MW17	Ground Water	11/07/17 14:46	11/10/17 09:43
310-118603-9	MW18	Ground Water	11/07/17 10:24	11/10/17 09:43
310-118603-10	MW19	Ground Water	11/07/17 10:46	11/10/17 09:43
310-118603-11	DUP-1	Ground Water	11/07/17 08:00	11/10/17 09:43

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# Detection Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-118603-1

## Client Sample ID: MW2

## Lab Sample ID: 310-118603-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	21.2		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.529		0.500		mg/L	5		9056A	Total/NA
Sulfate	907		20.0		mg/L	20		9056A	Total/NA
Boron	1.59		0.200		mg/L	1		6020A	Total/NA
Calcium	263		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	2210		150		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW9

## Lab Sample ID: 310-118603-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	220		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.550		0.500		mg/L	5		9056A	Total/NA
Sulfate	37.7		5.00		mg/L	5		9056A	Total/NA
Calcium	153		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1090		60.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW13

## Lab Sample ID: 310-118603-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.81		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.670		0.500		mg/L	5		9056A	Total/NA
Sulfate	581		20.0		mg/L	20		9056A	Total/NA
Boron	1.71		0.200		mg/L	1		6020A	Total/NA
Calcium	129		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1080		60.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW15

## Lab Sample ID: 310-118603-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	11.6		5.00		mg/L	5		9056A	Total/NA
Sulfate	900		20.0		mg/L	20		9056A	Total/NA
Boron	4.13		0.200		mg/L	1		6020A	Total/NA
Calcium	293		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1520		60.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW17

## Lab Sample ID: 310-118603-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	46.2		5.00		mg/L	5		9056A	Total/NA
Sulfate	952		20.0		mg/L	20		9056A	Total/NA
Boron	0.660		0.200		mg/L	1		6020A	Total/NA
Calcium	323		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	2590		150		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW18

## Lab Sample ID: 310-118603-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.704		0.500		mg/L	5		9056A	Total/NA
Calcium	87.5		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	518		30.0		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Cedar Falls

# Detection Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-118603-1

## Client Sample ID: MW19

## Lab Sample ID: 310-118603-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	6.91		5.00		mg/L	5		9056A	Total/NA
Calcium	93.0		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	410		30.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: DUP-1

## Lab Sample ID: 310-118603-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	11.8		5.00		mg/L	5		9056A	Total/NA
Sulfate	887		20.0		mg/L	20		9056A	Total/NA
Boron	4.24		0.200		mg/L	1		6020A	Total/NA
Calcium	304		0.200		mg/L	1		6020A	Total/NA
Total Dissolved Solids	1750		100		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Cedar Falls



# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-118603-1

**Client Sample ID: MW2**  
**Date Collected: 11/07/17 12:10**  
**Date Received: 11/10/17 09:43**

**Lab Sample ID: 310-118603-1**  
**Matrix: Ground Water**

## Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	21.2		5.00		mg/L			11/14/17 22:46	5
Fluoride	0.529		0.500		mg/L			11/14/17 22:46	5
Sulfate	907		20.0		mg/L			11/14/17 23:03	20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.59		0.200		mg/L		11/13/17 07:54	11/24/17 15:25	1
Calcium	263		0.200		mg/L		11/13/17 07:54	11/22/17 20:56	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	2210		150		mg/L			11/11/17 10:35	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-118603-1

**Client Sample ID: MW9**  
**Date Collected: 11/07/17 11:08**  
**Date Received: 11/10/17 09:43**

**Lab Sample ID: 310-118603-5**  
**Matrix: Ground Water**

## Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	220		5.00		mg/L			11/15/17 01:37	5
Fluoride	0.550		0.500		mg/L			11/15/17 01:37	5
Sulfate	37.7		5.00		mg/L			11/15/17 01:37	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 07:54	11/22/17 21:17	1
Calcium	153		0.200		mg/L		11/13/17 07:54	11/22/17 21:17	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1090		60.0		mg/L			11/11/17 10:45	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-118603-1

**Client Sample ID: MW13**

**Date Collected: 11/07/17 11:34**

**Date Received: 11/10/17 09:43**

**Lab Sample ID: 310-118603-6**

**Matrix: Ground Water**

## Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.81		5.00		mg/L			11/15/17 02:12	5
Fluoride	0.670		0.500		mg/L			11/15/17 02:12	5
Sulfate	581		20.0		mg/L			11/15/17 02:29	20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.71		0.200		mg/L		11/13/17 07:54	11/22/17 21:20	1
Calcium	129		0.200		mg/L		11/13/17 07:54	11/22/17 21:20	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1080		60.0		mg/L			11/11/17 10:45	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-118603-1

**Client Sample ID: MW15**

**Date Collected: 11/07/17 13:13**

**Date Received: 11/10/17 09:43**

**Lab Sample ID: 310-118603-7**

**Matrix: Ground Water**

## Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11.6		5.00		mg/L			11/15/17 03:20	5
Fluoride	<0.500		0.500		mg/L			11/15/17 03:20	5
Sulfate	900		20.0		mg/L			11/15/17 03:37	20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.13		0.200		mg/L		11/13/17 07:54	11/22/17 21:27	1
Calcium	293		0.200		mg/L		11/13/17 07:54	11/22/17 21:27	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1520		60.0		mg/L			11/11/17 10:45	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-118603-1

**Client Sample ID: MW17**

**Date Collected: 11/07/17 14:46**

**Date Received: 11/10/17 09:43**

**Lab Sample ID: 310-118603-8**

**Matrix: Ground Water**

## Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	46.2		5.00		mg/L			11/15/17 03:54	5
Fluoride	<0.500		0.500		mg/L			11/15/17 03:54	5
Sulfate	952		20.0		mg/L			11/15/17 04:12	20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.660		0.200		mg/L		11/13/17 07:54	11/22/17 21:30	1
Calcium	323		0.200		mg/L		11/13/17 07:54	11/22/17 21:30	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	2590		150		mg/L			11/11/17 10:45	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-118603-1

**Client Sample ID: MW18**  
**Date Collected: 11/07/17 10:24**  
**Date Received: 11/10/17 09:43**

**Lab Sample ID: 310-118603-9**  
**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 04:29	5
<b>Fluoride</b>	<b>0.704</b>		0.500		mg/L			11/15/17 04:29	5
Sulfate	<5.00		5.00		mg/L			11/15/17 04:29	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 07:54	11/22/17 21:33	1
<b>Calcium</b>	<b>87.5</b>		0.200		mg/L		11/13/17 07:54	11/22/17 21:33	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>518</b>		30.0		mg/L			11/11/17 10:45	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-118603-1

**Client Sample ID: MW19**

**Date Collected: 11/07/17 10:46**

**Date Received: 11/10/17 09:43**

**Lab Sample ID: 310-118603-10**

**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 04:46	5
Fluoride	<0.500		0.500		mg/L			11/15/17 04:46	5
<b>Sulfate</b>	<b>6.91</b>		5.00		mg/L			11/15/17 04:46	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 07:54	11/22/17 21:36	1
<b>Calcium</b>	<b>93.0</b>		0.200		mg/L		11/13/17 07:54	11/22/17 21:36	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>410</b>		30.0		mg/L			11/11/17 10:45	1

# Client Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-118603-1

**Client Sample ID: DUP-1**  
**Date Collected: 11/07/17 08:00**  
**Date Received: 11/10/17 09:43**

**Lab Sample ID: 310-118603-11**  
**Matrix: Ground Water**

## Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11.8		5.00		mg/L			11/15/17 05:03	5
Fluoride	<0.500		0.500		mg/L			11/15/17 05:03	5
Sulfate	887		20.0		mg/L			11/15/17 05:20	20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.24		0.200		mg/L		11/13/17 07:54	11/22/17 21:39	1
Calcium	304		0.200		mg/L		11/13/17 07:54	11/22/17 21:39	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1750		100		mg/L			11/11/17 10:45	1



# Definitions/Glossary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-118603-1

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)

# QC Sample Results

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-118603-1

## 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 310-185822/1-A**  
**Matrix: Water**  
**Analysis Batch: 186926**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 185822**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.200		0.200		mg/L		11/13/17 07:54	11/22/17 02:12	1
Calcium	<0.200		0.200		mg/L		11/13/17 07:54	11/22/17 02:12	1

**Lab Sample ID: LCS 310-185822/2-A**  
**Matrix: Water**  
**Analysis Batch: 186926**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 185822**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.880	0.7908		mg/L		90	80 - 120
Calcium	2.00	1.888		mg/L		94	80 - 120

**Lab Sample ID: 310-118603-6 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 187022**

**Client Sample ID: MW13**  
**Prep Type: Total/NA**  
**Prep Batch: 185822**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Boron	1.71		1.821		mg/L		6	20
Calcium	129		135.4		mg/L		5	20

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

**Lab Sample ID: MB 310-185772/1**  
**Matrix: Water**  
**Analysis Batch: 185772**

**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			11/11/17 10:35	1

TestAmerica Cedar Falls

# QC Sample Results

Client: Omaha Public Power District  
 Project/Site: North Omaha Station

TestAmerica Job ID: 310-118603-1

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

**Lab Sample ID: LCS 310-185772/2**  
**Matrix: Water**  
**Analysis Batch: 185772**

**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: MB 310-185774/1**  
**Matrix: Water**  
**Analysis Batch: 185774**

**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			11/11/17 10:45	1

**Lab Sample ID: LCS 310-185774/2**  
**Matrix: Water**  
**Analysis Batch: 185774**

**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	984.0		mg/L		98	90 - 110

**Lab Sample ID: 310-118603-B-2 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 185774**

**Client Sample ID: 310-118603-B-2 DU**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	2310		2430		mg/L		5	24

# QC Association Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-118603-1

## HPLC/IC

### Analysis Batch: 186167

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-118603-1	MW2	Total/NA	Ground Water	9056A	
310-118603-1	MW2	Total/NA	Ground Water	9056A	
310-118603-5	MW9	Total/NA	Ground Water	9056A	
310-118603-6	MW13	Total/NA	Ground Water	9056A	
310-118603-6	MW13	Total/NA	Ground Water	9056A	
310-118603-7	MW15	Total/NA	Ground Water	9056A	
310-118603-7	MW15	Total/NA	Ground Water	9056A	
310-118603-8	MW17	Total/NA	Ground Water	9056A	
310-118603-8	MW17	Total/NA	Ground Water	9056A	
310-118603-9	MW18	Total/NA	Ground Water	9056A	
310-118603-10	MW19	Total/NA	Ground Water	9056A	
310-118603-11	DUP-1	Total/NA	Ground Water	9056A	
310-118603-11	DUP-1	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: 185822

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-118603-1	MW2	Total/NA	Ground Water	3010A	
310-118603-5	MW9	Total/NA	Ground Water	3010A	
310-118603-6	MW13	Total/NA	Ground Water	3010A	
310-118603-7	MW15	Total/NA	Ground Water	3010A	
310-118603-8	MW17	Total/NA	Ground Water	3010A	
310-118603-9	MW18	Total/NA	Ground Water	3010A	
310-118603-10	MW19	Total/NA	Ground Water	3010A	
310-118603-11	DUP-1	Total/NA	Ground Water	3010A	
MB 310-185822/1-A	Method Blank	Total/NA	Water	3010A	
LCS 310-185822/2-A	Lab Control Sample	Total/NA	Water	3010A	
310-118603-6 DU	MW13	Total/NA	Ground Water	3010A	

### Analysis Batch: 186926

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-185822/1-A	Method Blank	Total/NA	Water	6020A	185822
LCS 310-185822/2-A	Lab Control Sample	Total/NA	Water	6020A	185822

### Analysis Batch: 187022

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-118603-1	MW2	Total/NA	Ground Water	6020A	185822
310-118603-5	MW9	Total/NA	Ground Water	6020A	185822
310-118603-6	MW13	Total/NA	Ground Water	6020A	185822
310-118603-7	MW15	Total/NA	Ground Water	6020A	185822
310-118603-8	MW17	Total/NA	Ground Water	6020A	185822
310-118603-9	MW18	Total/NA	Ground Water	6020A	185822
310-118603-10	MW19	Total/NA	Ground Water	6020A	185822
310-118603-11	DUP-1	Total/NA	Ground Water	6020A	185822
310-118603-6 DU	MW13	Total/NA	Ground Water	6020A	185822

TestAmerica Cedar Falls

# QC Association Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-118603-1

## Metals (Continued)

### Analysis Batch: 187098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-118603-1	MW2	Total/NA	Ground Water	6020A	185822

## General Chemistry

### Analysis Batch: 185772

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-118603-1	MW2	Total/NA	Ground Water	SM 2540C	
MB 310-185772/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-185772/2	Lab Control Sample	Total/NA	Water	SM 2540C	

### Analysis Batch: 185774

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-118603-5	MW9	Total/NA	Ground Water	SM 2540C	
310-118603-6	MW13	Total/NA	Ground Water	SM 2540C	
310-118603-7	MW15	Total/NA	Ground Water	SM 2540C	
310-118603-8	MW17	Total/NA	Ground Water	SM 2540C	
310-118603-9	MW18	Total/NA	Ground Water	SM 2540C	
310-118603-10	MW19	Total/NA	Ground Water	SM 2540C	
310-118603-11	DUP-1	Total/NA	Ground Water	SM 2540C	
MB 310-185774/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-185774/2	Lab Control Sample	Total/NA	Water	SM 2540C	
310-118603-B-2 DU	310-118603-B-2 DU	Total/NA	Ground Water	SM 2540C	

# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-118603-1

**Client Sample ID: MW2**  
**Date Collected: 11/07/17 12:10**  
**Date Received: 11/10/17 09:43**

**Lab Sample ID: 310-118603-1**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	186167	11/14/17 22:46	SAD	TAL CF
Total/NA	Analysis	9056A		20	186167	11/14/17 23:03	SAD	TAL CF
Total/NA	Prep	3010A			185822	11/13/17 07:54	JNR	TAL CF
Total/NA	Analysis	6020A		1	187022	11/22/17 20:56	OAD	TAL CF
Total/NA	Prep	3010A			185822	11/13/17 07:54	JNR	TAL CF
Total/NA	Analysis	6020A		1	187098	11/24/17 15:25	SAD	TAL CF
Total/NA	Analysis	SM 2540C		1	185772	11/11/17 10:35	SAS	TAL CF

**Client Sample ID: MW9**  
**Date Collected: 11/07/17 11:08**  
**Date Received: 11/10/17 09:43**

**Lab Sample ID: 310-118603-5**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	186167	11/15/17 01:37	SAD	TAL CF
Total/NA	Prep	3010A			185822	11/13/17 07:54	JNR	TAL CF
Total/NA	Analysis	6020A		1	187022	11/22/17 21:17	OAD	TAL CF
Total/NA	Analysis	SM 2540C		1	185774	11/11/17 10:45	SAS	TAL CF

**Client Sample ID: MW13**  
**Date Collected: 11/07/17 11:34**  
**Date Received: 11/10/17 09:43**

**Lab Sample ID: 310-118603-6**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	186167	11/15/17 02:12	SAD	TAL CF
Total/NA	Analysis	9056A		20	186167	11/15/17 02:29	SAD	TAL CF
Total/NA	Prep	3010A			185822	11/13/17 07:54	JNR	TAL CF
Total/NA	Analysis	6020A		1	187022	11/22/17 21:20	OAD	TAL CF
Total/NA	Analysis	SM 2540C		1	185774	11/11/17 10:45	SAS	TAL CF

**Client Sample ID: MW15**  
**Date Collected: 11/07/17 13:13**  
**Date Received: 11/10/17 09:43**

**Lab Sample ID: 310-118603-7**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	186167	11/15/17 03:20	SAD	TAL CF
Total/NA	Analysis	9056A		20	186167	11/15/17 03:37	SAD	TAL CF
Total/NA	Prep	3010A			185822	11/13/17 07:54	JNR	TAL CF
Total/NA	Analysis	6020A		1	187022	11/22/17 21:27	OAD	TAL CF
Total/NA	Analysis	SM 2540C		1	185774	11/11/17 10:45	SAS	TAL CF

TestAmerica Cedar Falls

# Lab Chronicle

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-118603-1

## Client Sample ID: MW17

Date Collected: 11/07/17 14:46

Date Received: 11/10/17 09:43

## Lab Sample ID: 310-118603-8

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	186167	11/15/17 03:54	SAD	TAL CF
Total/NA	Analysis	9056A		20	186167	11/15/17 04:12	SAD	TAL CF
Total/NA	Prep	3010A			185822	11/13/17 07:54	JNR	TAL CF
Total/NA	Analysis	6020A		1	187022	11/22/17 21:30	OAD	TAL CF
Total/NA	Analysis	SM 2540C		1	185774	11/11/17 10:45	SAS	TAL CF

## Client Sample ID: MW18

Date Collected: 11/07/17 10:24

Date Received: 11/10/17 09:43

## Lab Sample ID: 310-118603-9

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	186167	11/15/17 04:29	SAD	TAL CF
Total/NA	Prep	3010A			185822	11/13/17 07:54	JNR	TAL CF
Total/NA	Analysis	6020A		1	187022	11/22/17 21:33	OAD	TAL CF
Total/NA	Analysis	SM 2540C		1	185774	11/11/17 10:45	SAS	TAL CF

## Client Sample ID: MW19

Date Collected: 11/07/17 10:46

Date Received: 11/10/17 09:43

## Lab Sample ID: 310-118603-10

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	186167	11/15/17 04:46	SAD	TAL CF
Total/NA	Prep	3010A			185822	11/13/17 07:54	JNR	TAL CF
Total/NA	Analysis	6020A		1	187022	11/22/17 21:36	OAD	TAL CF
Total/NA	Analysis	SM 2540C		1	185774	11/11/17 10:45	SAS	TAL CF

## Client Sample ID: DUP-1

Date Collected: 11/07/17 08:00

Date Received: 11/10/17 09:43

## Lab Sample ID: 310-118603-11

Matrix: Ground Water

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 05:03	SAD	TAL CF
Total/NA	Analysis	9056A		20	186167	11/15/17 05:20	SAD	TAL CF
Total/NA	Prep	3010A			185822	11/13/17 07:54	JNR	TAL CF
Total/NA	Analysis	6020A		1	187022	11/22/17 21:39	OAD	TAL CF
Total/NA	Analysis	SM 2540C		1	185774	11/11/17 10:45	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: North Omaha Station

TestAmerica Job ID: 310-118603-1

## 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

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Cedar Falls



# Method Summary

Client: Omaha Public Power District  
Project/Site: North Omaha Station

TestAmerica Job ID: 310-118603-1

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

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- 14



## Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>Omaha Public Power District</u>			
City/State: <u>Omaha NE</u>		Project: <u>North Omaha Station landfill</u>	
Receipt Information			
Date/Time Received: DATE <u>11-10-17</u> TIME <u>0943</u>		Received By: <u>D</u>	
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> TA Courier <input type="checkbox"/> TA Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		If yes: Cooler ID: <u>AB-1</u>	
Multiple Coolers? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		If yes: Cooler # _____ of _____	
Cooler Custody Seals Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		If yes: Cooler custody seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Sample Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		If yes: Which VOA samples are in cooler? ↓	
Temperature Record			
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE			
Thermometer ID: <u>H</u>		Correction Factor (°C): <u>+0.0</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>1.1</u>		Corrected Temp (°C): <u>1.1</u>	
• Sample Container Temperature			
Sample ID(s) & bottle type used: CONTAINER 1		CONTAINER 2	
Uncorrected Temp (°C): TEMP 1		Corrected Temp (°C): TEMP 1	
TEMP 2		TEMP 2	
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			

**Chain of Custody Record**

<b>Client Information</b>		Lab PM: Hayes, Shawn M		Carrier Tracking No(s):	
Client Contact: Brad Sojka		E-Mail: shawn.hayes@testamericainc.com		Page:	
Company: Omaha Public Power District		Phone: 402-636-2515		Job #:	
Address: 444 South 16th Street Mall 9E/EP1		Due Date Requested:		Analysis Requested	
City: Omaha		TAT Requested (days):		Total Number of Containers	
State, Zip: NE, 68102-2247		PO #:		Preservation Codes:	
Phone: 402-636-2515 (Tel)		WO #:		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)	
Email: bsoljka@oppd.com		TestAmerica Project #:		Other:	
Project Name: North Omaha Station CCR Appendix III		31007560			
Site:		SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	602A Boron and Calcium	2640C TDS, 9066A Chloride, Fluoride, Sulfate	Analysis Requested	Total Number of Containers	Special Instructions/Note:
MW2	11/7/17	1210	G	GW	X	X	X	X			
MW9		1108	G	GW	X	X	X	X			
MW13		1134	G	GW	X	X	X	X			
MW15		1313	G	GW	X	X	X	X			
MW17		1446	G	GW	X	X	X	X			
MW18		1024	G	GW	X	X	X	X			
MW19		1046	G	GW	X	X	X	X			
DUP		0800	G	GW	X	X	X	X			

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

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

Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date/Time: 11/9/17 1500 Company: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_

Custody Seals Intact:  Yes  No  Custody Seal No.:

Relinquished by: \_\_\_\_\_ Date/Time: 11-10-17 0913 Company: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_

Cooler Temperature(s) °C and Other Remarks:





Temperature readings: \_\_\_\_\_

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container pH</u>	<u>Preservative Added (mls)</u>	<u>Lot #</u>
MW2	310-118603-A-1	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW5	310-118603-A-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW6	310-118603-A-3	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW8	310-118603-A-4	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW9	310-118603-A-5	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW13	310-118603-A-6	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW15	310-118603-A-7	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW17	310-118603-A-8	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW18	310-118603-A-9	Plastic 250ml - with Nitric Acid	<2	_____	_____
MW19	310-118603-A-10	Plastic 250ml - with Nitric Acid	<2	_____	_____
DUP-1	310-118603-A-11	Plastic 250ml - with Nitric Acid	<2	_____	_____

# Login Sample Receipt Checklist

Client: Omaha Public Power District

Job Number: 310-118603-1

**Login Number: 118603**

**List Source: TestAmerica Cedar Falls**

**List Number: 1**

**Creator: Homolar, Dana J**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> 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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



## **APPENDIX D**

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 North Omaha Station (NOS)  
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 North Omaha Station (NOS).

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:  $H_0$  = 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-9, MW-18 and MW-19 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-9, MW-18 and MW-19 were designated as the upgradient (background) well and monitoring wells MW-2, MW-13, MW-15, and MW-17 were designated as downgradient (compliance) wells.



Output from the statistical analysis program is attached. ANOVA results indicate SSIs for the following constituents and wells.

- Boron in monitoring wells MW-2, MW-13, MW-15, and MW-17
- Calcium in monitoring wells MW-2, MW-13, MW-15, and MW-17
- Chloride in monitoring well MW-17
- Sulfate in monitoring wells MW-2, MW-13, MW-15, and MW-17
- Total Dissolved Solids in monitoring wells MW-2, MW-13, MW-15, and MW-17

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,



Adam Hooper, P.G.  
Staff Hydrogeologist



David Jaros, P.G.  
Project Manager

*Attachments: Sanitas Report November 2017 ANOVA  
Sanitas Report November 2017 Time Series  
Sanitas Report November 2017 Box Plots  
Sanitas Report November 2017 Trend Analysis*

## **ANALYSIS OF VARIANCE (ANOVA)**

# Analysis of Variance

OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2 Printed 1/4/2018, 10:37 AM

<u>Constituent</u>	<u>Well</u>	<u>Calc.</u>	<u>Crit.</u>	<u>Sig.</u>	<u>Alpha</u>	<u>Transform</u>	<u>ANOVA Sig.</u>	<u>Alpha</u>	<u>Method</u>
<b>Boron (mg/L)</b>	<b>MW17</b>	<b>18</b>	<b>15.92</b>	<b>Yes</b>	<b>0.0125</b>	<b>n/a</b>	<b>Yes</b>	<b>0.05</b>	<b>NP (normality)</b>
<b>Boron (mg/L)</b>	<b>MW2</b>	<b>27.56</b>	<b>15.92</b>	<b>Yes</b>	<b>0.0125</b>	<b>n/a</b>	<b>Yes</b>	<b>0.05</b>	<b>NP (normality)</b>
<b>Boron (mg/L)</b>	<b>MW13</b>	<b>35.44</b>	<b>15.92</b>	<b>Yes</b>	<b>0.0125</b>	<b>n/a</b>	<b>Yes</b>	<b>0.05</b>	<b>NP (normality)</b>
<b>Boron (mg/L)</b>	<b>MW15</b>	<b>45</b>	<b>15.92</b>	<b>Yes</b>	<b>0.0125</b>	<b>n/a</b>	<b>Yes</b>	<b>0.05</b>	<b>NP (normality)</b>
<b>Calcium (mg/L)</b>	<b>MW2</b>	<b>5.756</b>	<b>0.7275</b>	<b>Yes</b>	<b>0.0125</b>	<b>sqrt(x)</b>	<b>Yes</b>	<b>0.05</b>	<b>Param.</b>
<b>Calcium (mg/L)</b>	<b>MW15</b>	<b>5.878</b>	<b>0.7275</b>	<b>Yes</b>	<b>0.0125</b>	<b>sqrt(x)</b>	<b>Yes</b>	<b>0.05</b>	<b>Param.</b>
<b>Calcium (mg/L)</b>	<b>MW13</b>	<b>1.263</b>	<b>0.7275</b>	<b>Yes</b>	<b>0.0125</b>	<b>sqrt(x)</b>	<b>Yes</b>	<b>0.05</b>	<b>Param.</b>
<b>Calcium (mg/L)</b>	<b>MW17</b>	<b>8.421</b>	<b>0.7275</b>	<b>Yes</b>	<b>0.0125</b>	<b>sqrt(x)</b>	<b>Yes</b>	<b>0.05</b>	<b>Param.</b>
Chloride (mg/L)	MW15	5.37	15.92	No	0.0125	n/a	Yes	0.05	NP (normality)
Chloride (mg/L)	MW13	-2.852	15.92	No	0.0125	n/a	Yes	0.05	NP (normality)
Chloride (mg/L)	MW2	13.04	15.92	No	0.0125	n/a	Yes	0.05	NP (normality)
<b>Chloride (mg/L)</b>	<b>MW17</b>	<b>23.59</b>	<b>15.92</b>	<b>Yes</b>	<b>0.0125</b>	<b>n/a</b>	<b>Yes</b>	<b>0.05</b>	<b>NP (normality)</b>
Fluoride (mg/L)	MW17	-1.278	15.92	No	0.0125	n/a	No	0.05	NP (normality)
Fluoride (mg/L)	MW2	-0.9444	15.92	No	0.0125	n/a	No	0.05	NP (normality)
Fluoride (mg/L)	MW13	7	15.92	No	0.0125	n/a	No	0.05	NP (normality)
Fluoride (mg/L)	MW15	-4.389	15.92	No	0.0125	n/a	No	0.05	NP (normality)
pH (SU)	MW2	-0.01111	0.2846	No	0.00625	No	No	0.05	Param.
pH (SU)	MW15	-0.1189	0.2846	No	0.00625	No	No	0.05	Param.
pH (SU)	MW13	-0.1578	0.2846	No	0.00625	No	No	0.05	Param.
pH (SU)	MW17	-0.2511	0.2846	No	0.00625	No	No	0.05	Param.
<b>Sulfate (mg/L)</b>	<b>MW15</b>	<b>30.11</b>	<b>15.92</b>	<b>Yes</b>	<b>0.0125</b>	<b>n/a</b>	<b>Yes</b>	<b>0.05</b>	<b>NP (normality)</b>
<b>Sulfate (mg/L)</b>	<b>MW13</b>	<b>20.17</b>	<b>15.92</b>	<b>Yes</b>	<b>0.0125</b>	<b>n/a</b>	<b>Yes</b>	<b>0.05</b>	<b>NP (normality)</b>
<b>Sulfate (mg/L)</b>	<b>MW2</b>	<b>32.83</b>	<b>15.92</b>	<b>Yes</b>	<b>0.0125</b>	<b>n/a</b>	<b>Yes</b>	<b>0.05</b>	<b>NP (normality)</b>
<b>Sulfate (mg/L)</b>	<b>MW17</b>	<b>42.89</b>	<b>15.92</b>	<b>Yes</b>	<b>0.0125</b>	<b>n/a</b>	<b>Yes</b>	<b>0.05</b>	<b>NP (normality)</b>
<b>Total Dissolved Solids (mg/L)</b>	<b>MW2</b>	<b>1.191</b>	<b>0.1253</b>	<b>Yes</b>	<b>0.0125</b>	<b>ln(x)</b>	<b>Yes</b>	<b>0.05</b>	<b>Param.</b>
<b>Total Dissolved Solids (mg/L)</b>	<b>MW15</b>	<b>0.8689</b>	<b>0.1253</b>	<b>Yes</b>	<b>0.0125</b>	<b>ln(x)</b>	<b>Yes</b>	<b>0.05</b>	<b>Param.</b>
<b>Total Dissolved Solids (mg/L)</b>	<b>MW13</b>	<b>0.701</b>	<b>0.1253</b>	<b>Yes</b>	<b>0.0125</b>	<b>ln(x)</b>	<b>Yes</b>	<b>0.05</b>	<b>Param.</b>
<b>Total Dissolved Solids (mg/L)</b>	<b>MW17</b>	<b>1.486</b>	<b>0.1253</b>	<b>Yes</b>	<b>0.0125</b>	<b>ln(x)</b>	<b>Yes</b>	<b>0.05</b>	<b>Param.</b>

# Non-Parametric ANOVA

Constituent: Boron Analysis Run 1/4/2018 10:37 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

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For observations made between 3/22/2016 and 11/7/2017, 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 = 60.95

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) = 56.16

Adjusted Kruskal-Wallis statistic (H') = 60.95

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 4 of the compliance wells.

Contrast table:

Well	Difference	Contrast	Significant?
MW17	18	15.92	Yes
MW2	27.56	15.92	Yes
MW13	35.44	15.92	Yes
MW15	45	15.92	Yes

The critical (contrast) value was computed with 4 degrees of freedom and a 1.25% error level for each well comparison.

Non-parametric test used in lieu of parametric anova because the Shapiro Francia normality test showed the residuals to be non-normal at the 0.01 alpha level.

# Parametric ANOVA

Constituent: Calcium Analysis Run 1/4/2018 10:37 AM  
 OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

For observations made between 3/22/2016 and 11/7/2017 the parametric analysis of variance test (after square root transformation) indicates VARIATION at the 5% significance level. Because the calculated F statistic is greater than the tabulated F statistic, the hypothesis of a single homogeneous population is rejected.

Calculated F statistic = 175.8

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	22.22	6	3.703	185.3
Error Within Groups	1.119	56	0.01999	
Total	23.34	62		

The Bonferroni t-Test indicates that at least one compliance well mean is significantly higher than the background (see Contrasts Table below). The critical t (contrast) value is 2.303 with 56 degrees of freedom, 4 compliance wells and a 1.25% error level for each well comparison.

Contrast table:

Well	Difference	Di	Significant
MW2	5.756	0.7275	Yes
MW15	5.878	0.7275	Yes
MW13	1.263	0.7275	Yes
MW17	8.421	0.7275	Yes

Where 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 after square root transformation. Alpha = 0.01, calculated = 0.9642, critical = 0.947. Levene's Equality of Variance test passed. Calculated = 1.013, tabulated = 2.268.

# Non-Parametric ANOVA

Constituent: Chloride Analysis Run 1/4/2018 10:37 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

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For observations made between 3/22/2016 and 11/7/2017, the non-parametric analysis of variance test indicates a DIFFERENCE between the medians of the groups tested at the 5% significance level. Because the calculated Kruskal-Wallis statistic is greater than the Chi-squared value, we conclude that at least one group has a significantly different median concentration of this constituent when compared to another group.

Calculated Kruskal-Wallis statistic = 58.3

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) = 57.79

Adjusted Kruskal-Wallis statistic (H') = 58.3

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?
MW15	5.37	15.92	No
MW13	-2.852	15.92	No
MW2	13.04	15.92	No
MW17	23.59	15.92	Yes

The critical (contrast) value was computed with 4 degrees of freedom and a 1.25% error level for each well comparison.

Non-parametric test used in lieu of parametric anova because the Shapiro Francia normality test showed the residuals to be non-normal at the 0.01 alpha level.

# Non-Parametric ANOVA

Constituent: Fluoride Analysis Run 1/4/2018 10:37 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

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For observations made between 3/22/2016 and 11/7/2017, 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 = 5.576

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) = 4.845

Adjusted Kruskal-Wallis statistic (H') = 5.576

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?
MW17	-1.278	15.92	No
MW2	-0.9444	15.92	No
MW13	7	15.92	No
MW15	-4.389	15.92	No

The critical (contrast) value was computed with 4 degrees of freedom and a 1.25% error level for each well comparison.

Non-parametric test used in lieu of parametric anova because the Shapiro Francia normality test showed the residuals to be non-normal at the 0.01 alpha level.

# Parametric ANOVA

Constituent: pH Analysis Run 1/4/2018 10:37 AM  
 OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

For observations made between 3/22/2016 and 11/7/2017 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 = 1.281

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	22.22	6	3.703	185.3
Error Within Groups	1.119	56	0.01999	
Total	23.34	62		

The 2-tailed Bonferroni t-Test indicates that NO compliance well mean is significantly higher or lower than the background (see Contrasts Table below). The critical t (contrast) value is 2.581 with 56 degrees of freedom, 4 compliance wells and a 0.625% error level for each well comparison.

Contrast table:

Well	Difference	Di	Significant
MW2	-0.01111	0.2846	No
MW15	-0.1189	0.2846	No
MW13	-0.1578	0.2846	No
MW17	-0.2511	0.2846	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 = 0.9834, critical = 0.947. Levene's Equality of Variance test passed. Calculated = 0.5478, tabulated = 2.268.



# Non-Parametric ANOVA

Constituent: Sulfate Analysis Run 1/4/2018 10:37 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

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For observations made between 3/22/2016 and 11/7/2017, 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 = 55.77

Tabulated Chi-Squared value = 12.592 with 6 degrees of freedom at the 5% significance level.

There were 3 groups of ties in the data, consequently the Kruskal-Wallis statistic (H) was adjusted. The adjusted statistic (H') was utilized to determine if the medians were equal.

Kruskal-Wallis statistic (H) = 55.69

Adjusted Kruskal-Wallis statistic (H') = 55.77

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 4 of the compliance wells.

Contrast table:

Well	Difference	Contrast	Significant?
MW15	30.11	15.92	Yes
MW13	20.17	15.92	Yes
MW2	32.83	15.92	Yes
MW17	42.89	15.92	Yes

The critical (contrast) value was computed with 4 degrees of freedom and a 1.25% error level for each well comparison.

Non-parametric test used in lieu of parametric anova because the Shapiro Francia normality test showed the residuals to be non-normal at the 0.01 alpha level.

# Parametric ANOVA

Constituent: Total Dissolved Solids Analysis Run 1/4/2018 10:37 AM  
 OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

For observations made between 3/22/2016 and 11/7/2017 the parametric analysis of variance test (after natural log transformation) indicates VARIATION at the 5% significance level. Because the calculated F statistic is greater than the tabulated F statistic, the hypothesis of a single homogeneous population is rejected.

Calculated F statistic = 185.3

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	22.22	6	3.703	185.3
Error Within Groups	1.119	56	0.01999	
Total	23.34	62		

The Bonferroni t-Test indicates that at least one compliance well mean is significantly higher than the background (see Contrasts Table below). The critical t (contrast) value is 2.303 with 56 degrees of freedom, 4 compliance wells and a 1.25% error level for each well comparison.

Contrast table:

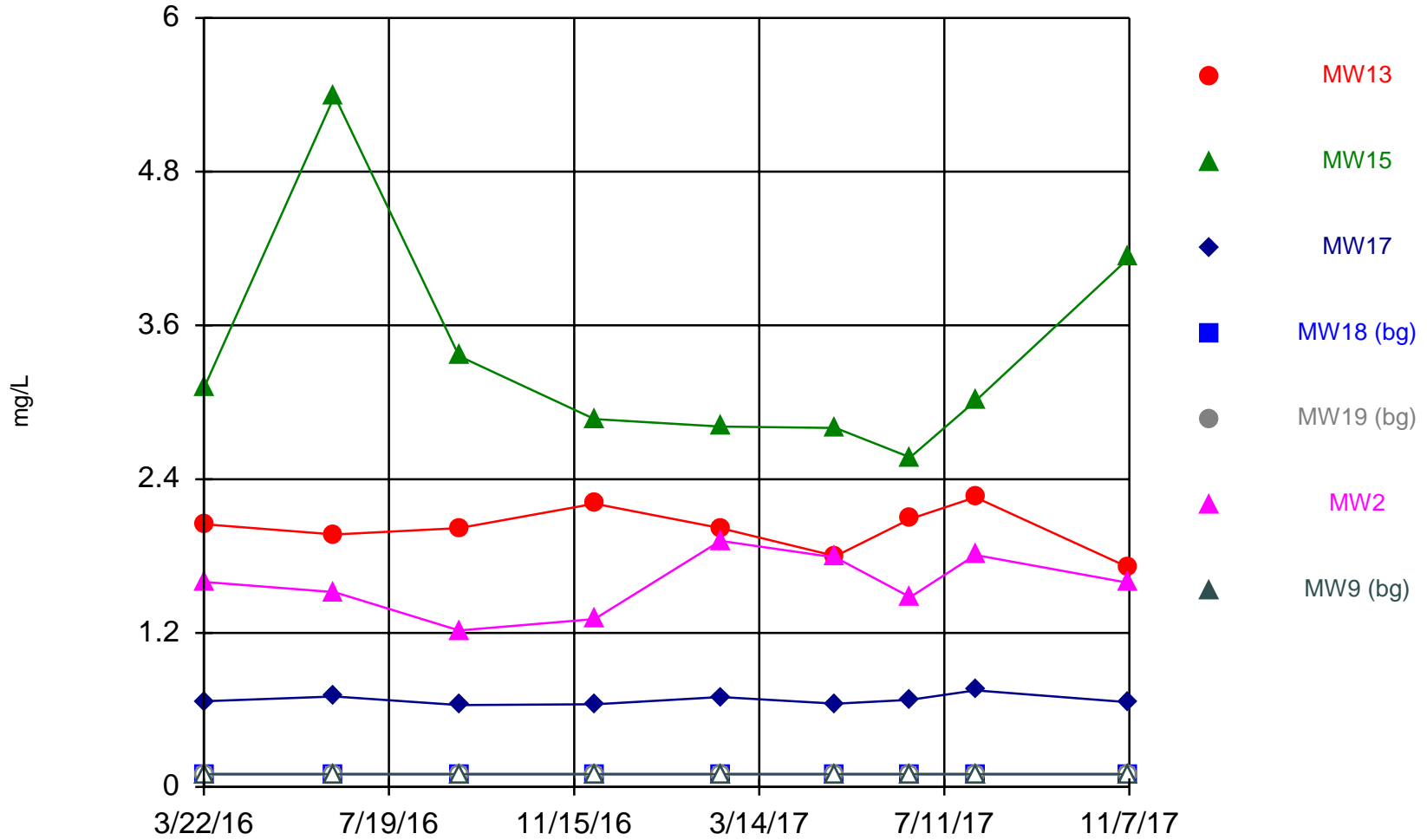
Well	Difference	Di	Significant
MW2	1.191	0.1253	Yes
MW15	0.8689	0.1253	Yes
MW13	0.701	0.1253	Yes
MW17	1.486	0.1253	Yes

Where 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 after natural log transformation. Alpha = 0.01, calculated = 0.9678, critical = 0.947. Levene's Equality of Variance test passed. Calculated = 1.728, tabulated = 2.268.

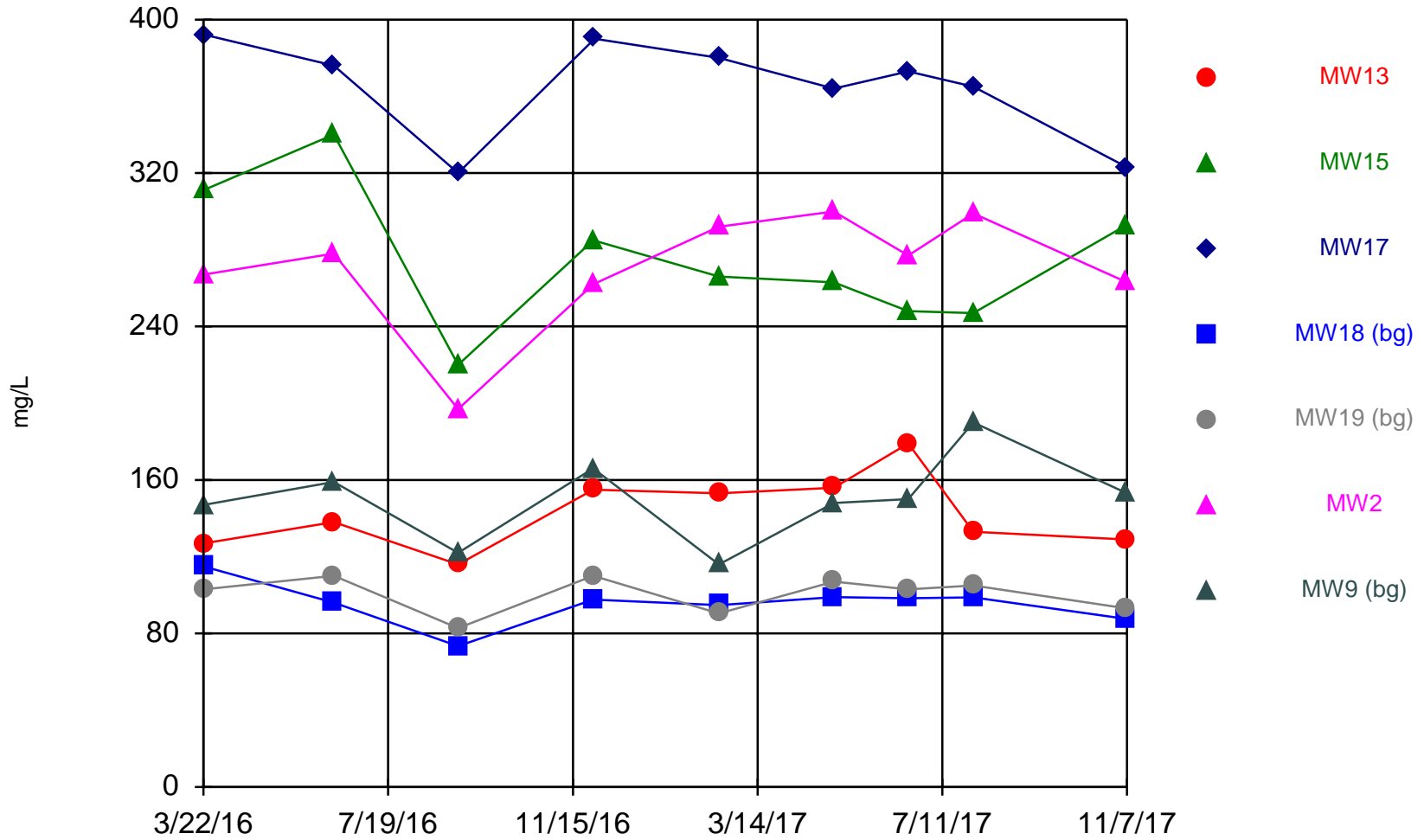
## **TIME SERIES**

### Time Series



Constituent: Boron Analysis Run 1/4/2018 10:29 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

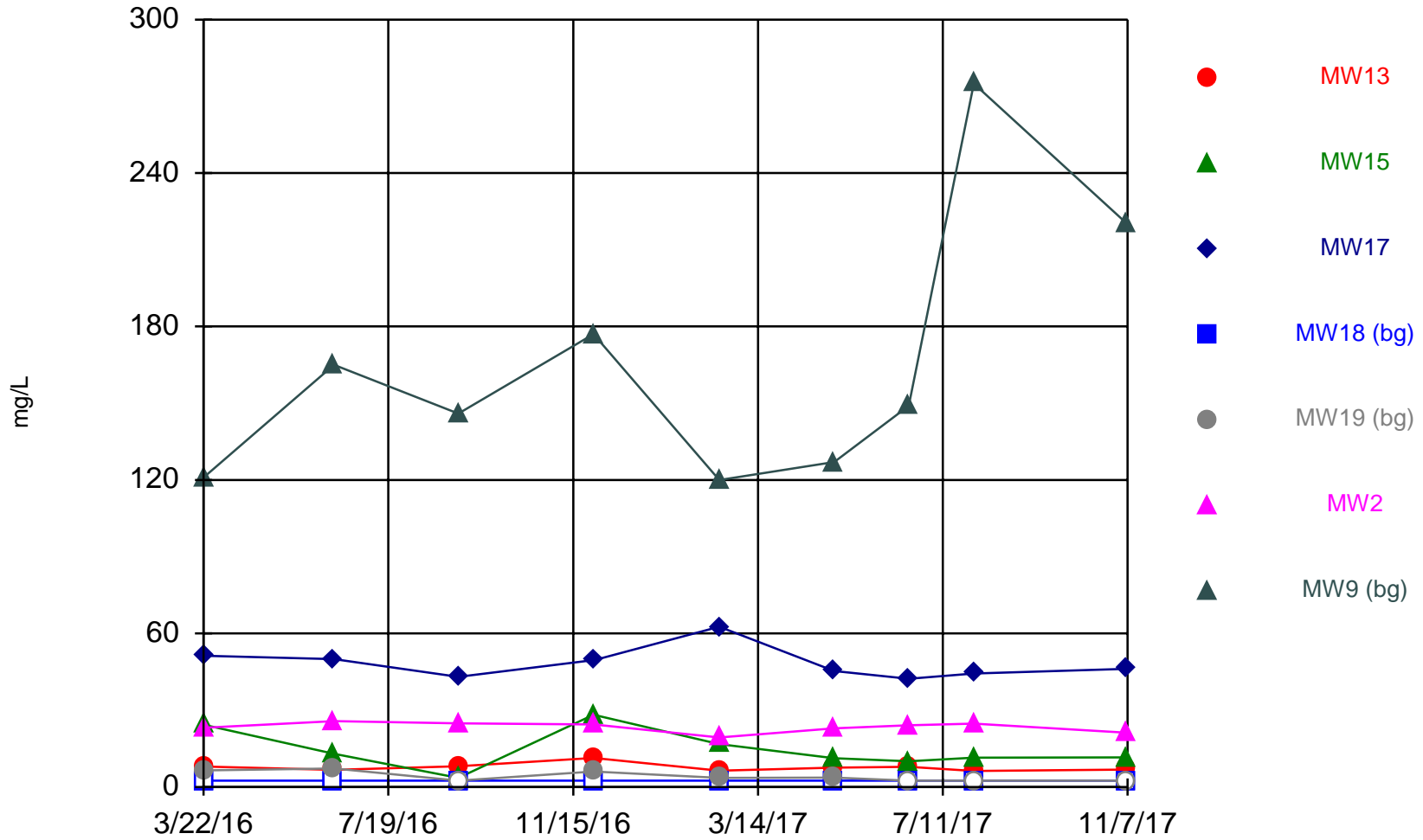
### Time Series



Constituent: Calcium Analysis Run 1/4/2018 10:29 AM

OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

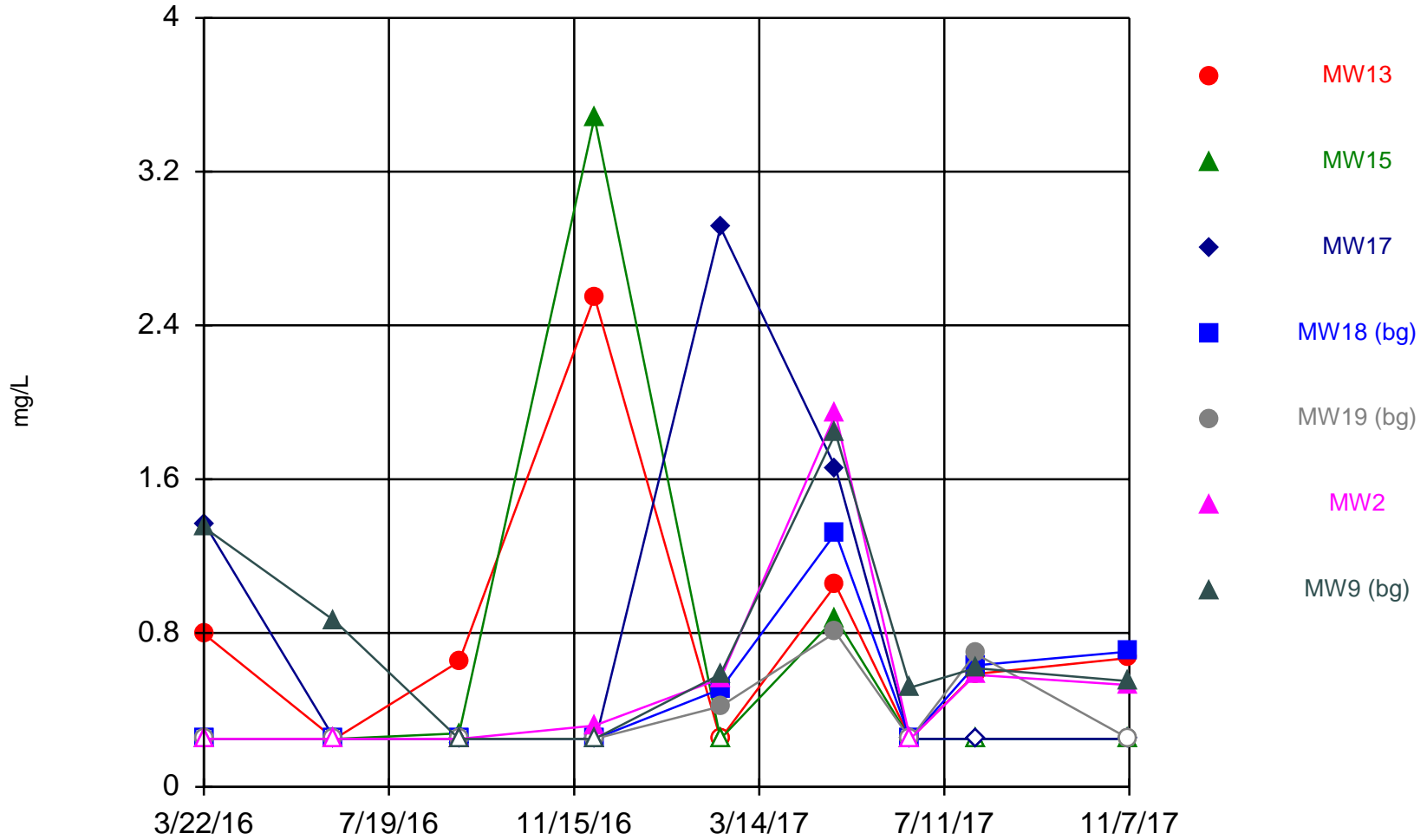
### Time Series



Constituent: Chloride Analysis Run 1/4/2018 10:29 AM

OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

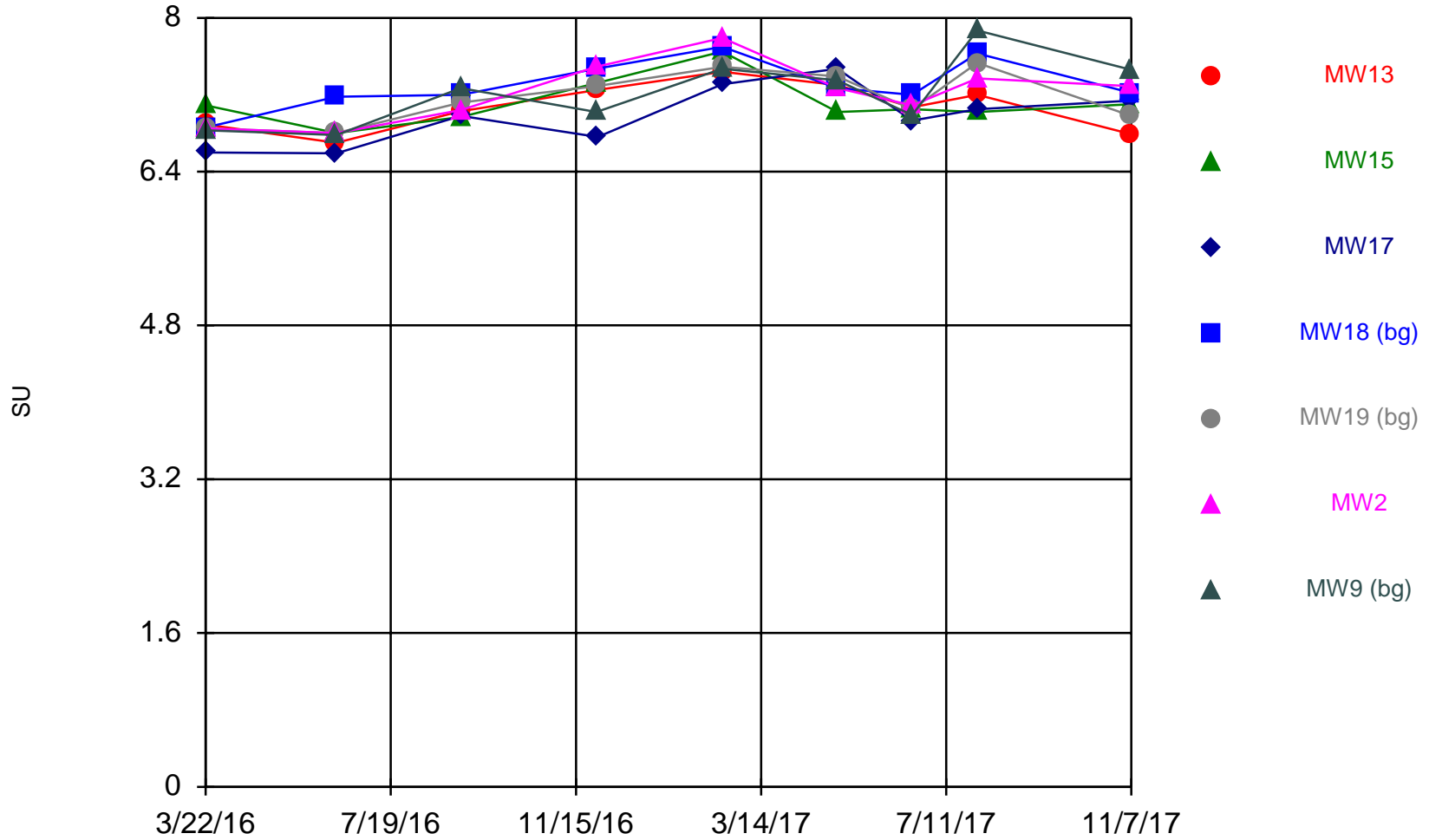
### Time Series



Constituent: Fluoride Analysis Run 1/4/2018 10:29 AM

OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

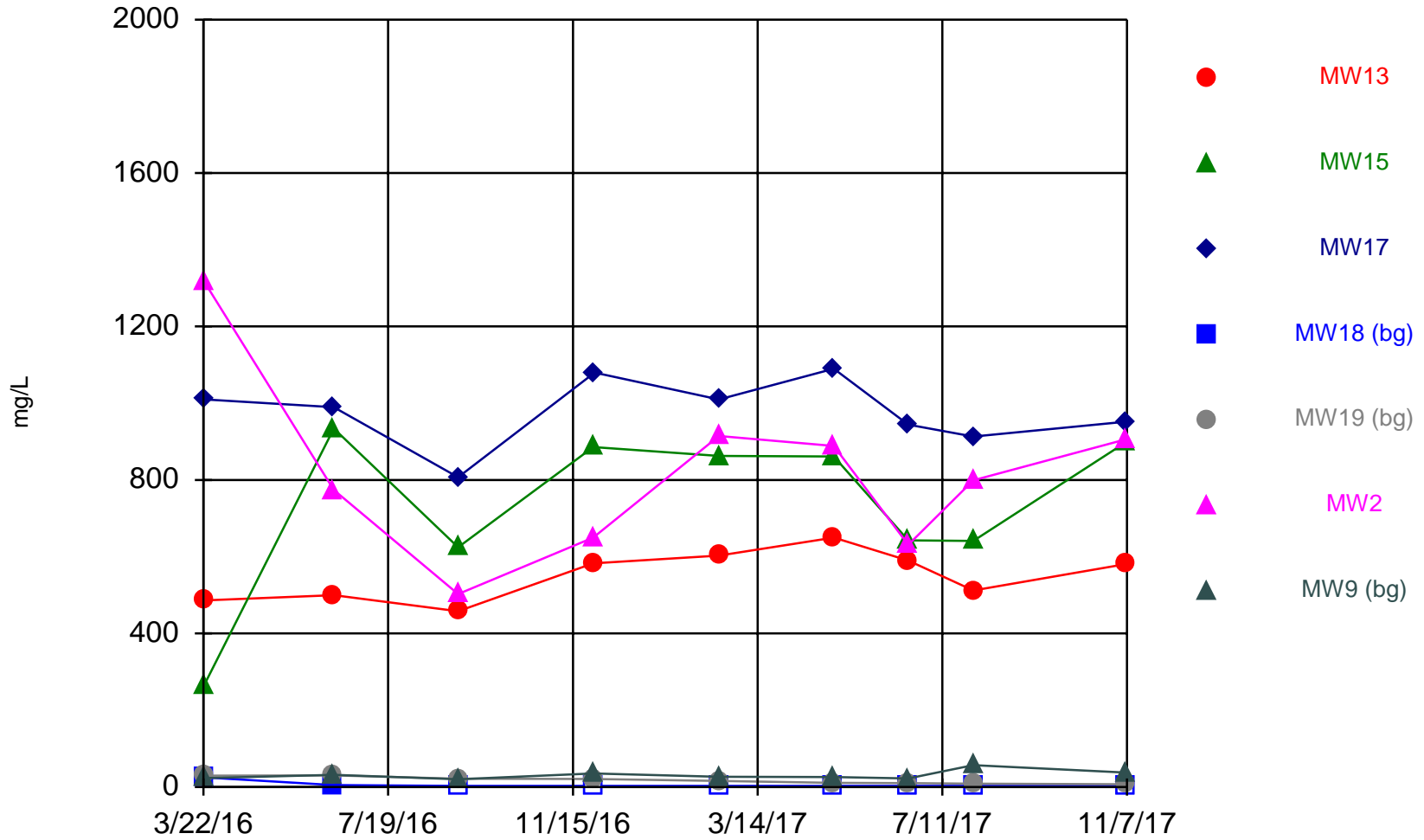
### Time Series



Constituent: pH Analysis Run 1/4/2018 10:29 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2



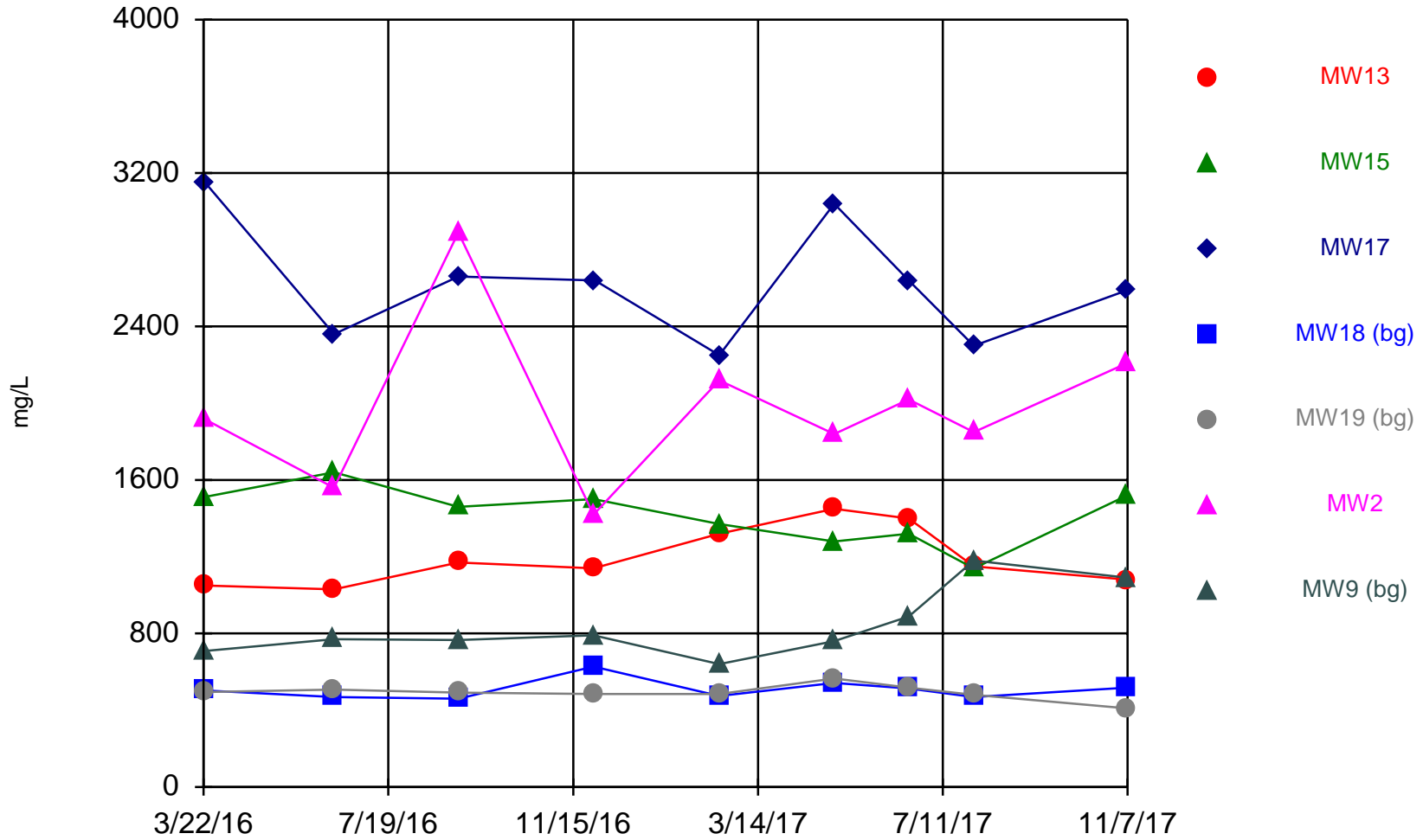
### Time Series



Constituent: Sulfate Analysis Run 1/4/2018 10:29 AM

OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

### Time Series



Constituent: Total Dissolved Solids Analysis Run 1/4/2018 10:29 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

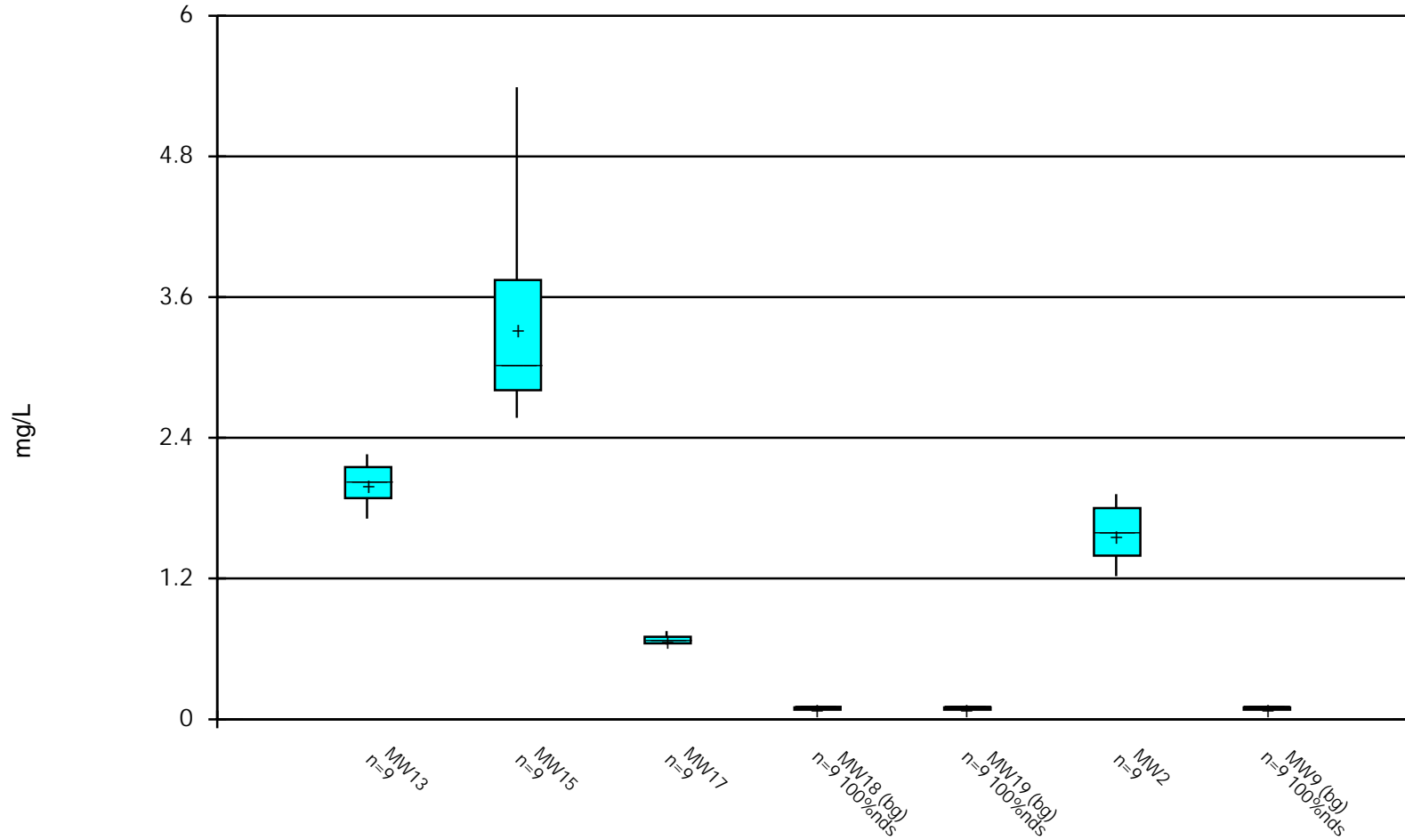
## **BOX PLOTS**

# Box & Whiskers Plot

OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2 Printed 1/4/2018, 10:31 AM

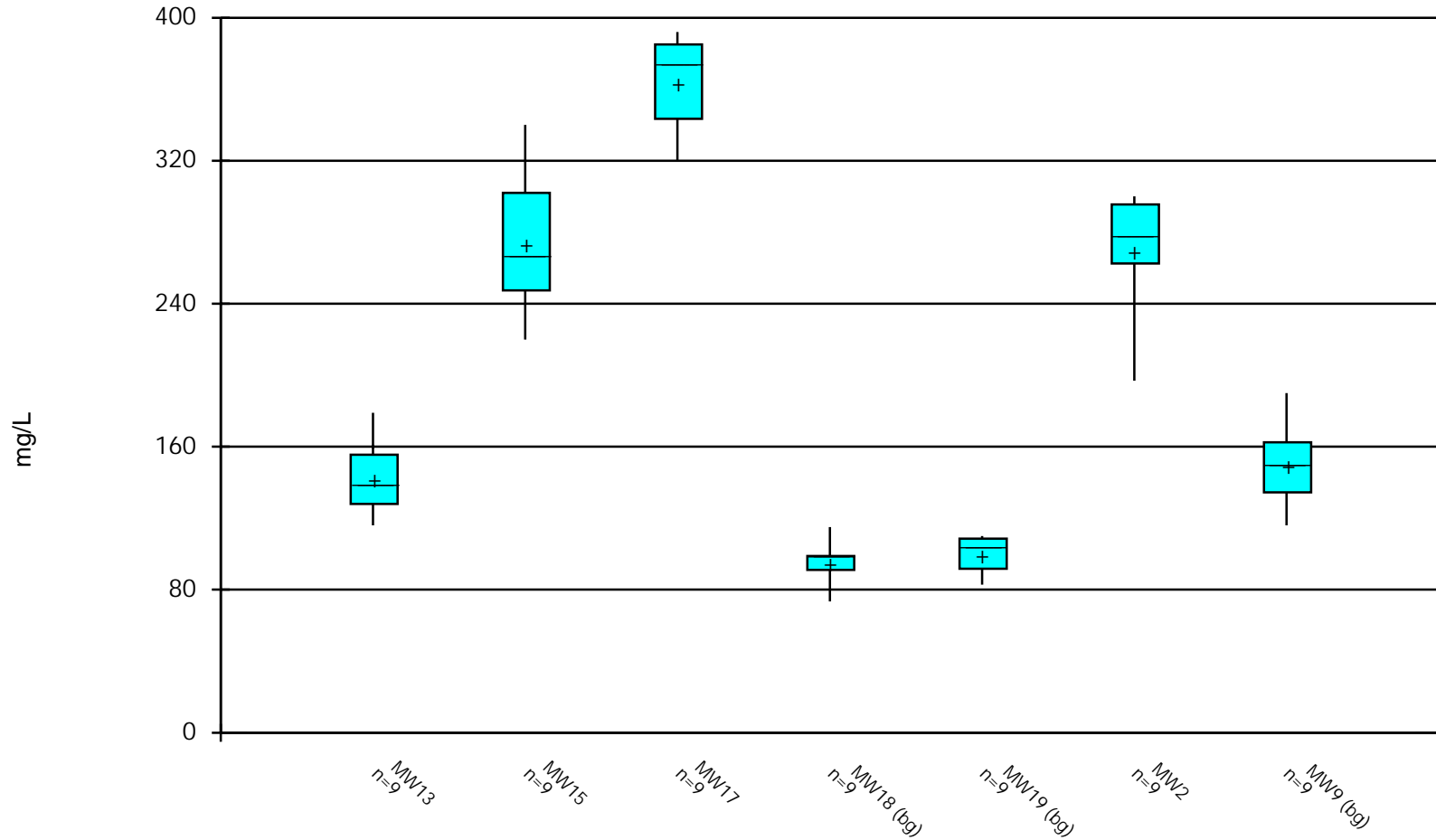
Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Boron (mg/L)	MW13	9	2.014	0.1754	0.05848	2.02	1.71	2.26	0
Boron (mg/L)	MW15	9	3.339	0.8927	0.2976	3.01	2.57	5.39	0
Boron (mg/L)	MW17	9	0.6773	0.03707	0.01236	0.668	0.637	0.753	0
Boron (mg/L)	MW18 (bg)	9	0.1	0	0	0.1	0.1	0.1	100
Boron (mg/L)	MW19 (bg)	9	0.1	0	0	0.1	0.1	0.1	100
Boron (mg/L)	MW2	9	1.582	0.2316	0.0772	1.59	1.22	1.92	0
Boron (mg/L)	MW9 (bg)	9	0.1	0	0	0.1	0.1	0.1	100
Calcium (mg/L)	MW13	9	142.9	19.41	6.471	138	116	179	0
Calcium (mg/L)	MW15	9	274.8	36.58	12.19	266	220	340	0
Calcium (mg/L)	MW17	9	364.8	26.35	8.783	373	320	392	0
Calcium (mg/L)	MW18 (bg)	9	95.61	11	3.668	97.6	73.4	115	0
Calcium (mg/L)	MW19 (bg)	9	100.5	9.52	3.173	103	82.8	110	0
Calcium (mg/L)	MW2	9	270.6	31.2	10.4	277	197	300	0
Calcium (mg/L)	MW9 (bg)	9	150.1	22.08	7.359	150	116	190	0
Chloride (mg/L)	MW13	9	7.649	1.531	0.5105	7.52	6.3	11.3	0
Chloride (mg/L)	MW15	9	14.45	7.592	2.531	11.6	3.52	28.2	0
Chloride (mg/L)	MW17	9	48.31	6.235	2.078	46.2	42.3	62.6	0
Chloride (mg/L)	MW18 (bg)	9	2.5	0	0	2.5	2.5	2.5	100
Chloride (mg/L)	MW19 (bg)	9	4.108	1.929	0.6429	3.55	2.5	7.2	44.44
Chloride (mg/L)	MW2	9	23.38	2.03	0.6768	24.1	19.3	25.7	0
Chloride (mg/L)	MW9 (bg)	9	166.7	51.56	17.19	149	120	275	0
Fluoride (mg/L)	MW13	9	0.7839	0.7171	0.239	0.652	0.25	2.55	33.33
Fluoride (mg/L)	MW15	9	0.6818	1.069	0.3565	0.25	0.25	3.48	66.67
Fluoride (mg/L)	MW17	9	0.8256	0.9562	0.3187	0.25	0.25	2.91	66.67
Fluoride (mg/L)	MW18 (bg)	9	0.4904	0.3611	0.1204	0.25	0.25	1.32	55.56
Fluoride (mg/L)	MW19 (bg)	9	0.3794	0.2181	0.0727	0.25	0.25	0.804	66.67
Fluoride (mg/L)	MW2	9	0.5481	0.5417	0.1806	0.318	0.25	1.94	44.44
Fluoride (mg/L)	MW9 (bg)	9	0.7581	0.5244	0.1748	0.585	0.25	1.84	22.22
pH (SU)	MW13	9	7.074	0.247	0.08235	7.07	6.7	7.44	0
pH (SU)	MW15	9	7.113	0.2428	0.08093	7.05	6.8	7.65	0
pH (SU)	MW17	9	6.981	0.3014	0.1005	6.98	6.59	7.47	0
pH (SU)	MW18 (bg)	9	7.303	0.2581	0.08604	7.22	6.86	7.7	0
pH (SU)	MW19 (bg)	9	7.167	0.2709	0.09029	7.12	6.8	7.53	0
pH (SU)	MW2	9	7.221	0.3143	0.1048	7.27	6.8	7.79	0
pH (SU)	MW9 (bg)	9	7.227	0.3536	0.1179	7.27	6.78	7.87	0
Sulfate (mg/L)	MW13	9	551.4	64.17	21.39	581	458	650	0
Sulfate (mg/L)	MW15	9	735	216.5	72.17	861	262	934	0
Sulfate (mg/L)	MW17	9	977.3	86.92	28.97	990	807	1090	0
Sulfate (mg/L)	MW18 (bg)	9	5.256	7.376	2.459	2.5	2.5	24.8	77.78
Sulfate (mg/L)	MW19 (bg)	9	17.04	8.818	2.939	15.7	6.91	29.9	0
Sulfate (mg/L)	MW2	9	820.9	234.3	78.09	799	503	1320	0
Sulfate (mg/L)	MW9 (bg)	9	30.94	11.55	3.85	26.2	19.9	57.1	0
Total Dissolved Solids (mg/L)	MW13	9	1199	154	51.33	1150	1030	1450	0
Total Dissolved Solids (mg/L)	MW15	9	1416	152	50.67	1460	1140	1640	0
Total Dissolved Solids (mg/L)	MW17	9	2626	309.7	103.2	2640	2250	3150	0
Total Dissolved Solids (mg/L)	MW18 (bg)	9	508.4	52.88	17.63	504	460	628	0
Total Dissolved Solids (mg/L)	MW19 (bg)	9	492.9	40.93	13.64	492	410	566	0
Total Dissolved Solids (mg/L)	MW2	9	1981	423.1	141	1920	1420	2890	0
Total Dissolved Solids (mg/L)	MW9 (bg)	9	843.6	179.2	59.74	770	640	1180	0

### Box & Whiskers Plot



Constituent: Boron Analysis Run 1/4/2018 10:30 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

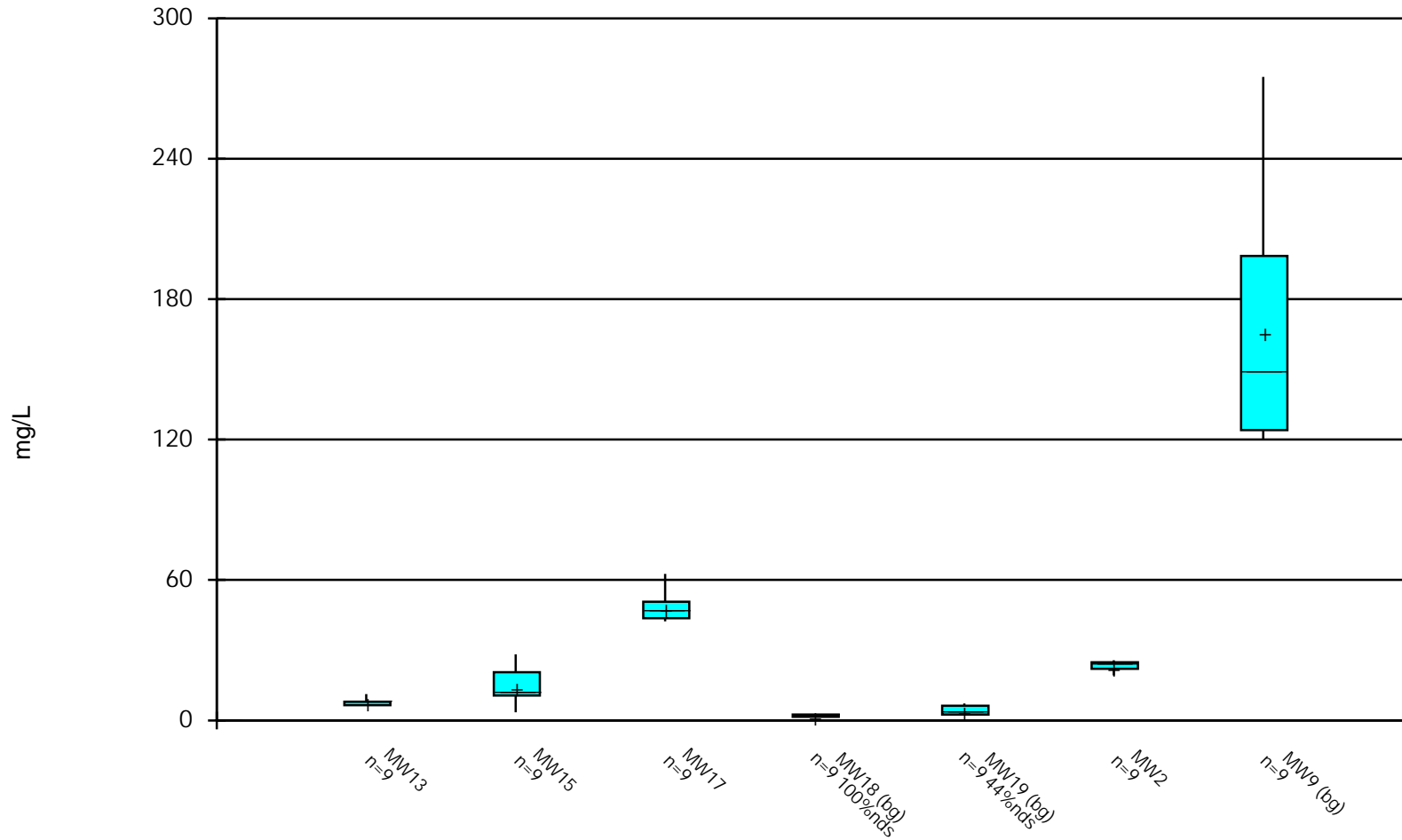
### Box & Whiskers Plot



Constituent: Calcium Analysis Run 1/4/2018 10:30 AM

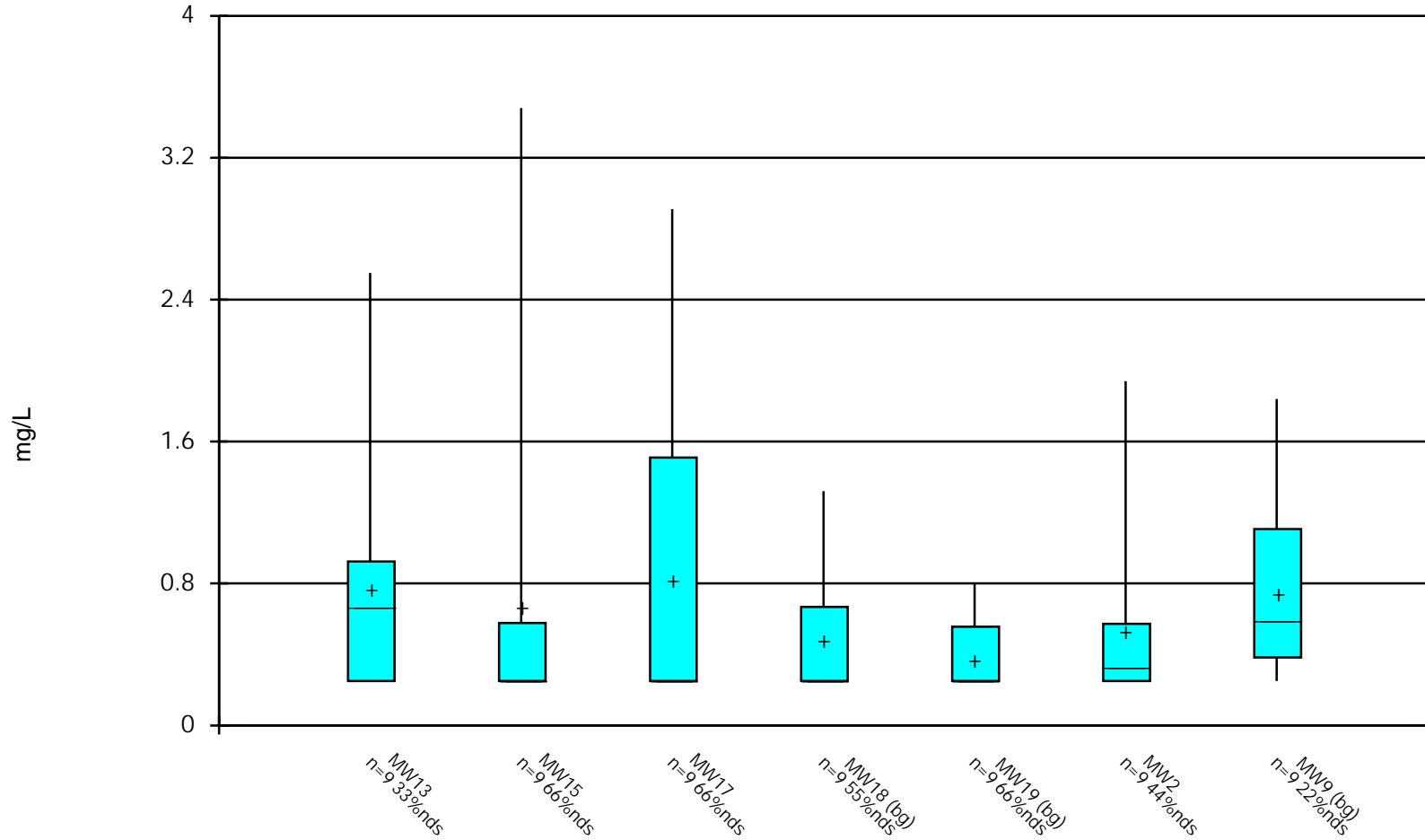
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

### Box & Whiskers Plot



Constituent: Chloride Analysis Run 1/4/2018 10:30 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

### Box & Whiskers Plot

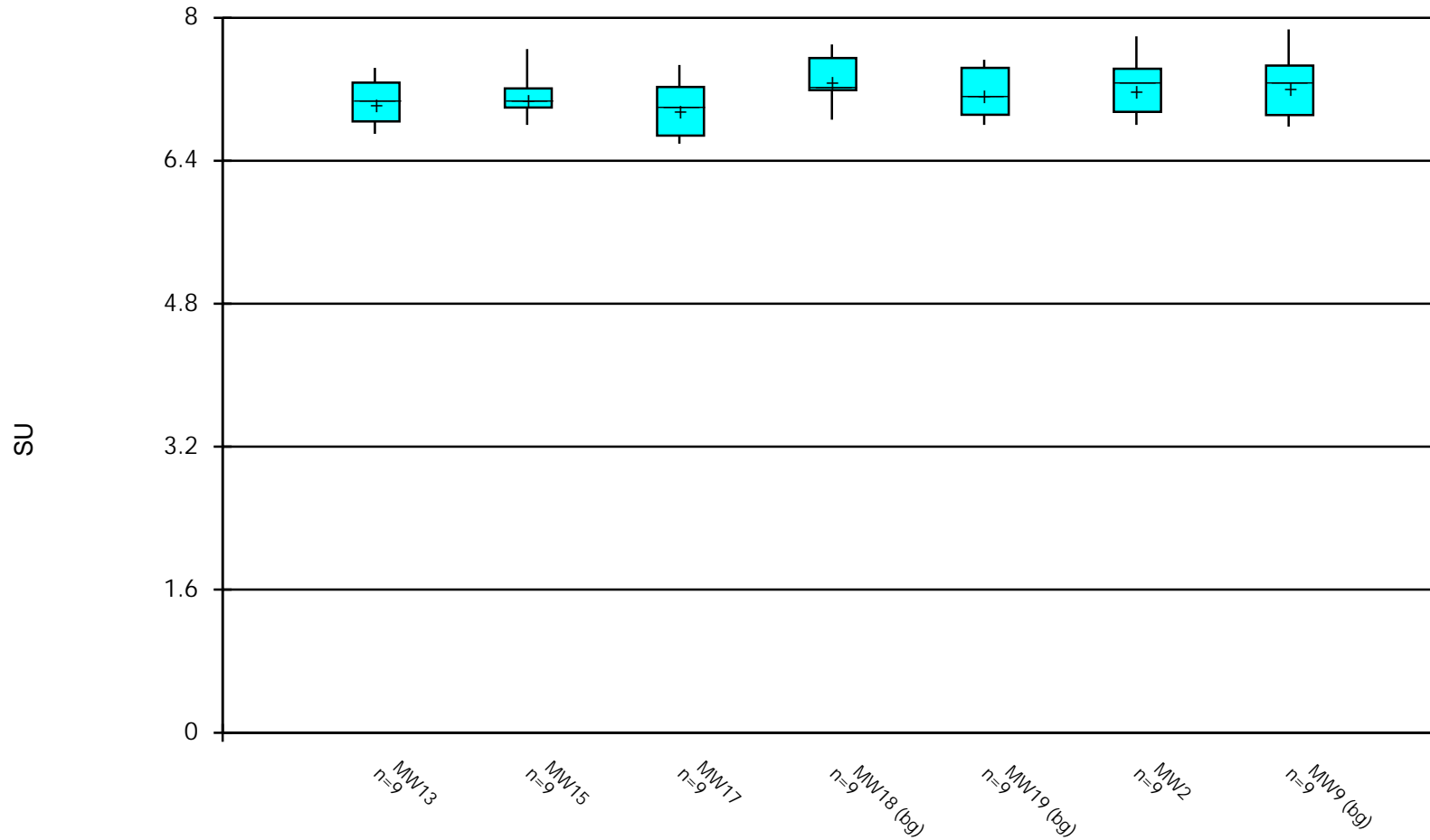


Constituent: Fluoride Analysis Run 1/4/2018 10:30 AM

OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

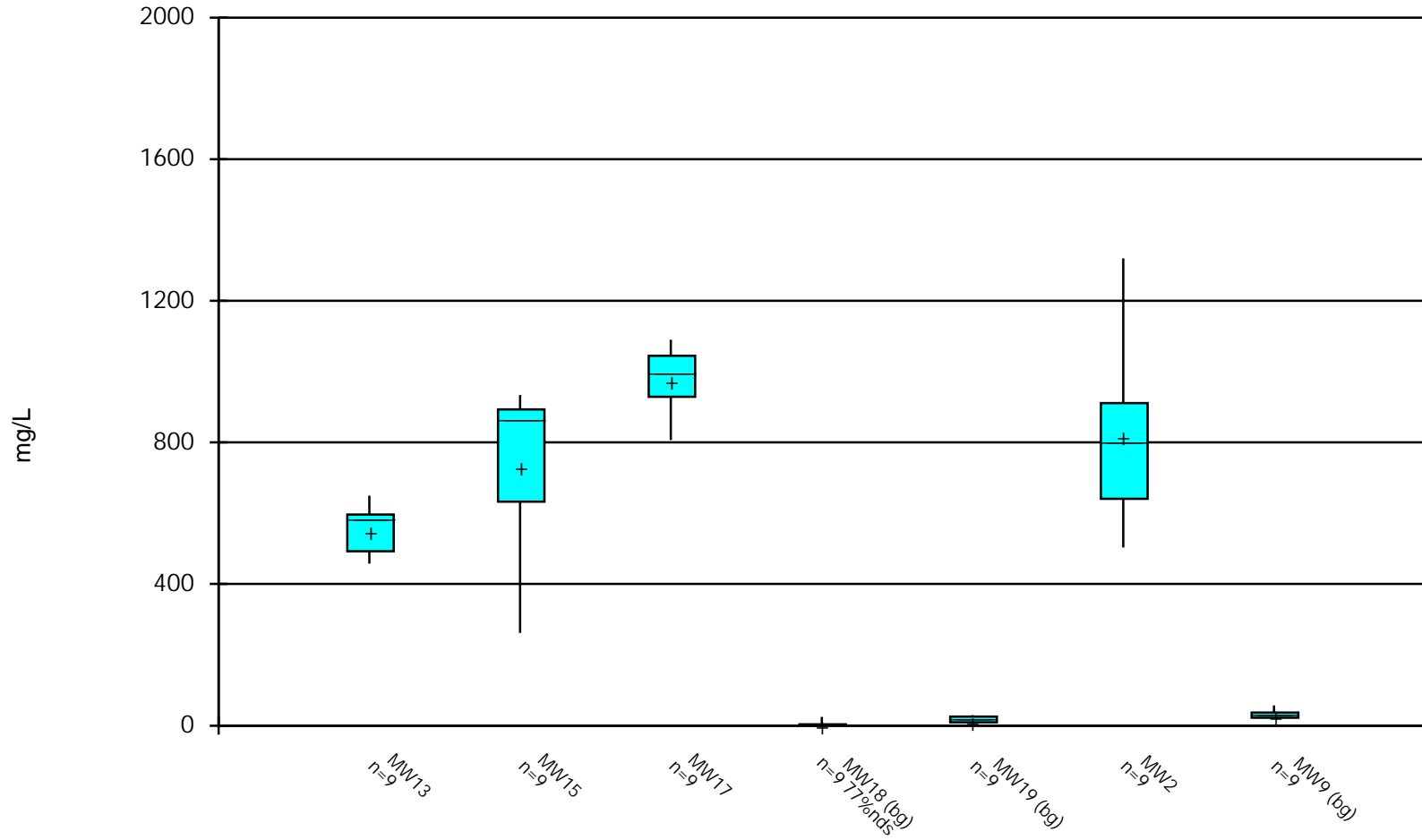


### Box & Whiskers Plot



Constituent: pH Analysis Run 1/4/2018 10:30 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

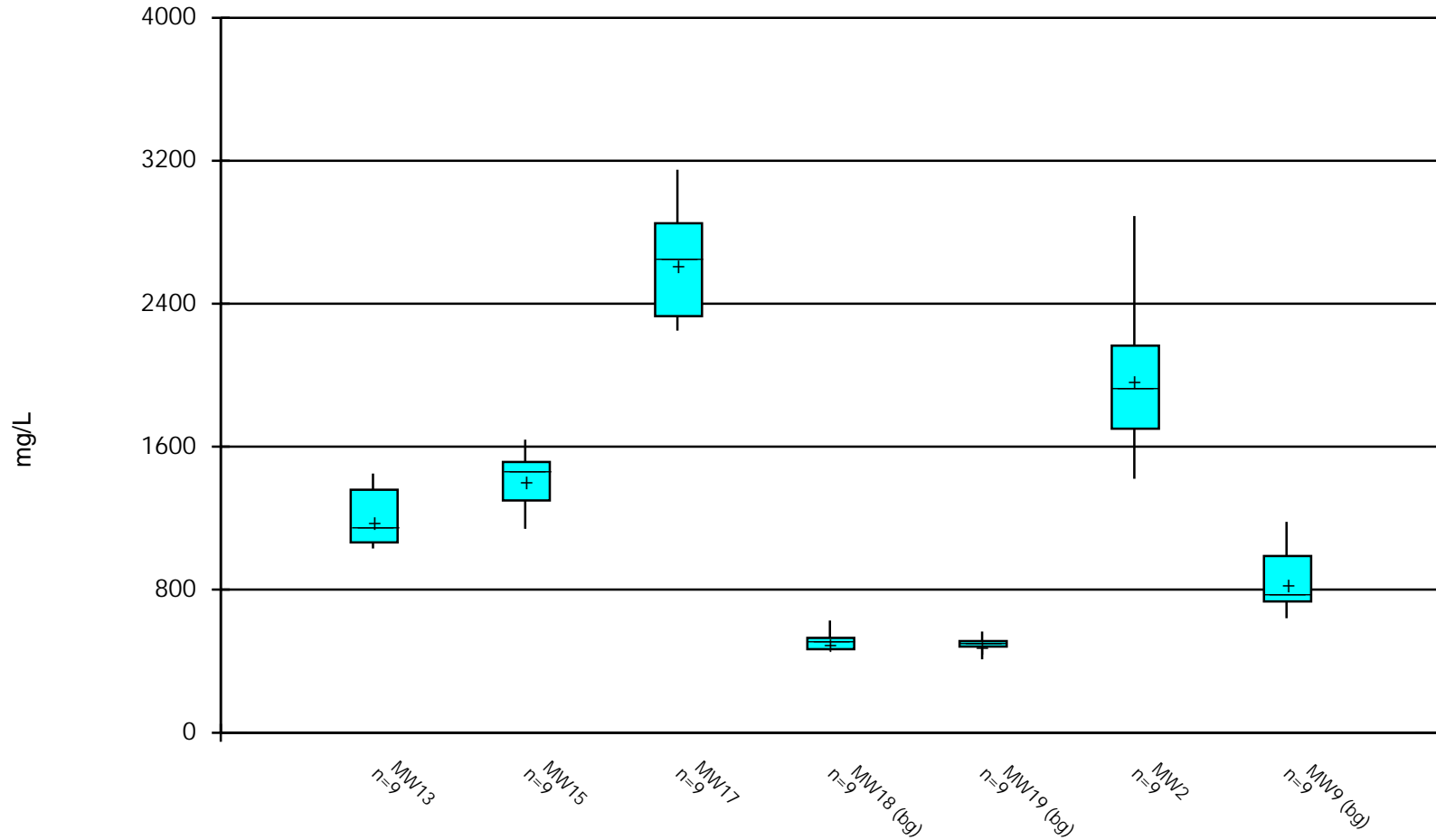
### Box & Whiskers Plot



Constituent: Sulfate Analysis Run 1/4/2018 10:30 AM

OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

### Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 1/4/2018 10:30 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

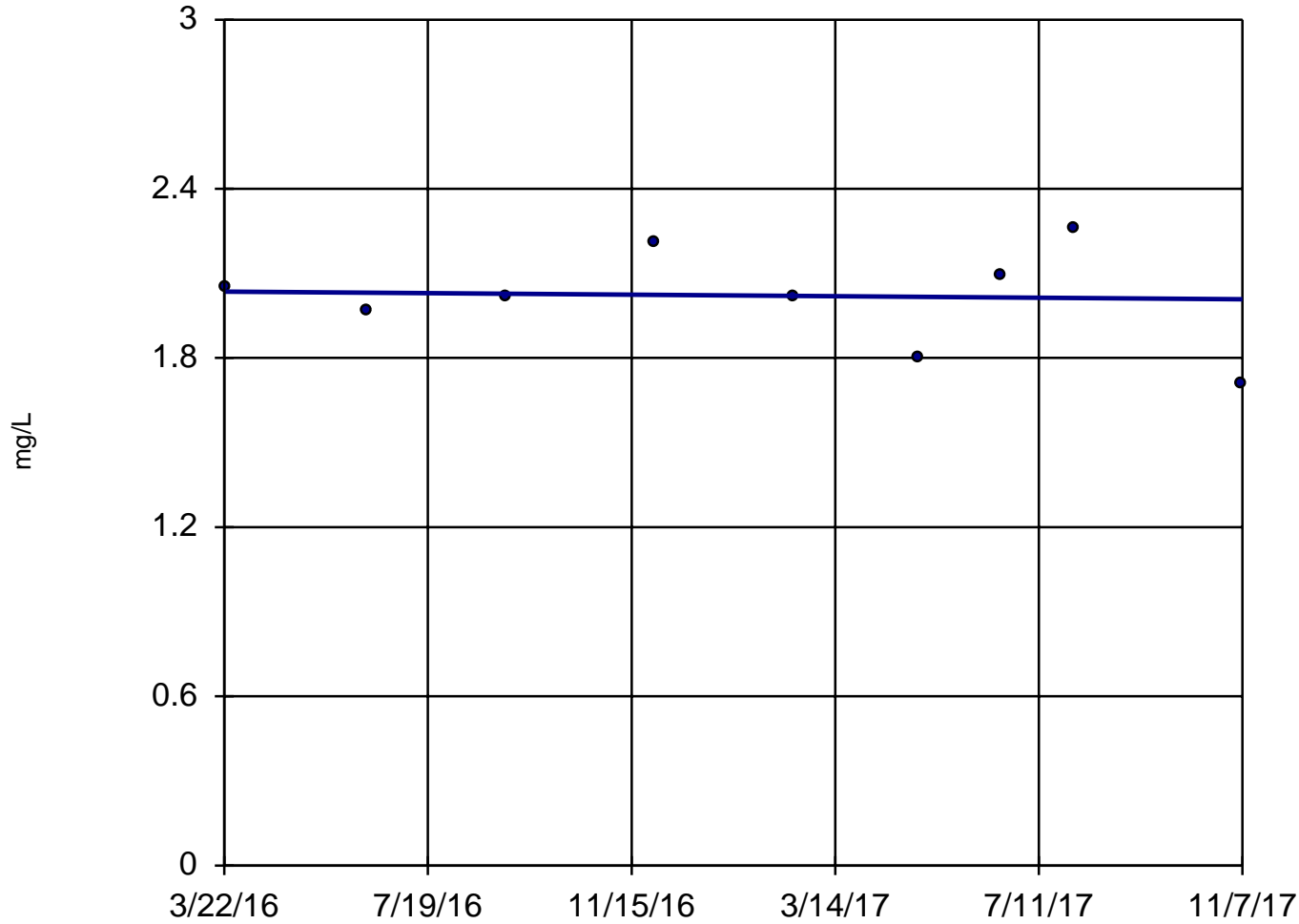
## **TREND ANALYSES**

# Trend Test

OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2 Printed 1/4/2018, 10:34 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	MW13	-0.01649	-1	-23	No	9	0	n/a	n/a	0.02	NP
Boron (mg/L)	MW15	-0.3043	-10	-23	No	9	0	n/a	n/a	0.02	NP
Boron (mg/L)	MW17	0.01756	6	23	No	9	0	n/a	n/a	0.02	NP
Boron (mg/L)	MW18 (bg)	0	0	23	No	9	100	n/a	n/a	0.02	NP
Boron (mg/L)	MW19 (bg)	0	0	23	No	9	100	n/a	n/a	0.02	NP
Boron (mg/L)	MW2	0.1627	6	23	No	9	0	n/a	n/a	0.02	NP
Boron (mg/L)	MW9 (bg)	0	0	23	No	9	100	n/a	n/a	0.02	NP
Calcium (mg/L)	MW13	12.9	8	23	No	9	0	n/a	n/a	0.02	NP
Calcium (mg/L)	MW15	-42.72	-12	-23	No	9	0	n/a	n/a	0.02	NP
Calcium (mg/L)	MW17	-23.09	-16	-23	No	9	0	n/a	n/a	0.02	NP
Calcium (mg/L)	MW18 (bg)	-1.159	-2	-23	No	9	0	n/a	n/a	0.02	NP
Calcium (mg/L)	MW19 (bg)	-3.915	-4	-23	No	9	0	n/a	n/a	0.02	NP
Calcium (mg/L)	MW2	19.6	8	23	No	9	0	n/a	n/a	0.02	NP
Calcium (mg/L)	MW9 (bg)	12.43	10	23	No	9	0	n/a	n/a	0.02	NP
Chloride (mg/L)	MW13	-0.4598	-10	-23	No	9	0	n/a	n/a	0.02	NP
Chloride (mg/L)	MW15	-5.093	-8	-23	No	9	0	n/a	n/a	0.02	NP
Chloride (mg/L)	MW17	-3.687	-12	-23	No	9	0	n/a	n/a	0.02	NP
Chloride (mg/L)	MW18 (bg)	0	0	23	No	9	100	n/a	n/a	0.02	NP
Chloride (mg/L)	MW19 (bg)	-2.761	-20	-23	No	9	44.44	n/a	n/a	0.02	NP
Chloride (mg/L)	MW2	-1.086	-10	-23	No	9	0	n/a	n/a	0.02	NP
Chloride (mg/L)	MW9 (bg)	50.63	14	23	No	9	0	n/a	n/a	0.02	NP
Fluoride (mg/L)	MW13	0	-1	-23	No	9	33.33	n/a	n/a	0.02	NP
Fluoride (mg/L)	MW15	0	-3	-23	No	9	66.67	n/a	n/a	0.02	NP
Fluoride (mg/L)	MW17	0	-5	-23	No	9	66.67	n/a	n/a	0.02	NP
Fluoride (mg/L)	MW18 (bg)	0.2798	18	23	No	9	55.56	n/a	n/a	0.02	NP
Fluoride (mg/L)	MW19 (bg)	0	9	23	No	9	66.67	n/a	n/a	0.02	NP
Fluoride (mg/L)	MW2	0.2116	16	23	No	9	44.44	n/a	n/a	0.02	NP
Fluoride (mg/L)	MW9 (bg)	-0.126	-3	-23	No	9	22.22	n/a	n/a	0.02	NP
pH (SU)	MW13	0.1312	6	23	No	9	0	n/a	n/a	0.02	NP
pH (SU)	MW15	0.08805	7	23	No	9	0	n/a	n/a	0.02	NP
pH (SU)	MW17	0.3524	18	23	No	9	0	n/a	n/a	0.02	NP
pH (SU)	MW18 (bg)	0.1632	15	23	No	9	0	n/a	n/a	0.02	NP
pH (SU)	MW19 (bg)	0.3021	12	23	No	9	0	n/a	n/a	0.02	NP
pH (SU)	MW2	0.3485	14	23	No	9	0	n/a	n/a	0.02	NP
pH (SU)	MW9 (bg)	0.4672	18	23	No	9	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	MW13	60.1	12	23	No	9	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	MW15	16.22	2	23	No	9	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	MW17	-40.51	-5	-23	No	9	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	MW18 (bg)	0	-15	-23	No	9	77.78	n/a	n/a	0.02	NP
<b>Sulfate (mg/L)</b>	<b>MW19 (bg)</b>	<b>-15.82</b>	<b>-34</b>	<b>-23</b>	<b>Yes</b>	<b>9</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.02</b>	<b>NP</b>
Sulfate (mg/L)	MW2	5.523	0	23	No	9	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	MW9 (bg)	6.186	10	23	No	9	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	MW13	118.6	10	23	No	9	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	MW15	-201.2	-16	-23	No	9	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	MW17	-91.05	-11	-23	No	9	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	MW18 (bg)	8.692	5	23	No	9	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	MW19 (bg)	-13.87	-13	-23	No	9	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	MW2	151.4	6	23	No	9	0	n/a	n/a	0.02	NP
Total Dissolved Solids (mg/L)	MW9 (bg)	202.4	18	23	No	9	0	n/a	n/a	0.02	NP

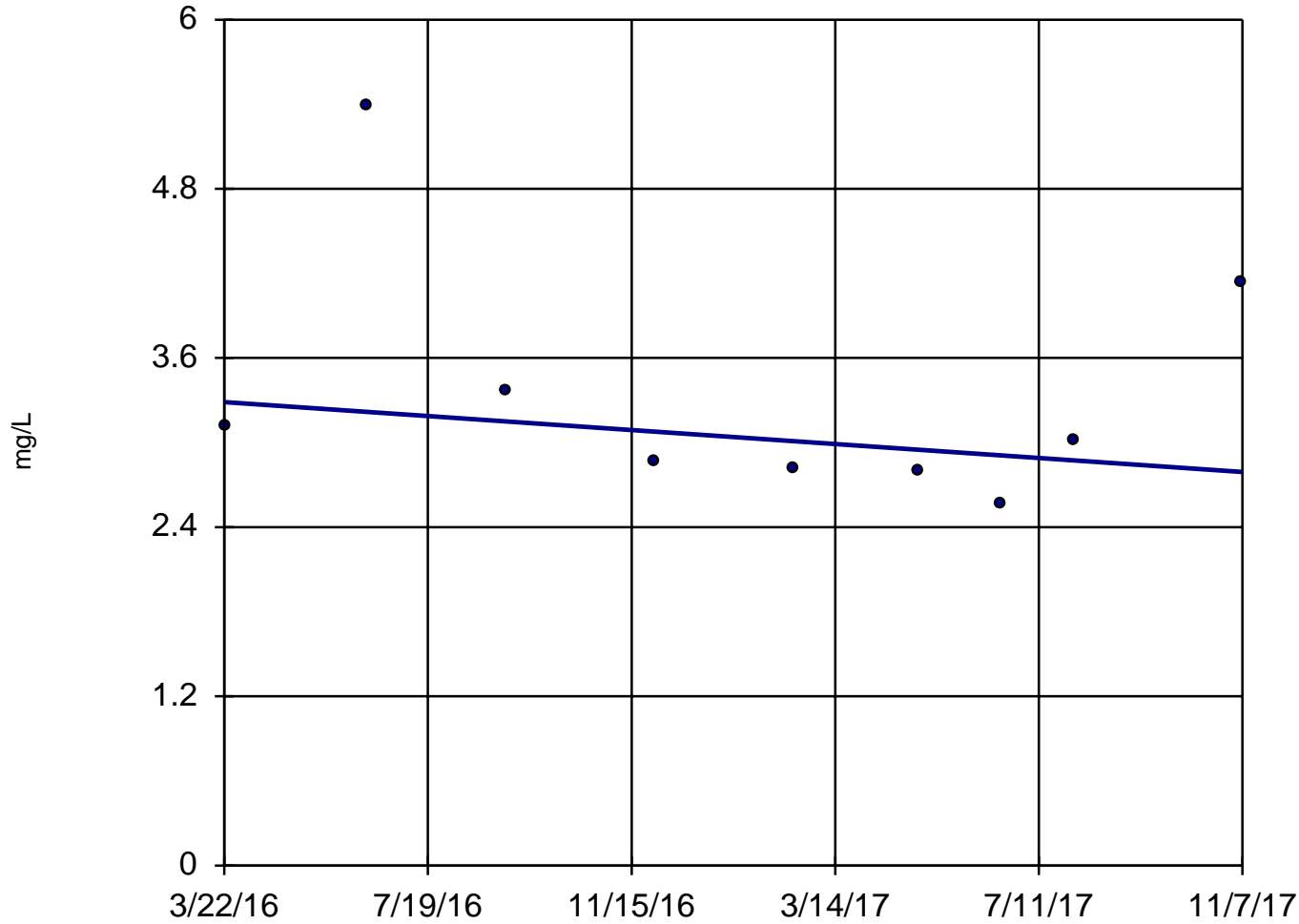
## Sen's Slope Estimator MW13



n = 9  
Slope = -0.01649  
units per year.  
Mann-Kendall  
statistic = -1  
critical = -23  
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Boron Analysis Run 1/4/2018 10:33 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

### Sen's Slope Estimator MW15

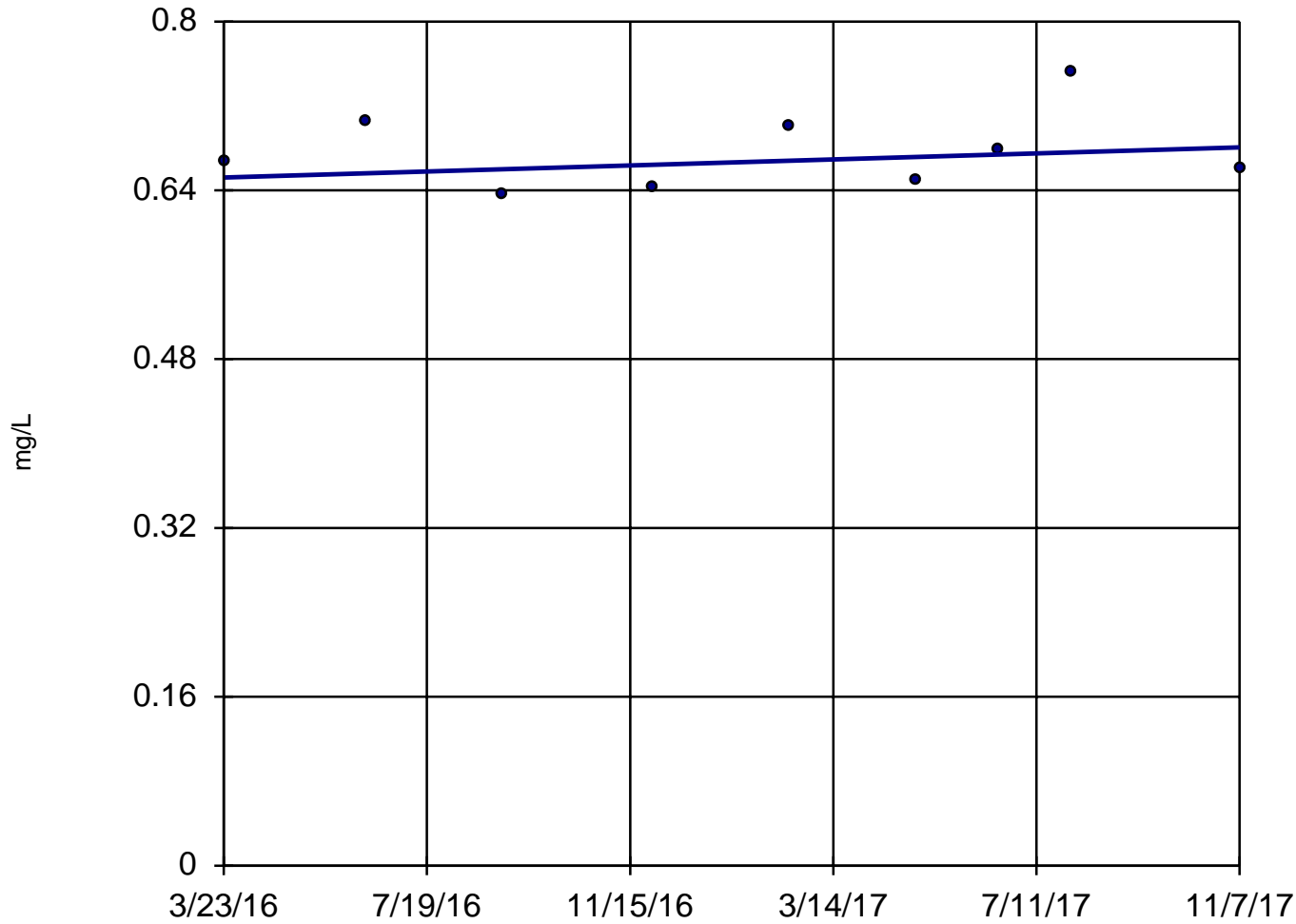


n = 9  
Slope = -0.3043  
units per year.  
Mann-Kendall  
statistic = -10  
critical = -23  
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Boron Analysis Run 1/4/2018 10:33 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

### Sen's Slope Estimator

MW17



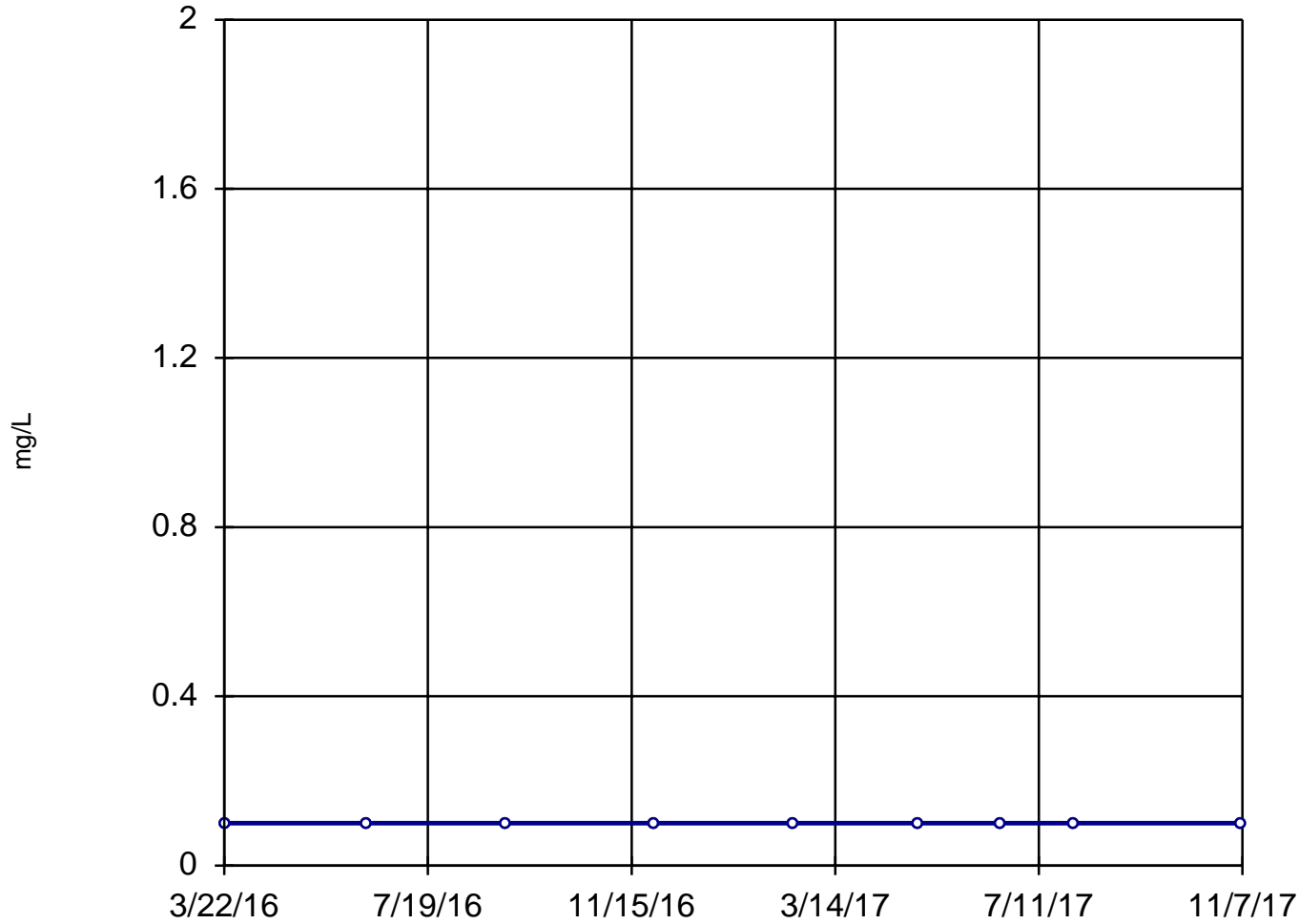
n = 9  
Slope = 0.01756  
units per year.  
Mann-Kendall  
statistic = 6  
critical = 23  
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Boron Analysis Run 1/4/2018 10:33 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2



## Sen's Slope Estimator

MW18 (bg)



n = 9

Slope = 0  
units per year.

Mann-Kendall  
statistic = 0  
critical = 23

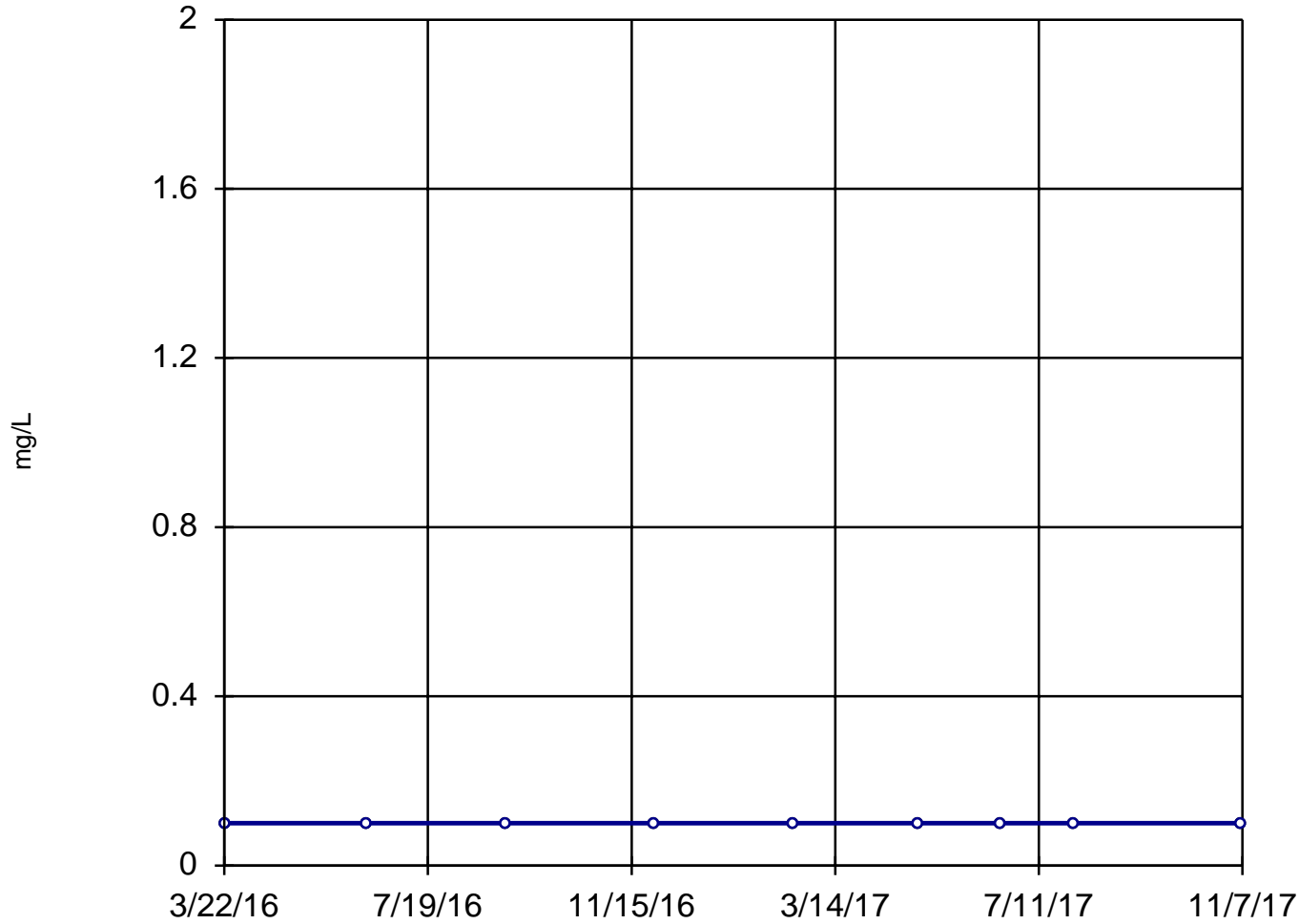
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Boron Analysis Run 1/4/2018 10:33 AM

OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

## Sen's Slope Estimator

MW19 (bg)

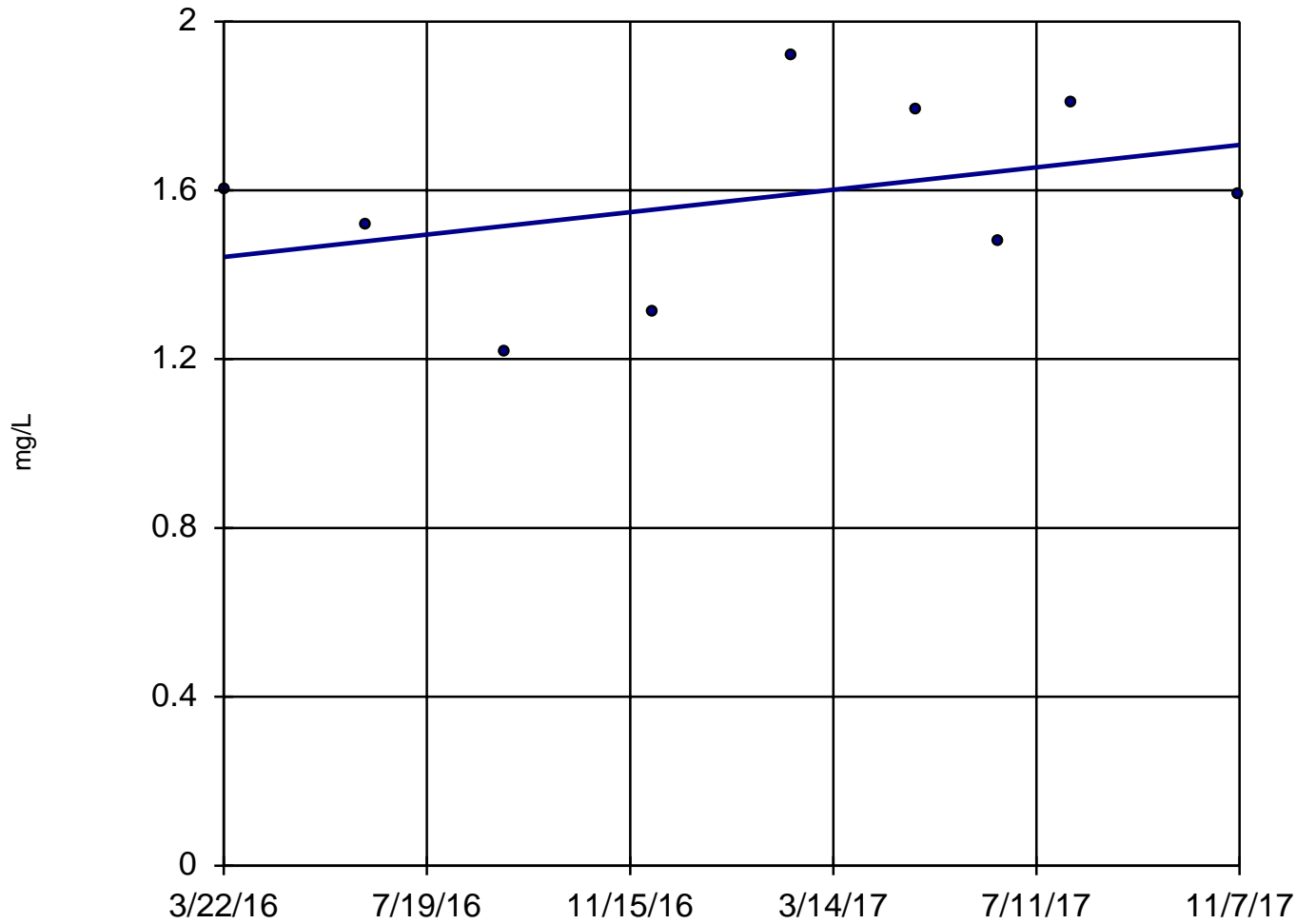


n = 9  
Slope = 0  
units per year.  
Mann-Kendall  
statistic = 0  
critical = 23  
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Boron Analysis Run 1/4/2018 10:33 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

## Sen's Slope Estimator

MW2



n = 9

Slope = 0.1627  
units per year.

Mann-Kendall  
statistic = 6  
critical = 23

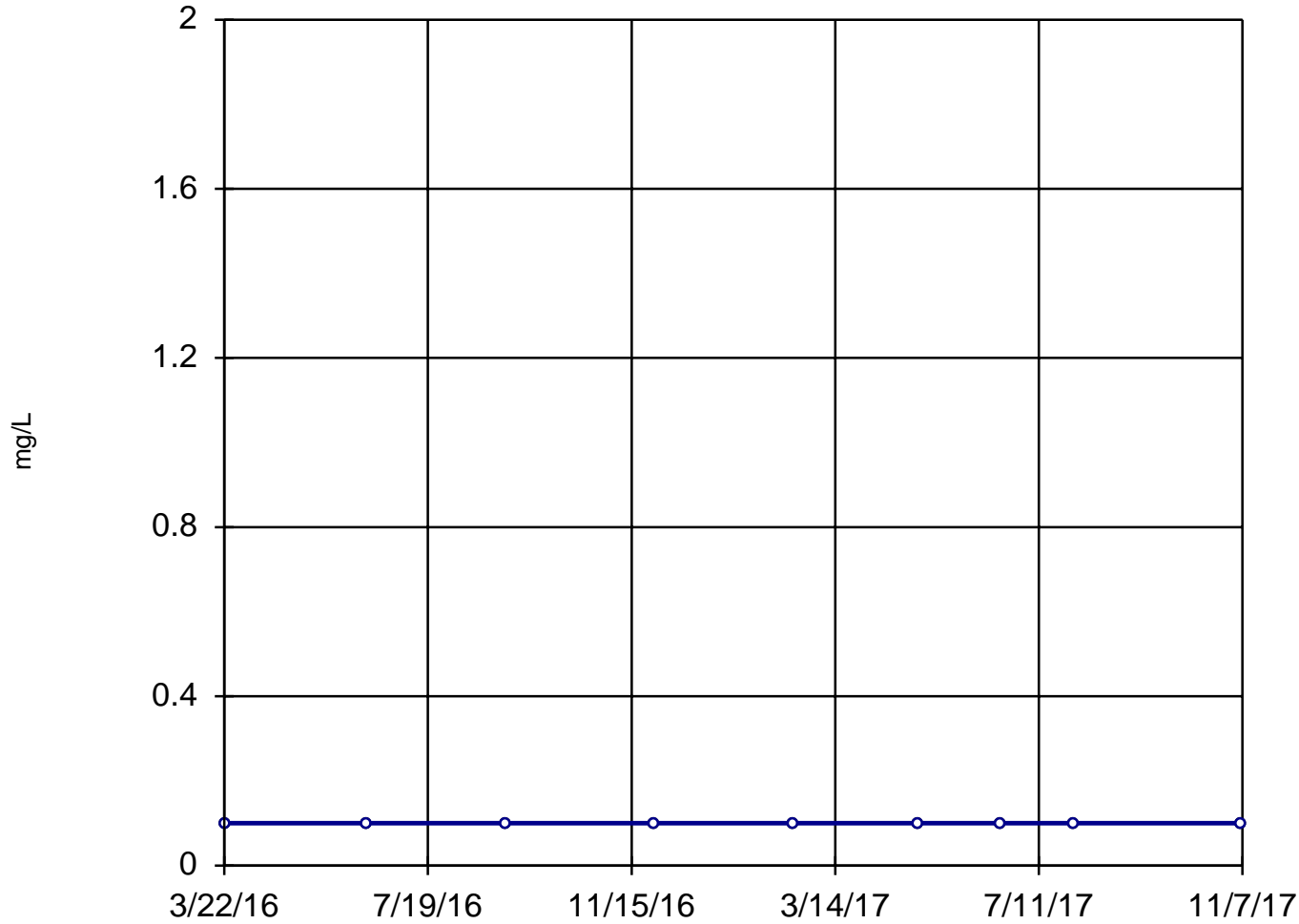
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Boron Analysis Run 1/4/2018 10:33 AM

OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

## Sen's Slope Estimator

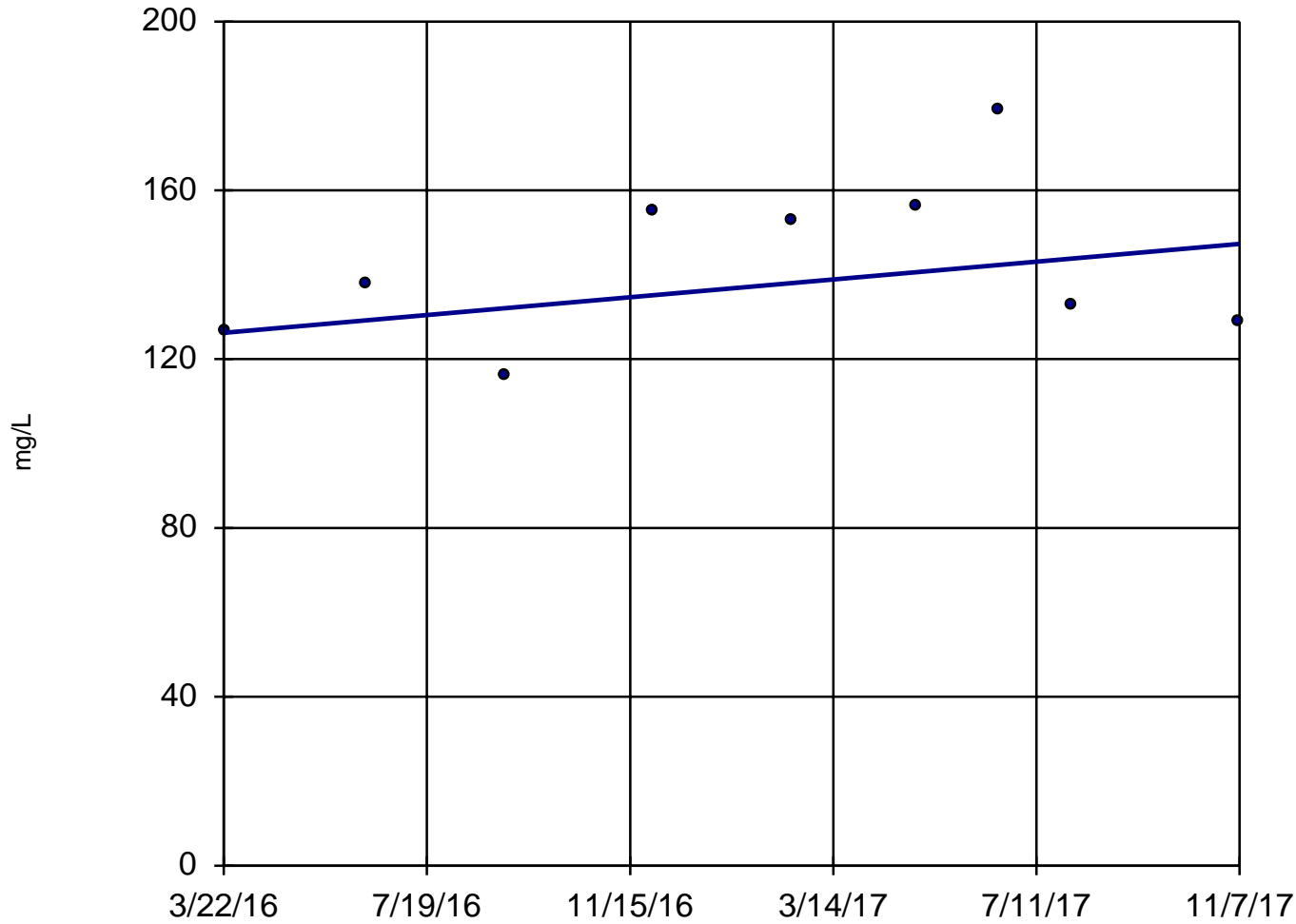
MW9 (bg)



n = 9  
Slope = 0  
units per year.  
Mann-Kendall  
statistic = 0  
critical = 23  
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Boron Analysis Run 1/4/2018 10:33 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

## Sen's Slope Estimator MW13



n = 9

Slope = 12.9  
units per year.

Mann-Kendall  
statistic = 8  
critical = 23

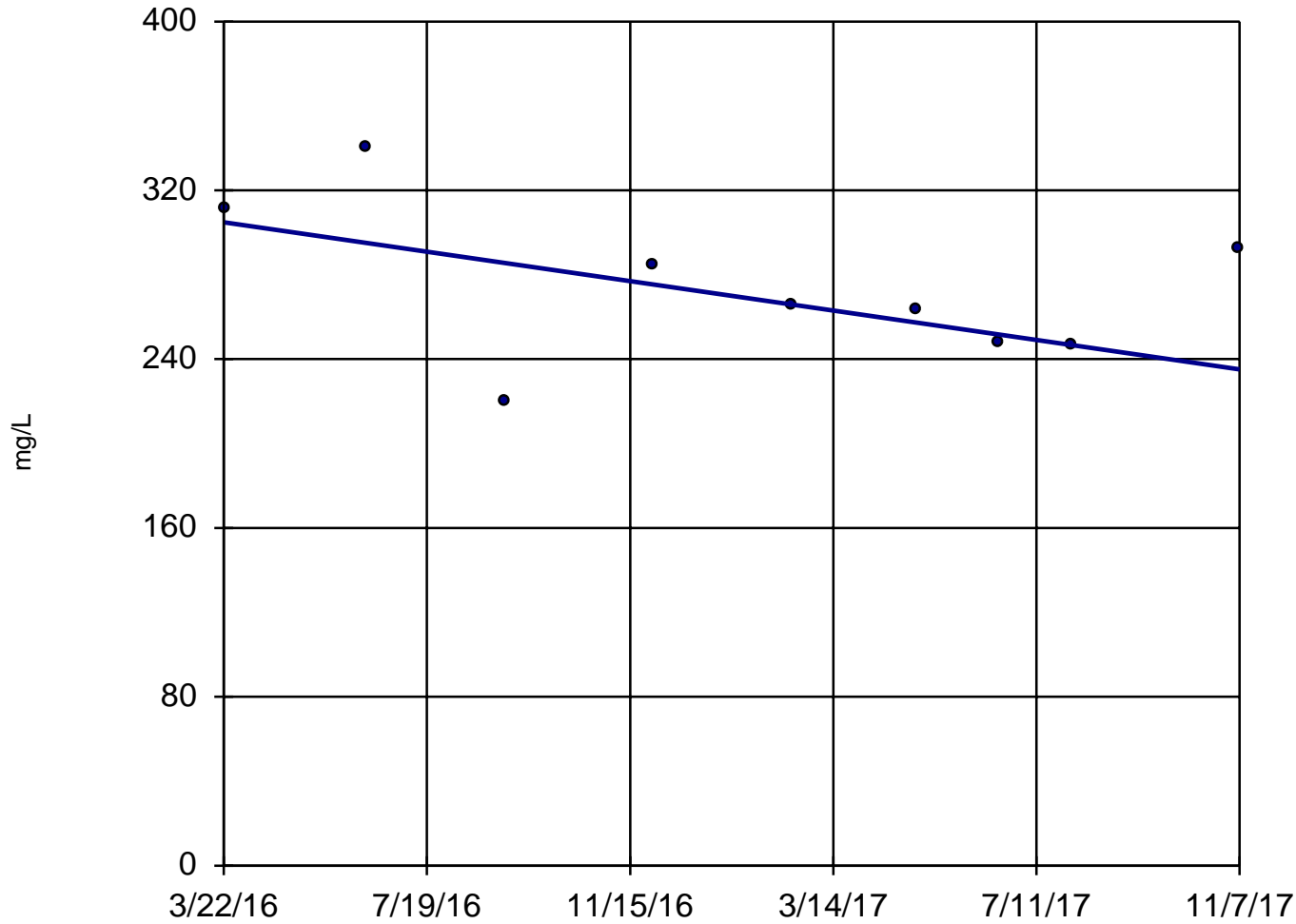
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Calcium Analysis Run 1/4/2018 10:33 AM

OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

# Sen's Slope Estimator

## MW15



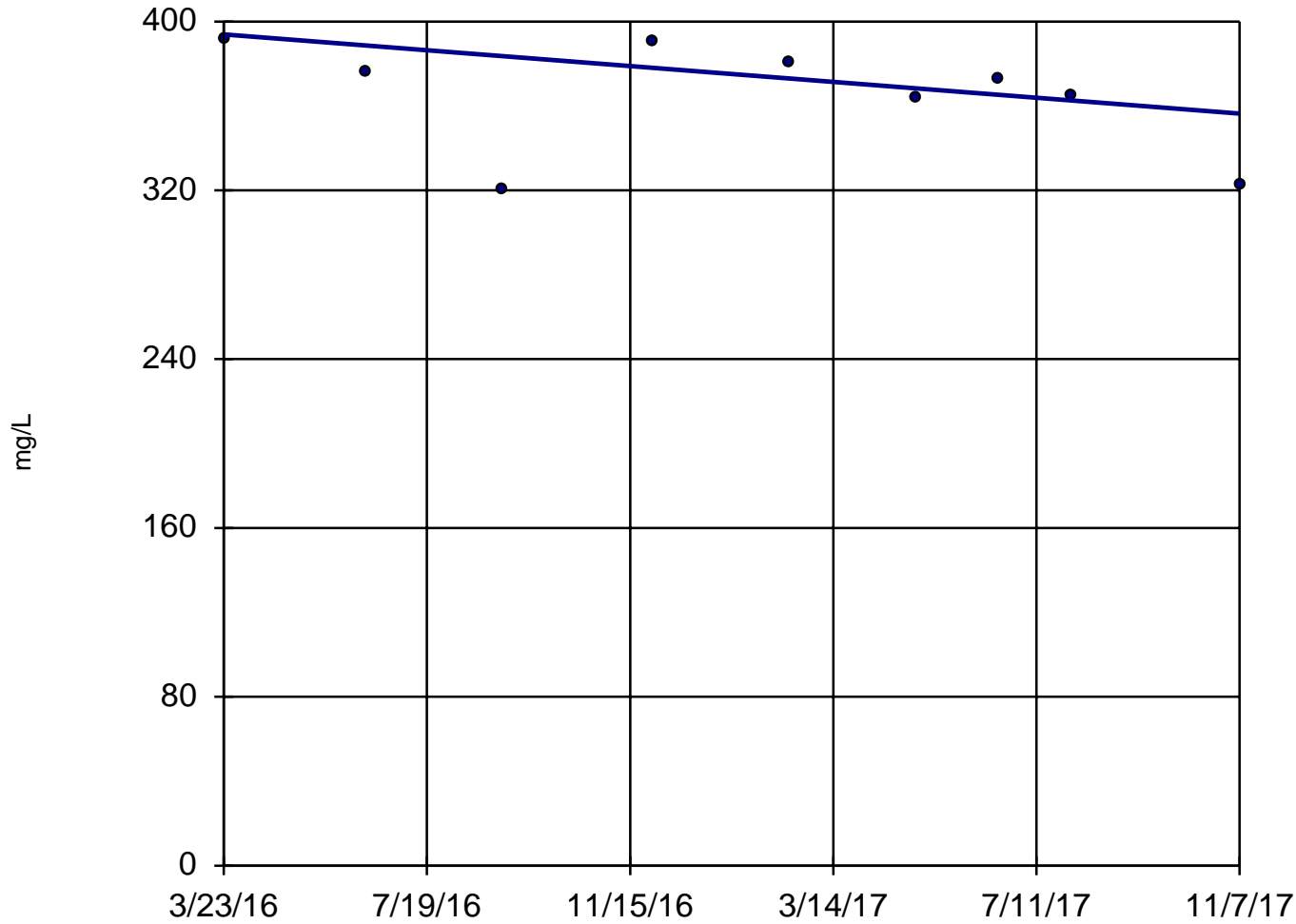
n = 9  
Slope = -42.72  
units per year.  
Mann-Kendall  
statistic = -12  
critical = -23  
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Calcium Analysis Run 1/4/2018 10:33 AM

OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

# Sen's Slope Estimator

MW17



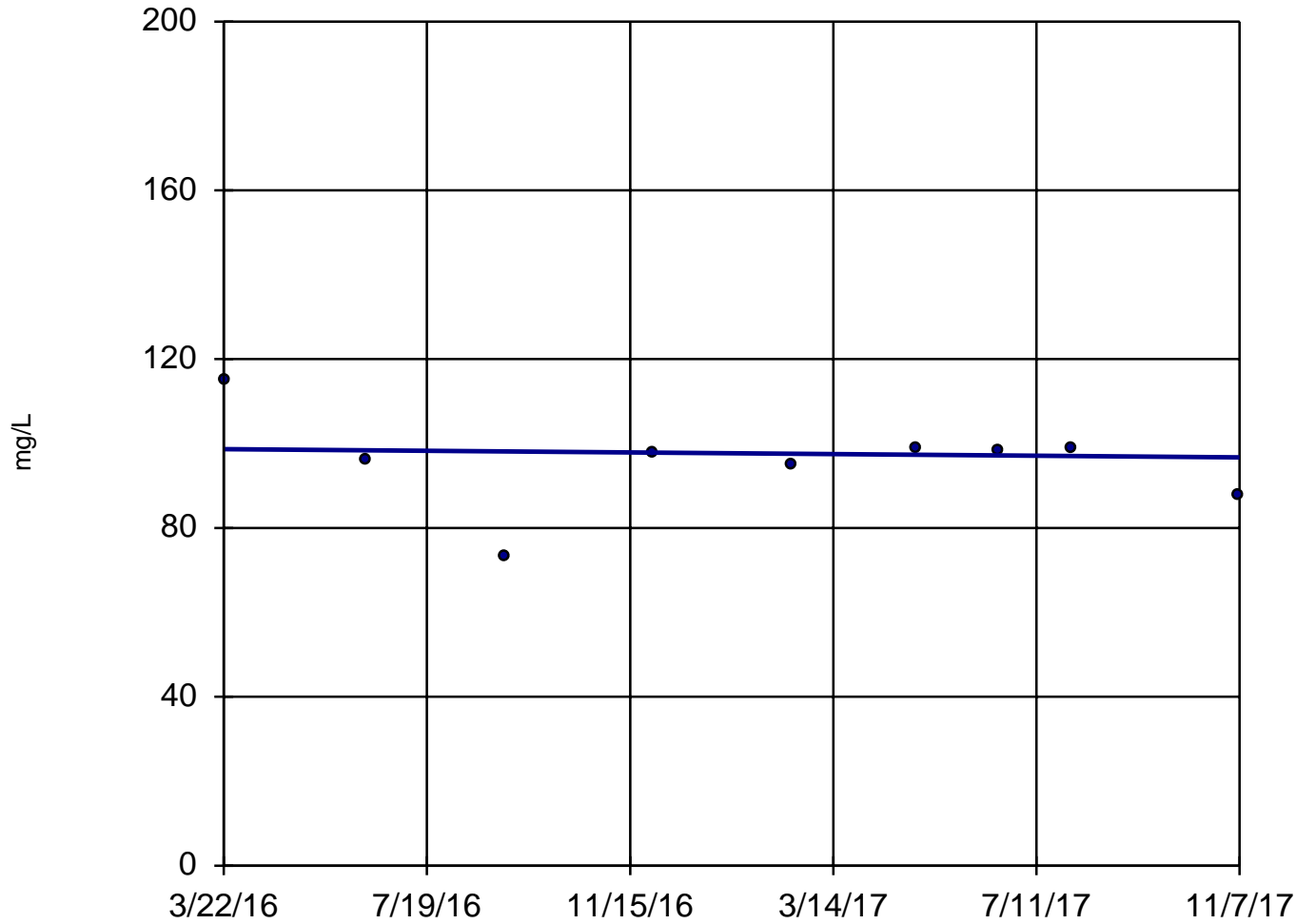
n = 9  
Slope = -23.09  
units per year.  
Mann-Kendall  
statistic = -16  
critical = -23  
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Calcium Analysis Run 1/4/2018 10:33 AM

OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

## Sen's Slope Estimator

MW18 (bg)



n = 9

Slope = -1.159  
units per year.

Mann-Kendall  
statistic = -2  
critical = -23

Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

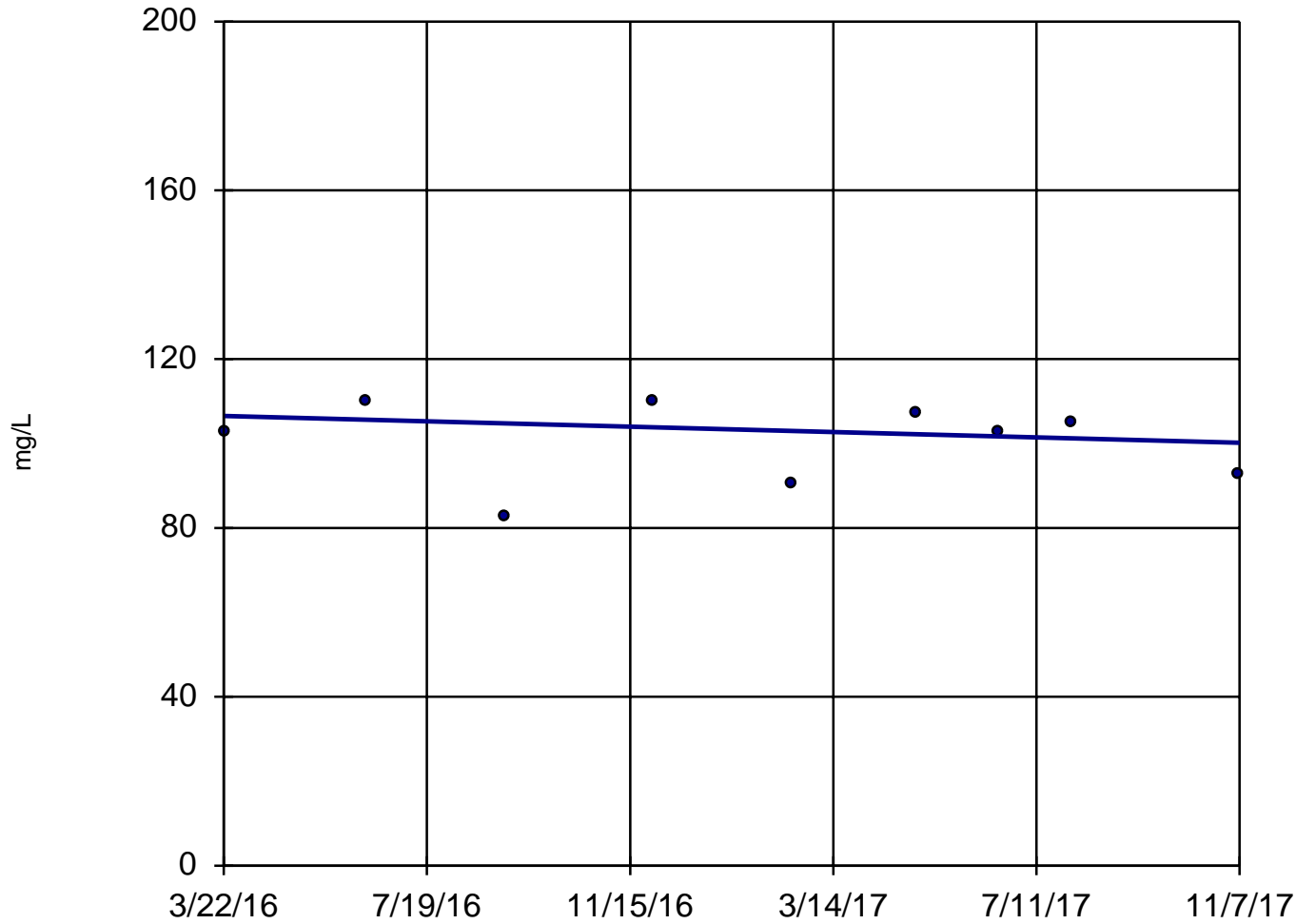
Constituent: Calcium Analysis Run 1/4/2018 10:33 AM

OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2



# Sen's Slope Estimator

MW19 (bg)



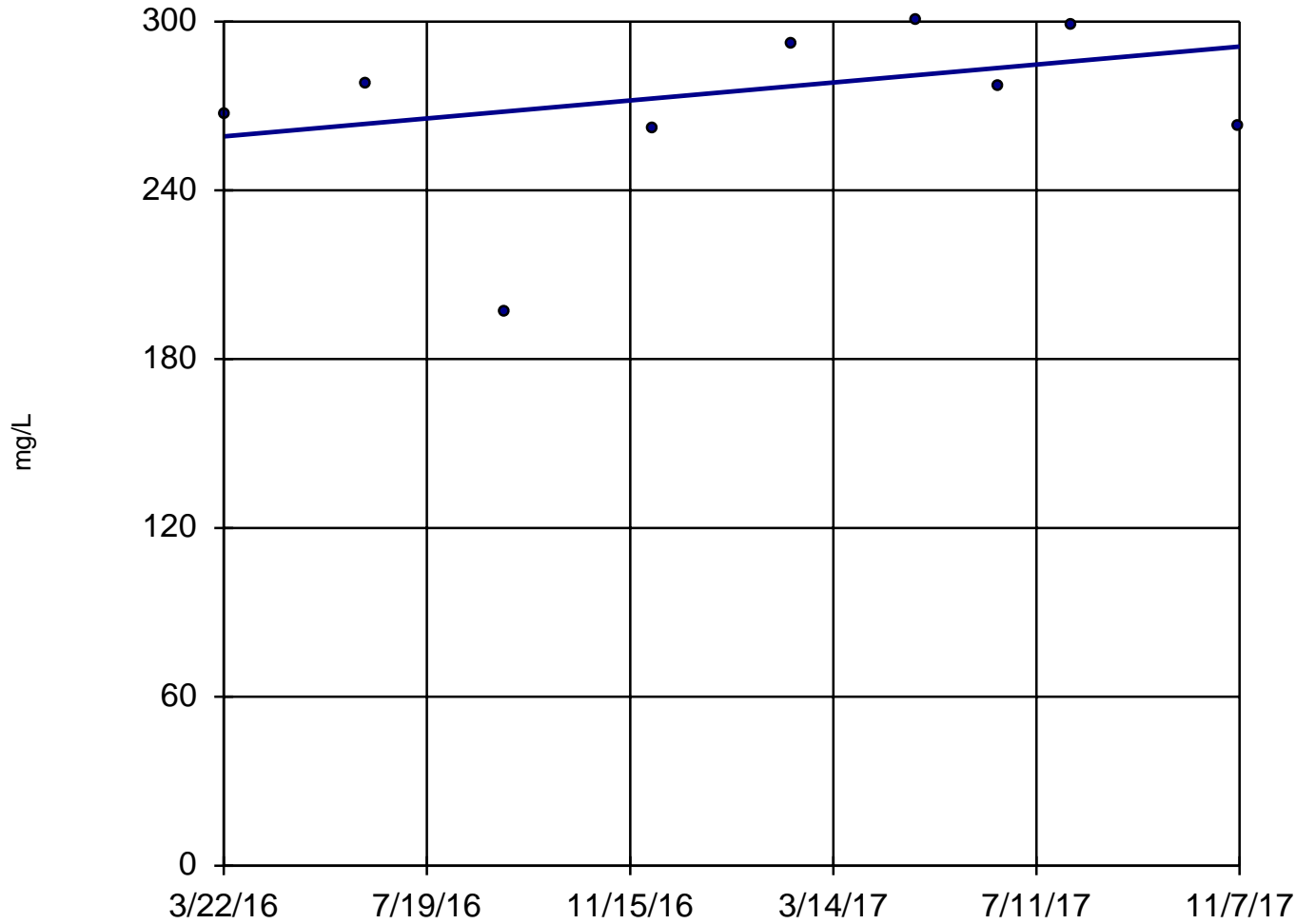
n = 9  
Slope = -3.915 units per year.  
Mann-Kendall statistic = -4  
critical = -23  
Trend not significant at 98% confidence level ( $\alpha = 0.01$  per tail).

Constituent: Calcium Analysis Run 1/4/2018 10:33 AM

OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

### Sen's Slope Estimator

MW2



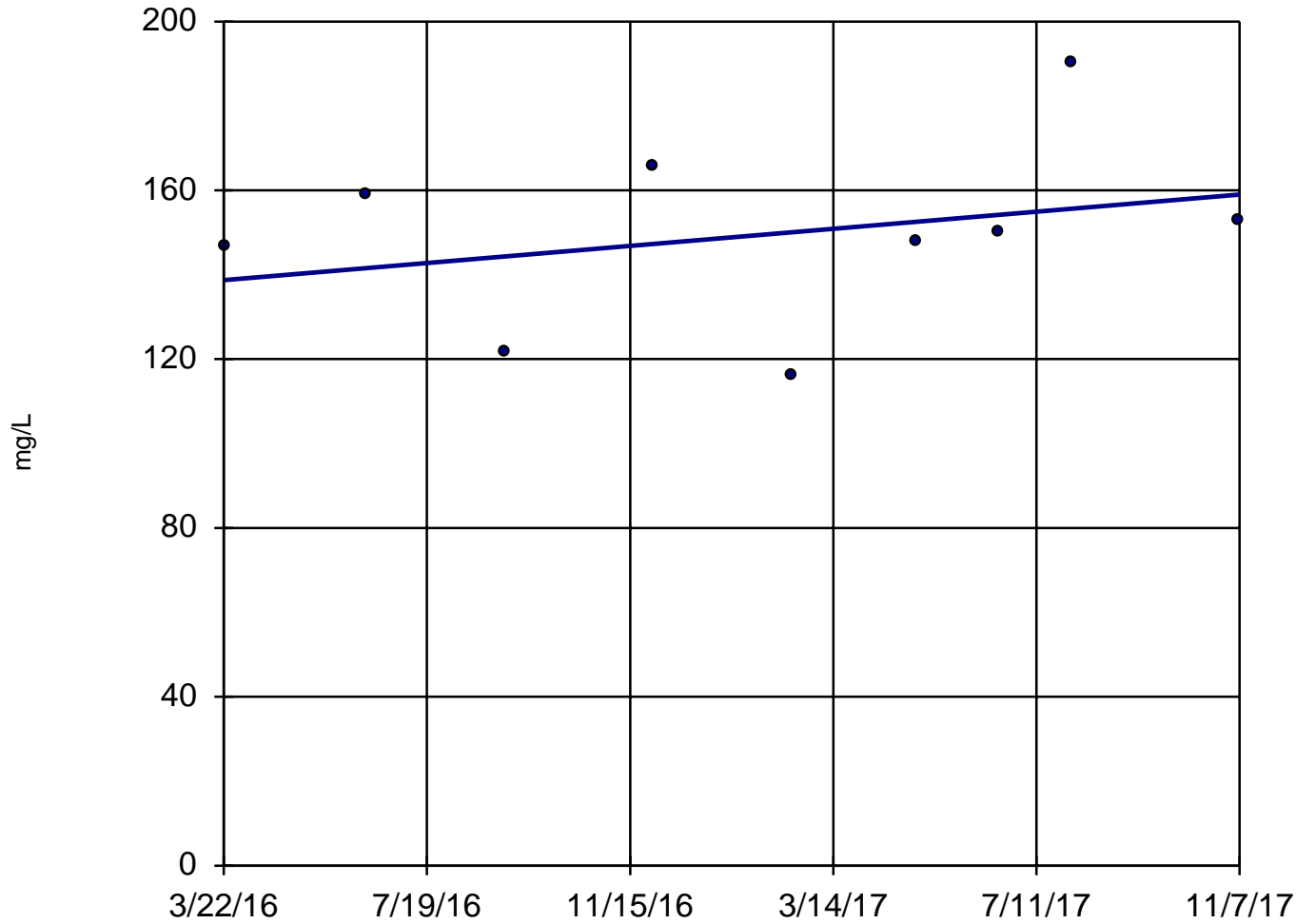
n = 9  
Slope = 19.6  
units per year.  
Mann-Kendall  
statistic = 8  
critical = 23  
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Calcium Analysis Run 1/4/2018 10:33 AM

OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

### Sen's Slope Estimator

MW9 (bg)



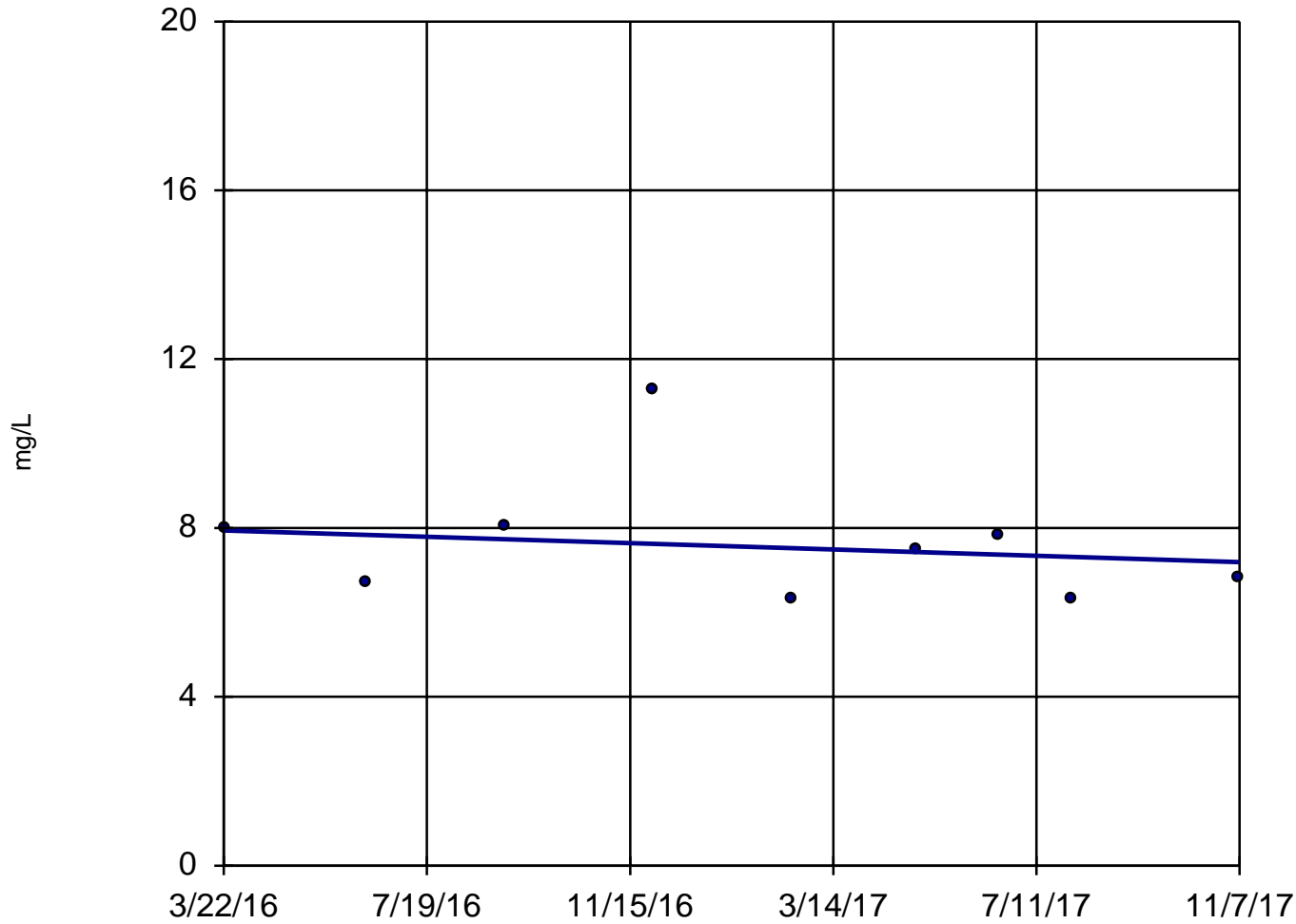
n = 9  
Slope = 12.43 units per year.  
Mann-Kendall statistic = 10  
critical = 23  
Trend not significant at 98% confidence level ( $\alpha = 0.01$  per tail).

Constituent: Calcium Analysis Run 1/4/2018 10:33 AM

OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

# Sen's Slope Estimator

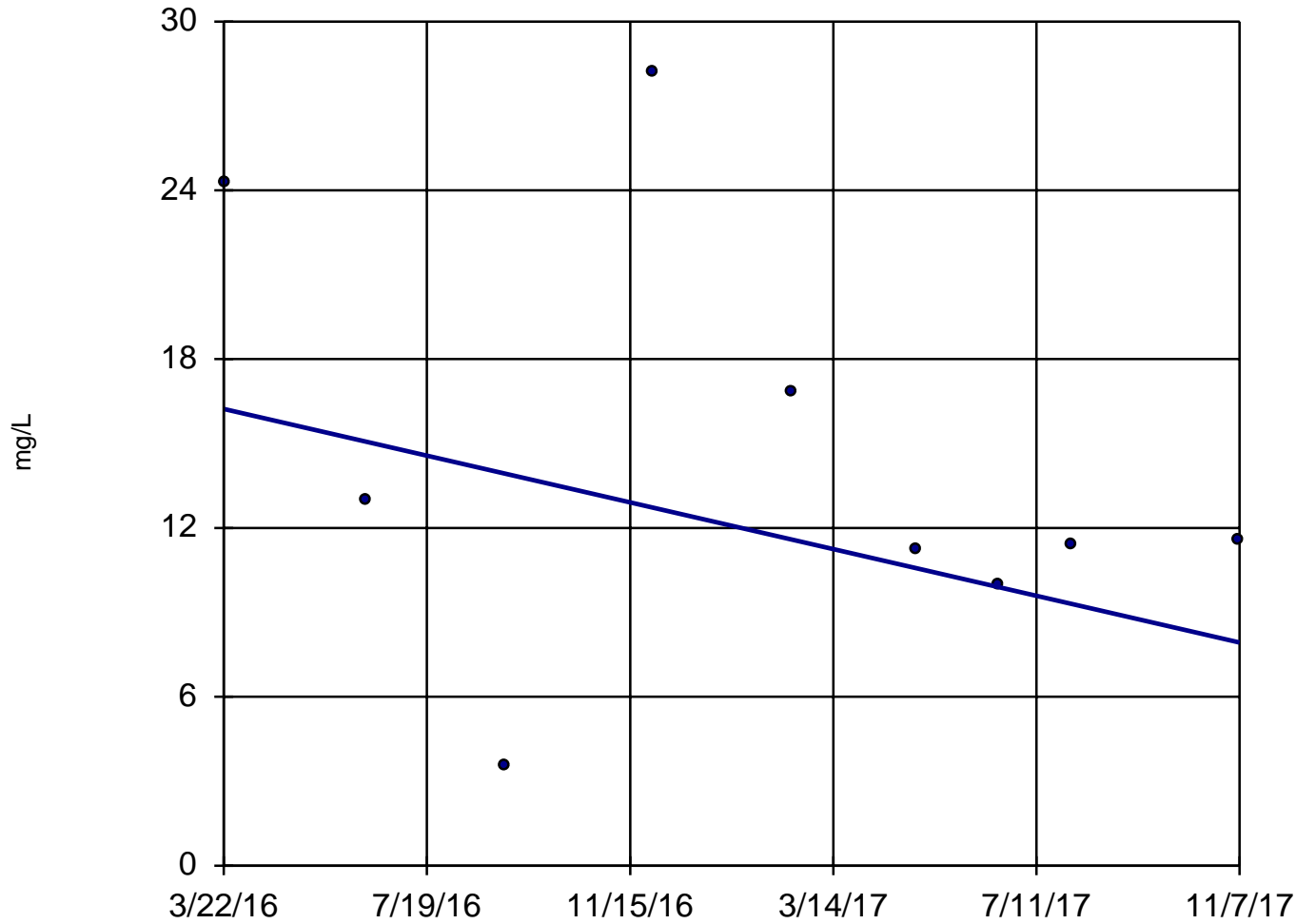
## MW13



n = 9  
Slope = -0.4598  
units per year.  
Mann-Kendall  
statistic = -10  
critical = -23  
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Chloride Analysis Run 1/4/2018 10:33 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

### Sen's Slope Estimator MW15

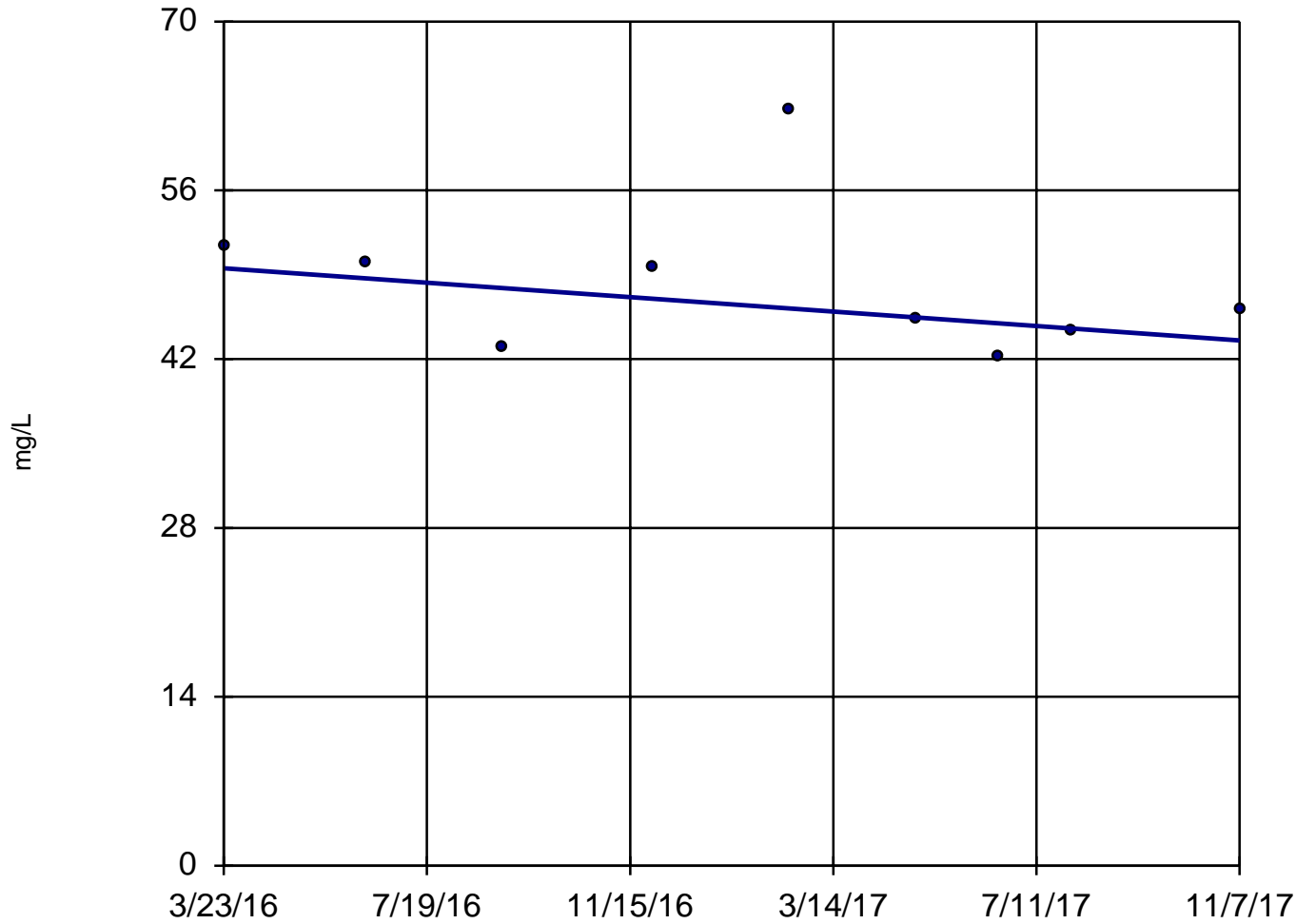


n = 9  
Slope = -5.093  
units per year.  
Mann-Kendall  
statistic = -8  
critical = -23  
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Chloride Analysis Run 1/4/2018 10:33 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

# Sen's Slope Estimator

MW17

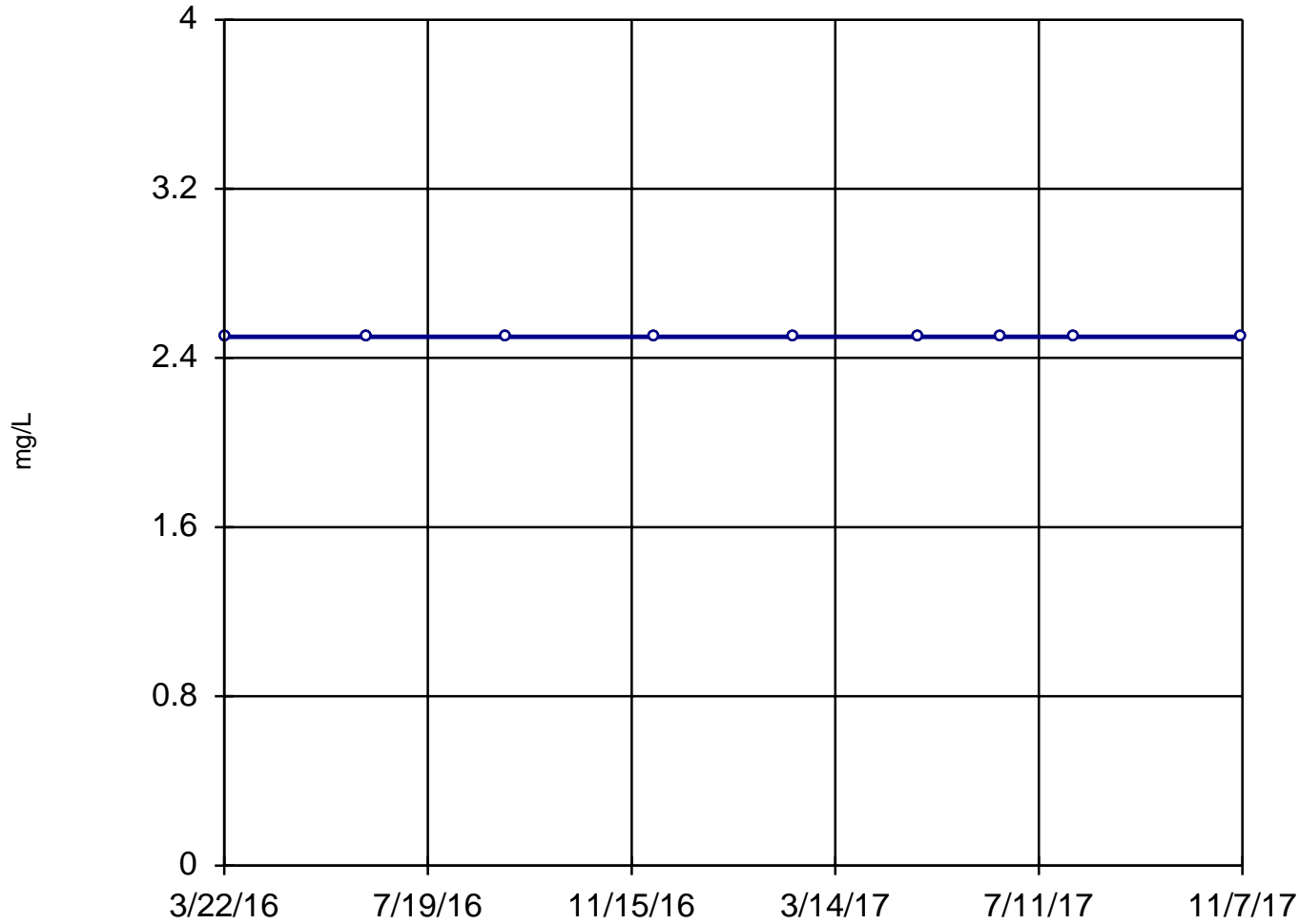


n = 9  
Slope = -3.687  
units per year.  
Mann-Kendall  
statistic = -12  
critical = -23  
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Chloride Analysis Run 1/4/2018 10:33 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

## Sen's Slope Estimator

MW18 (bg)



n = 9

Slope = 0  
units per year.

Mann-Kendall  
statistic = 0  
critical = 23

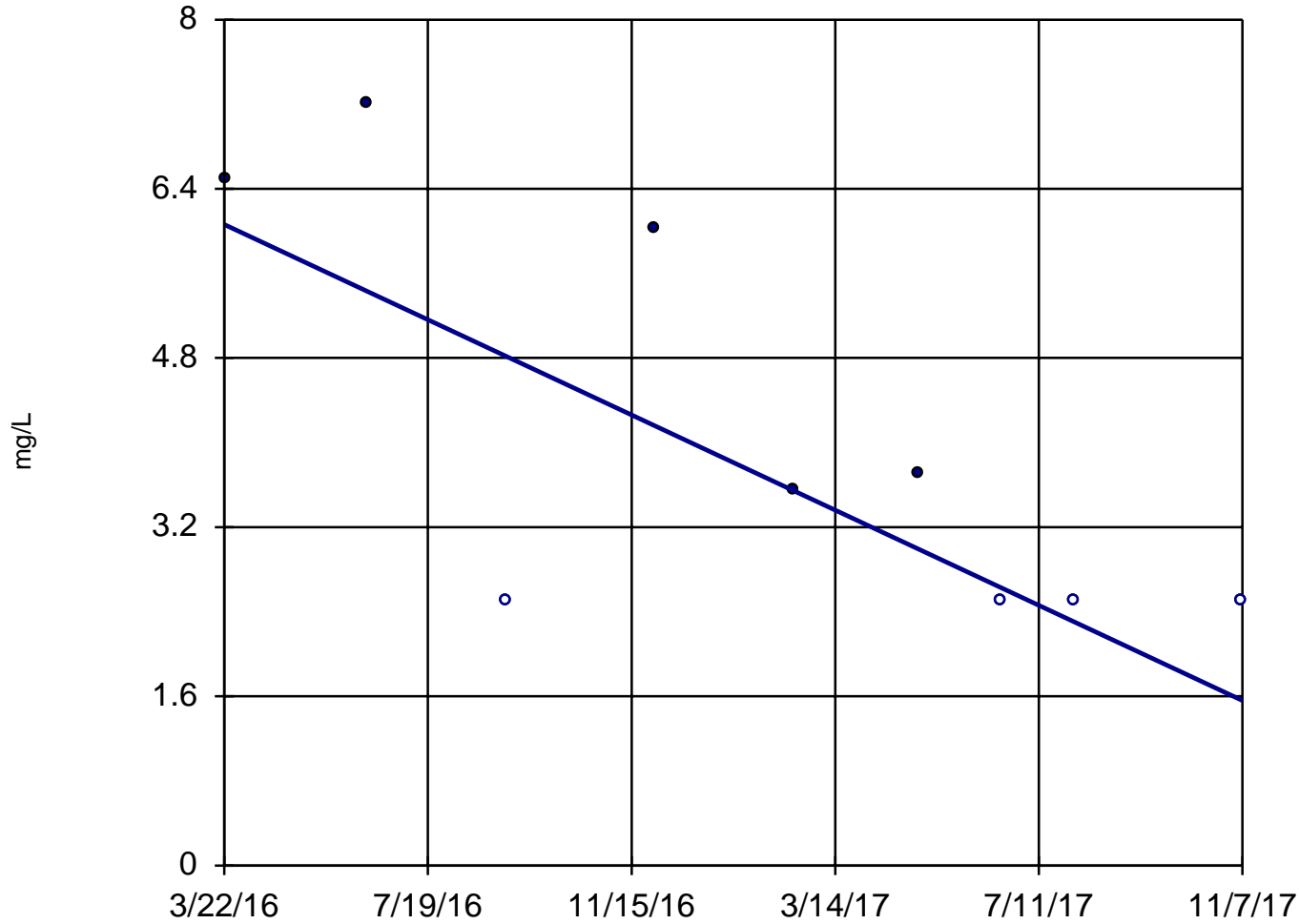
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Chloride Analysis Run 1/4/2018 10:33 AM

OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

## Sen's Slope Estimator

MW19 (bg)



n = 9

Slope = -2.761  
units per year.

Mann-Kendall  
statistic = -20  
critical = -23

Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

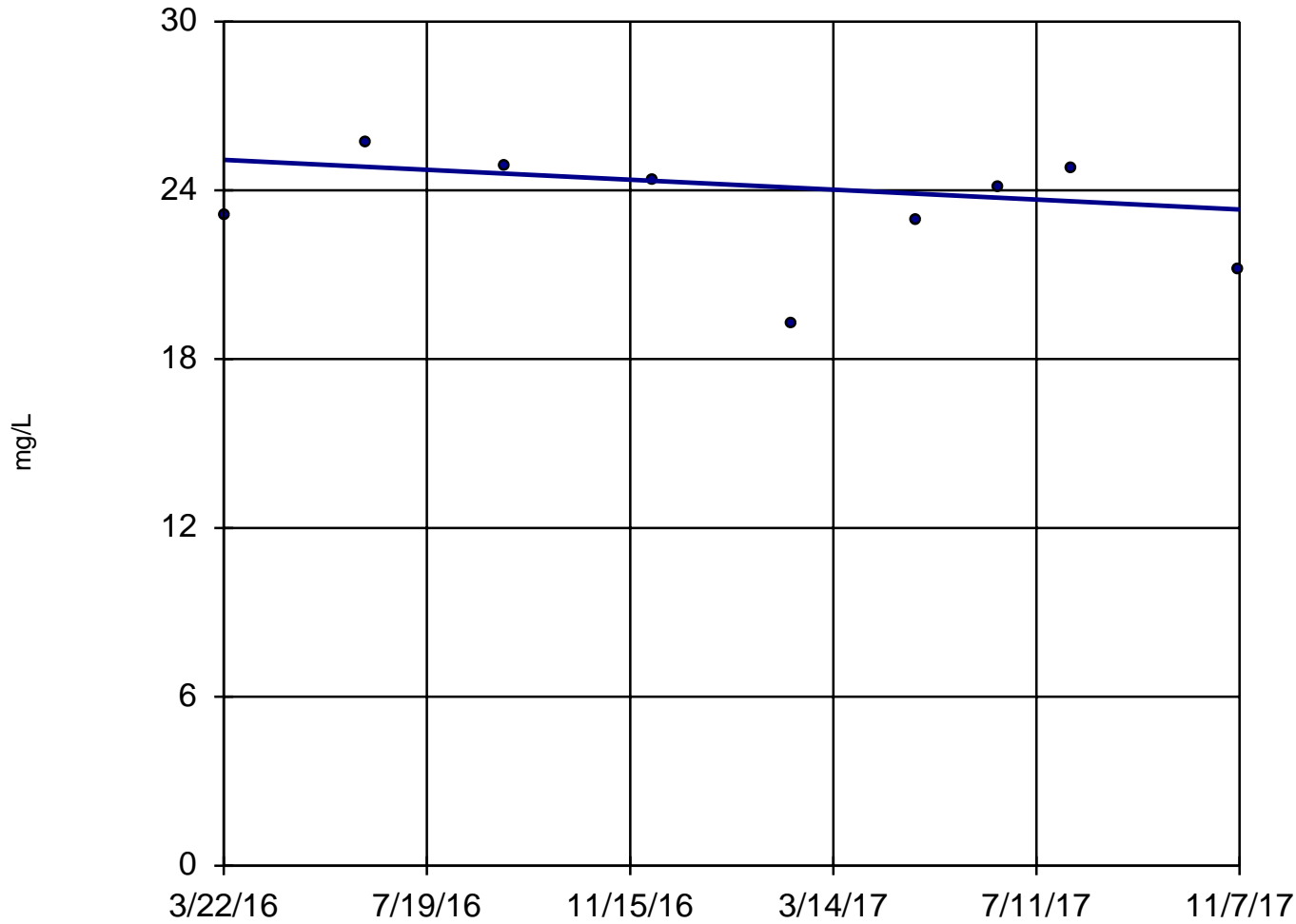
Constituent: Chloride Analysis Run 1/4/2018 10:33 AM

OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2



# Sen's Slope Estimator

MW2



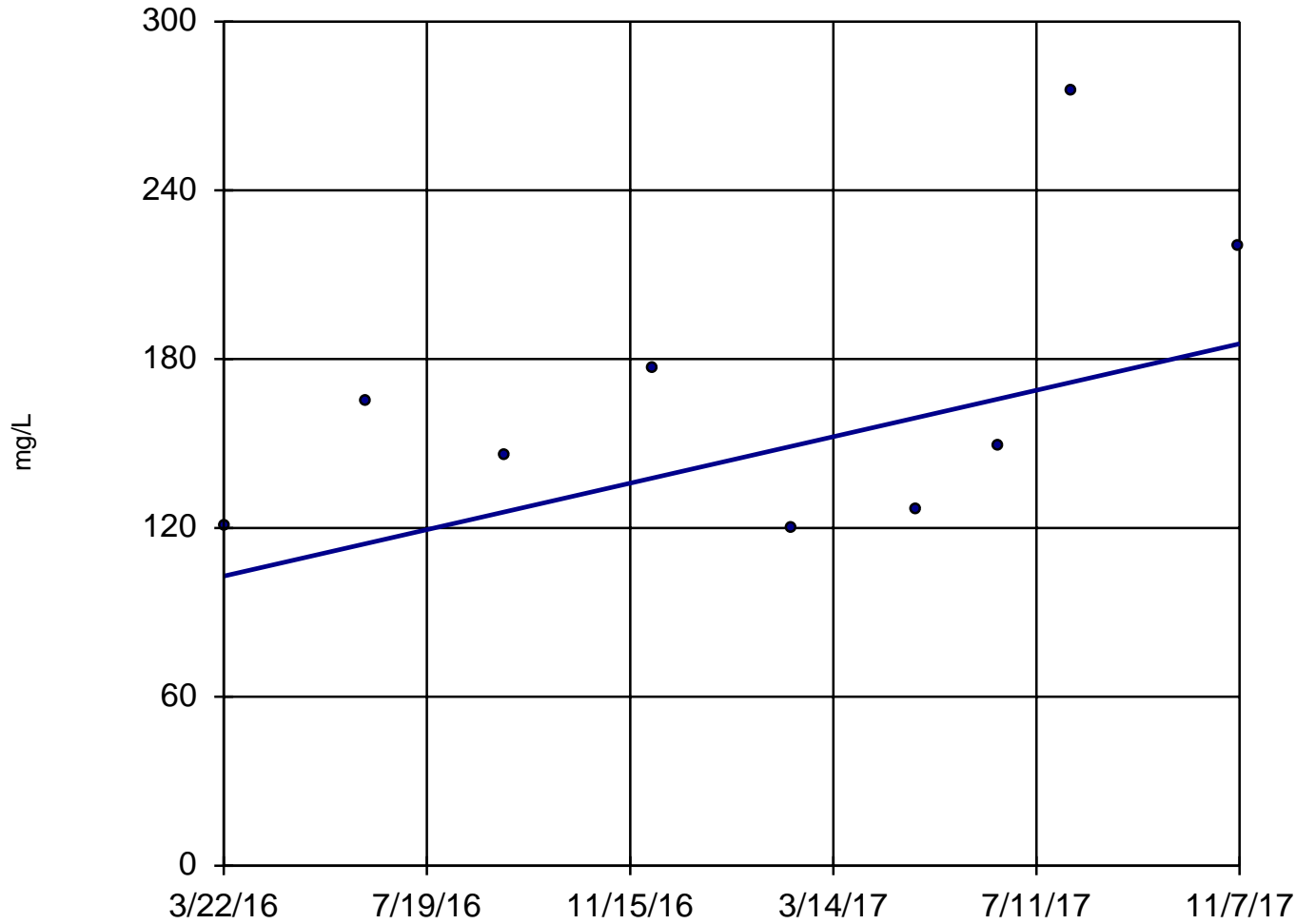
n = 9  
Slope = -1.086 units per year.  
Mann-Kendall statistic = -10  
critical = -23  
Trend not significant at 98% confidence level ( $\alpha = 0.01$  per tail).

Constituent: Chloride Analysis Run 1/4/2018 10:33 AM

OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

# Sen's Slope Estimator

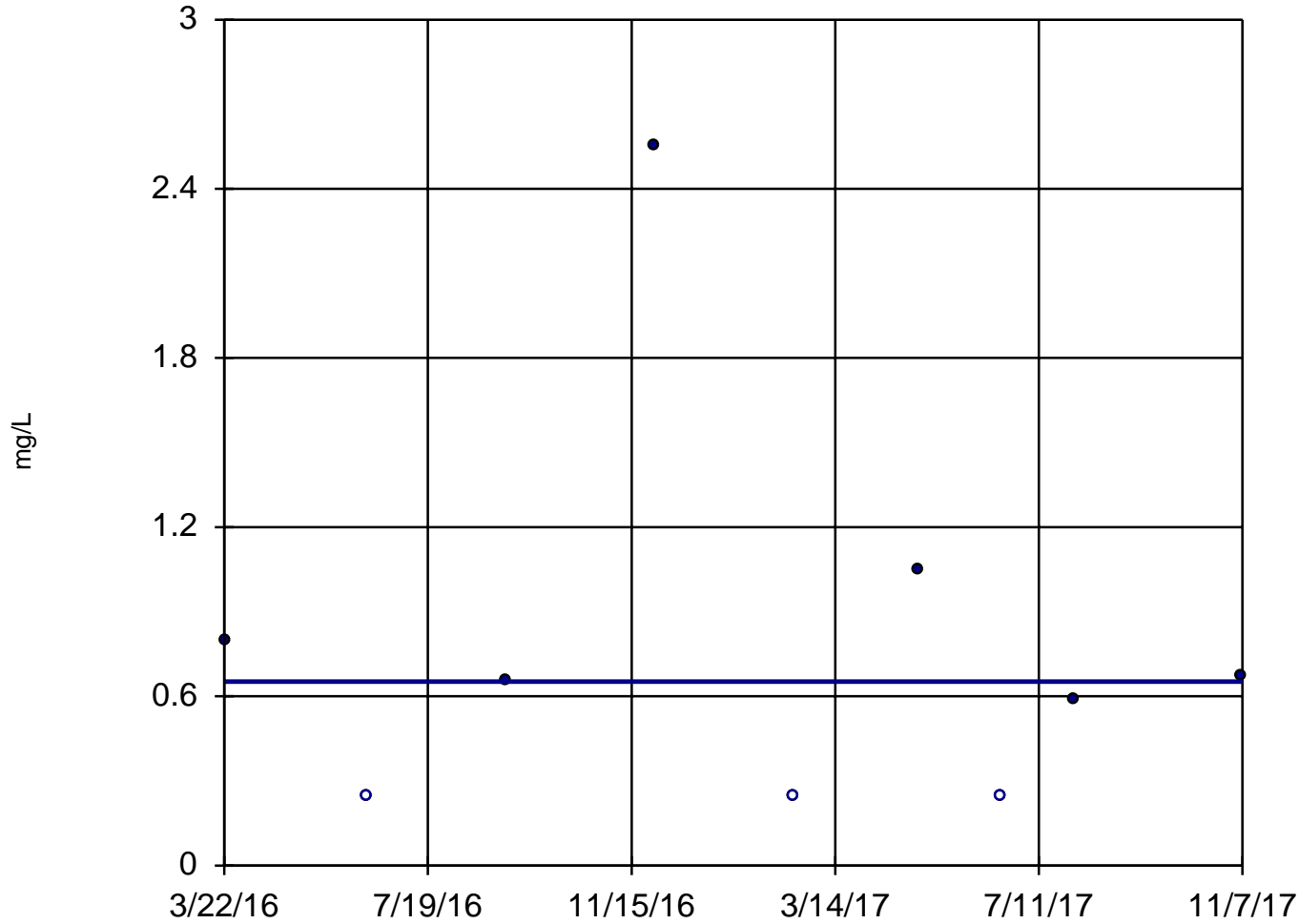
MW9 (bg)



n = 9  
Slope = 50.63 units per year.  
Mann-Kendall statistic = 14  
critical = 23  
Trend not significant at 98% confidence level ( $\alpha = 0.01$  per tail).

Constituent: Chloride Analysis Run 1/4/2018 10:33 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

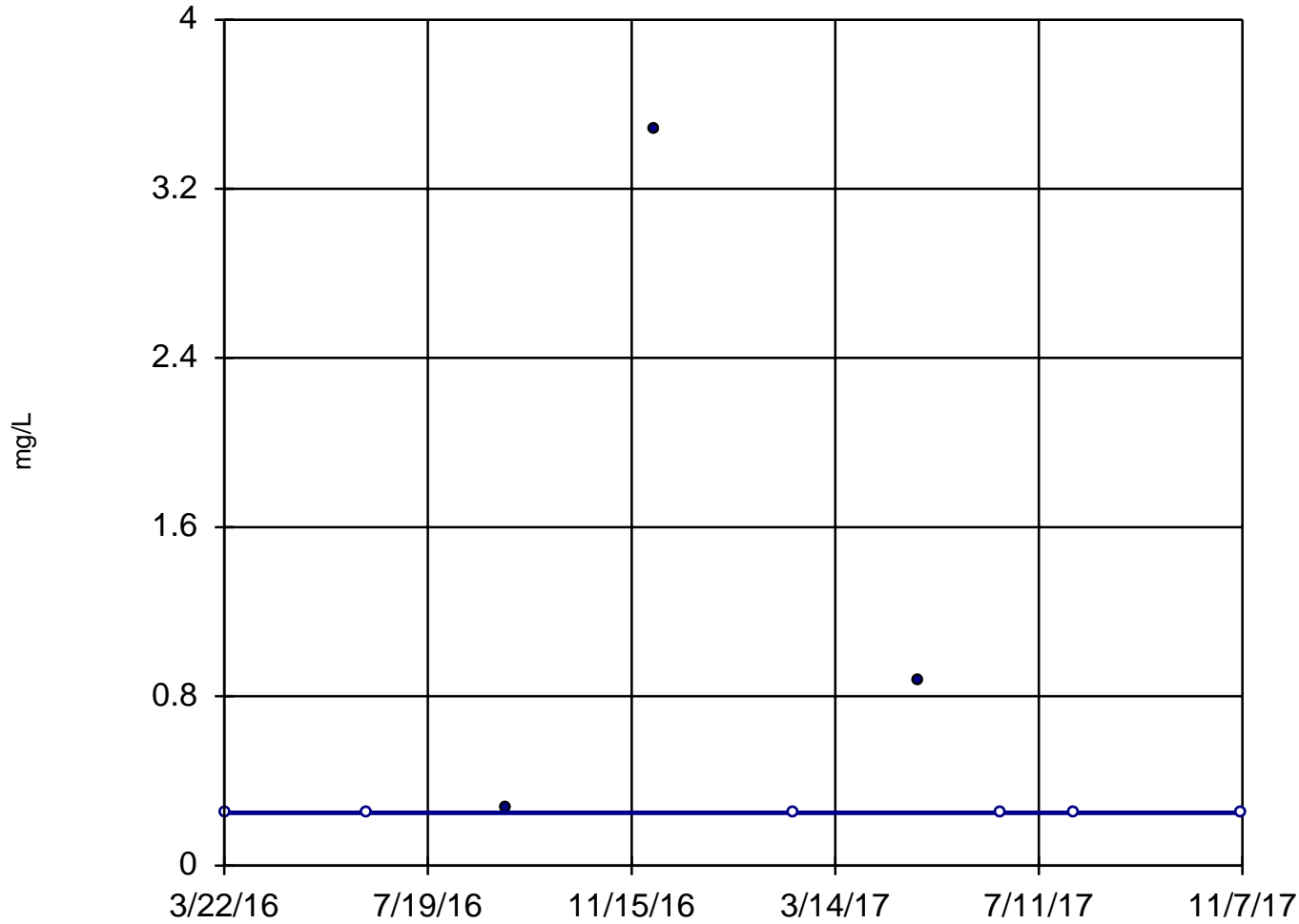
## Sen's Slope Estimator MW13



n = 9  
Slope = 0  
units per year.  
Mann-Kendall  
statistic = -1  
critical = -23  
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Fluoride Analysis Run 1/4/2018 10:33 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

## Sen's Slope Estimator MW15

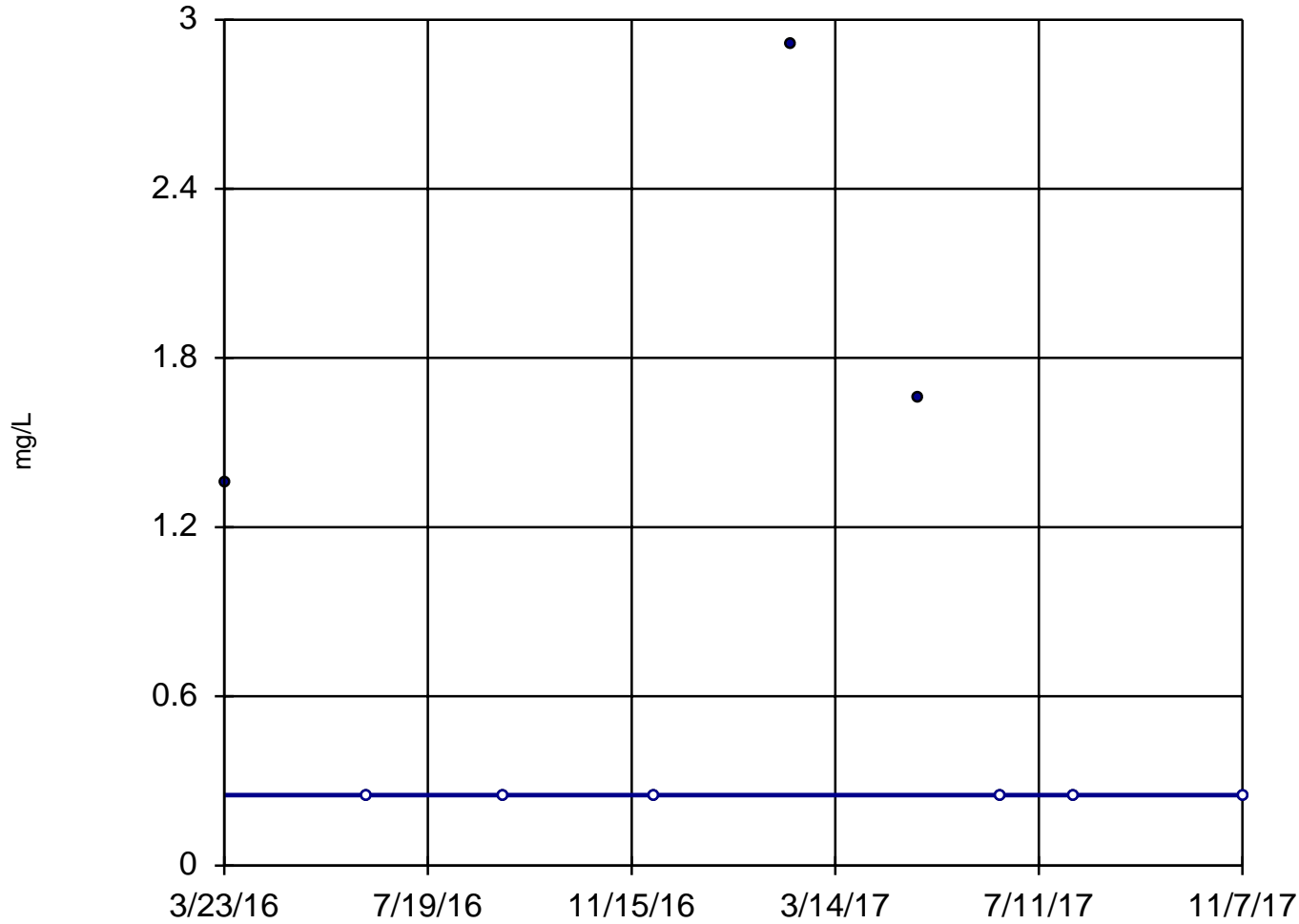


n = 9  
Slope = 0  
units per year.  
Mann-Kendall  
statistic = -3  
critical = -23  
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Fluoride Analysis Run 1/4/2018 10:33 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

## Sen's Slope Estimator

MW17



n = 9

Slope = 0  
units per year.

Mann-Kendall  
statistic = -5  
critical = -23

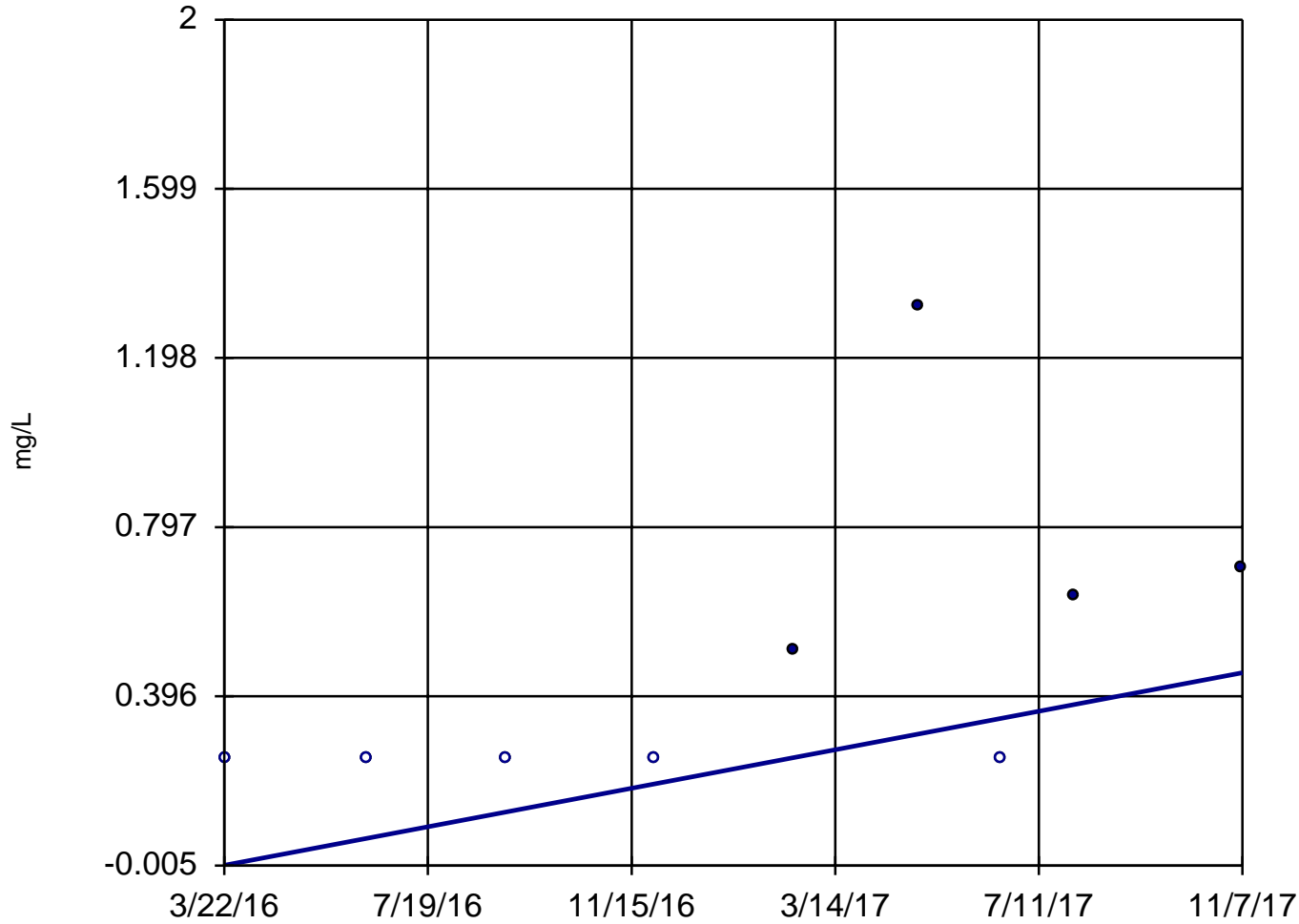
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Fluoride Analysis Run 1/4/2018 10:33 AM

OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

## Sen's Slope Estimator

MW18 (bg)

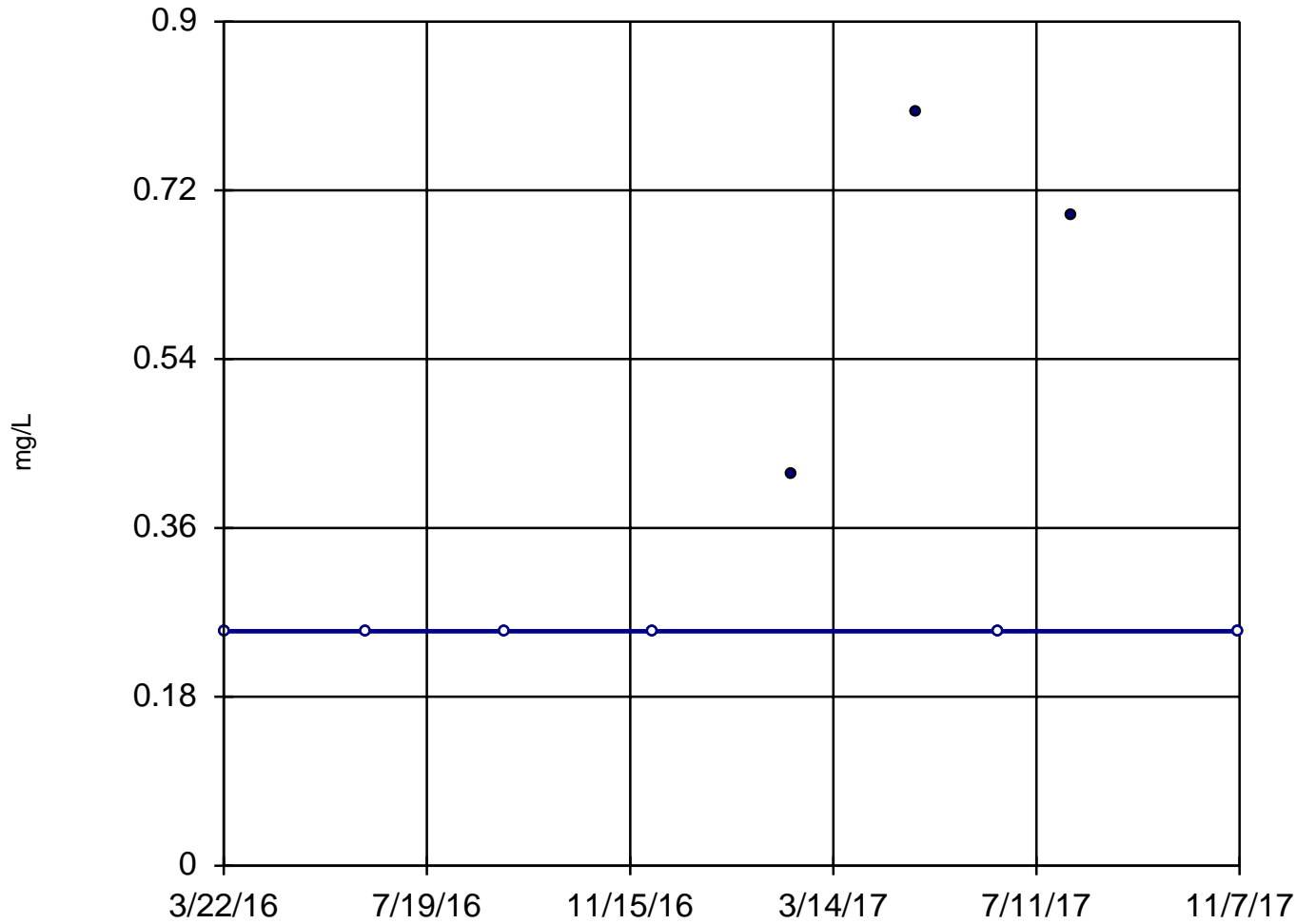


n = 9  
Slope = 0.2798  
units per year.  
Mann-Kendall  
statistic = 18  
critical = 23  
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Fluoride Analysis Run 1/4/2018 10:33 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

## Sen's Slope Estimator

MW19 (bg)



n = 9

Slope = 0  
units per year.

Mann-Kendall  
statistic = 9  
critical = 23

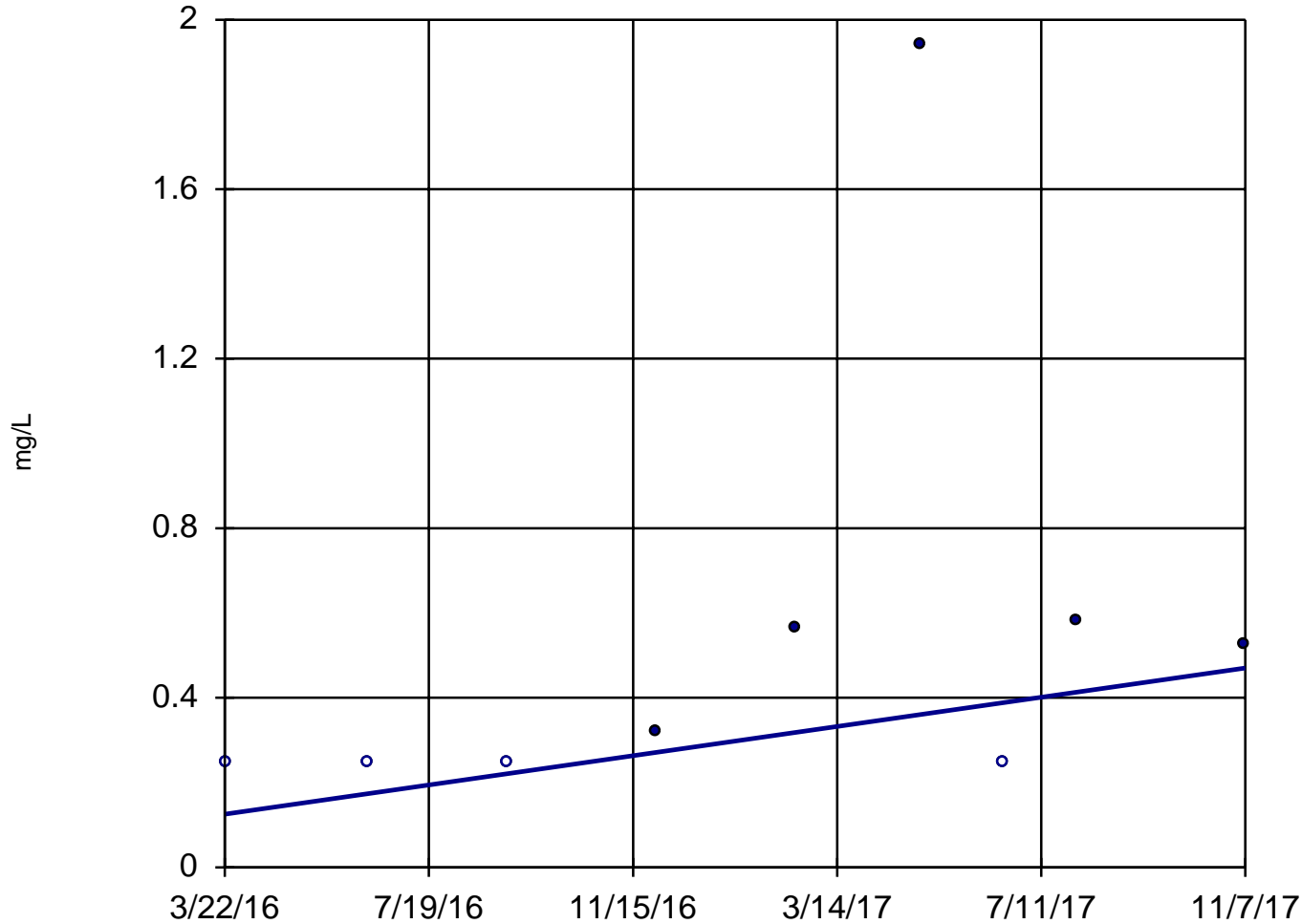
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Fluoride Analysis Run 1/4/2018 10:33 AM

OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

## Sen's Slope Estimator

MW2



n = 9

Slope = 0.2116  
units per year.

Mann-Kendall  
statistic = 16  
critical = 23

Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

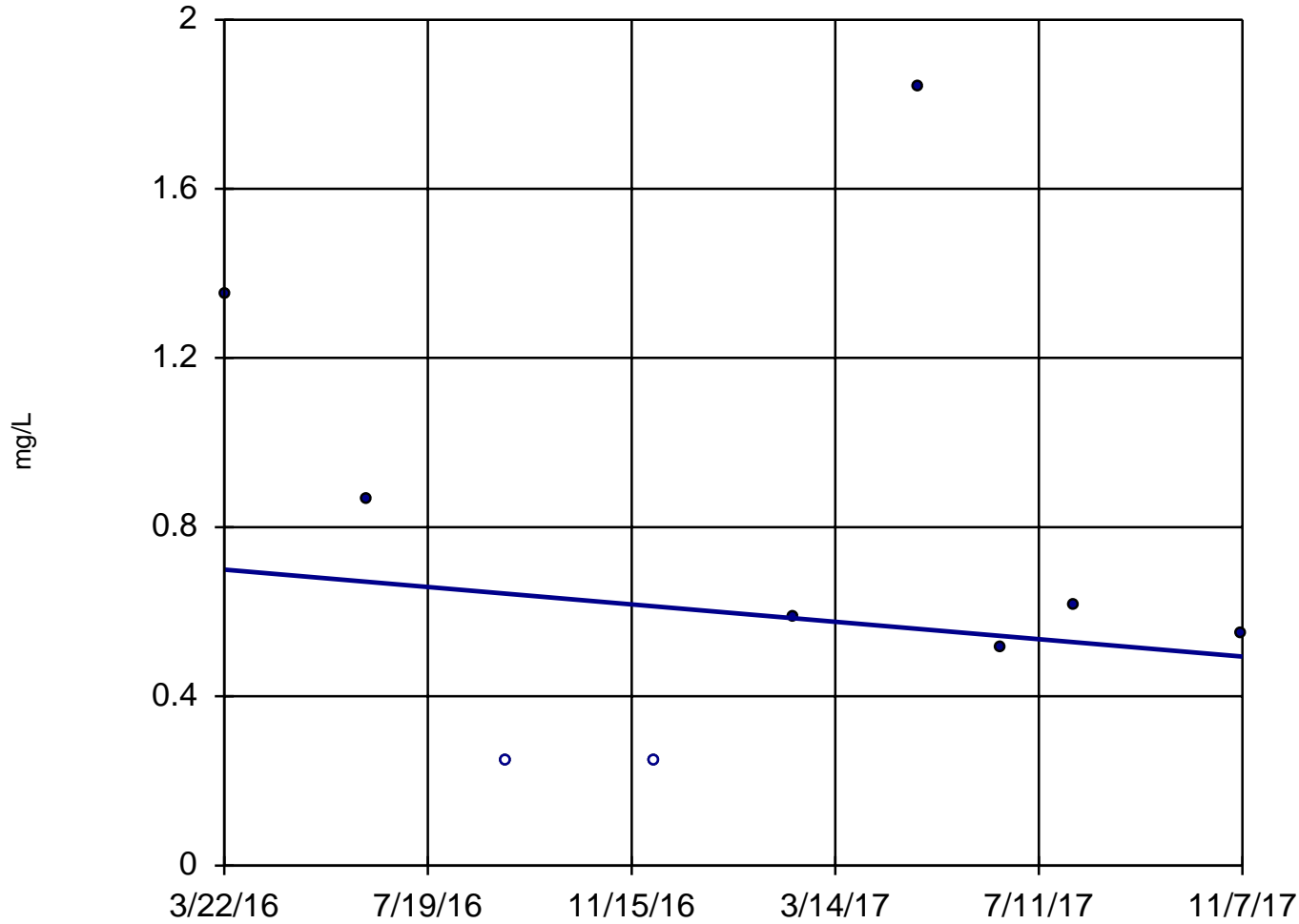
Constituent: Fluoride Analysis Run 1/4/2018 10:33 AM

OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2



## Sen's Slope Estimator

MW9 (bg)



n = 9

Slope = -0.126  
units per year.

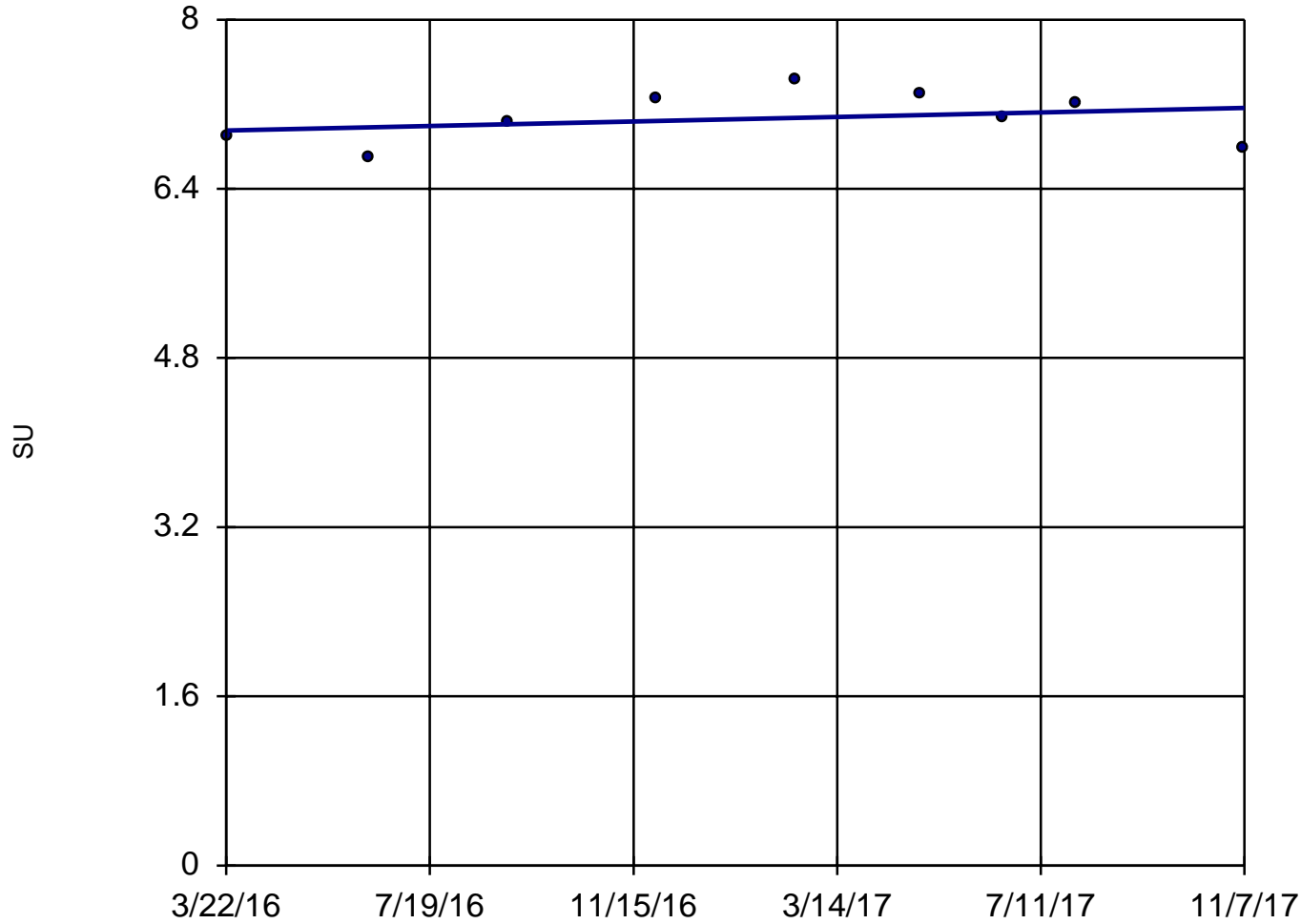
Mann-Kendall  
statistic = -3  
critical = -23

Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Fluoride Analysis Run 1/4/2018 10:33 AM

OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

## Sen's Slope Estimator MW13



n = 9

Slope = 0.1312  
units per year.

Mann-Kendall  
statistic = 6  
critical = 23

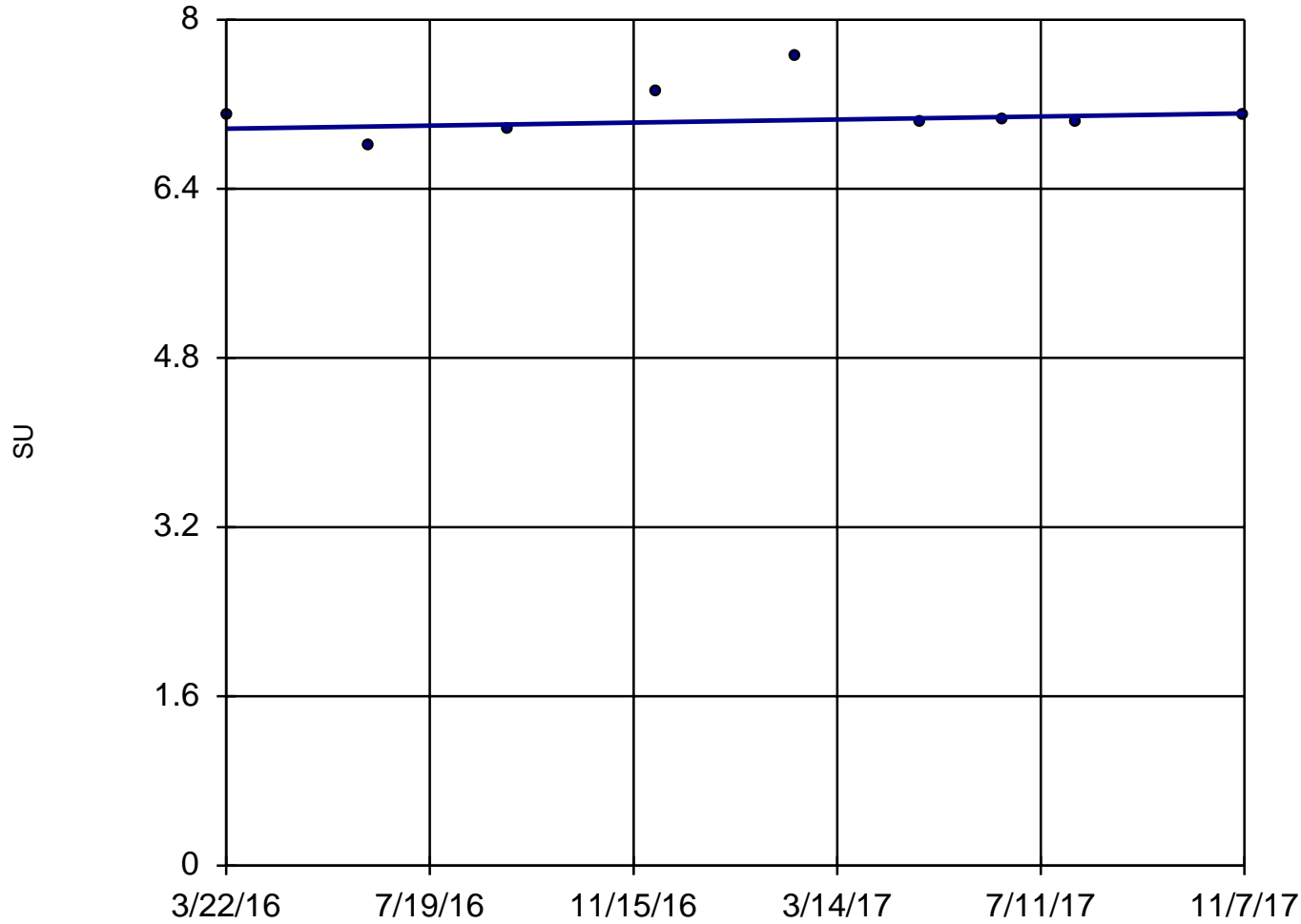
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: pH Analysis Run 1/4/2018 10:33 AM

OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

# Sen's Slope Estimator

MW15

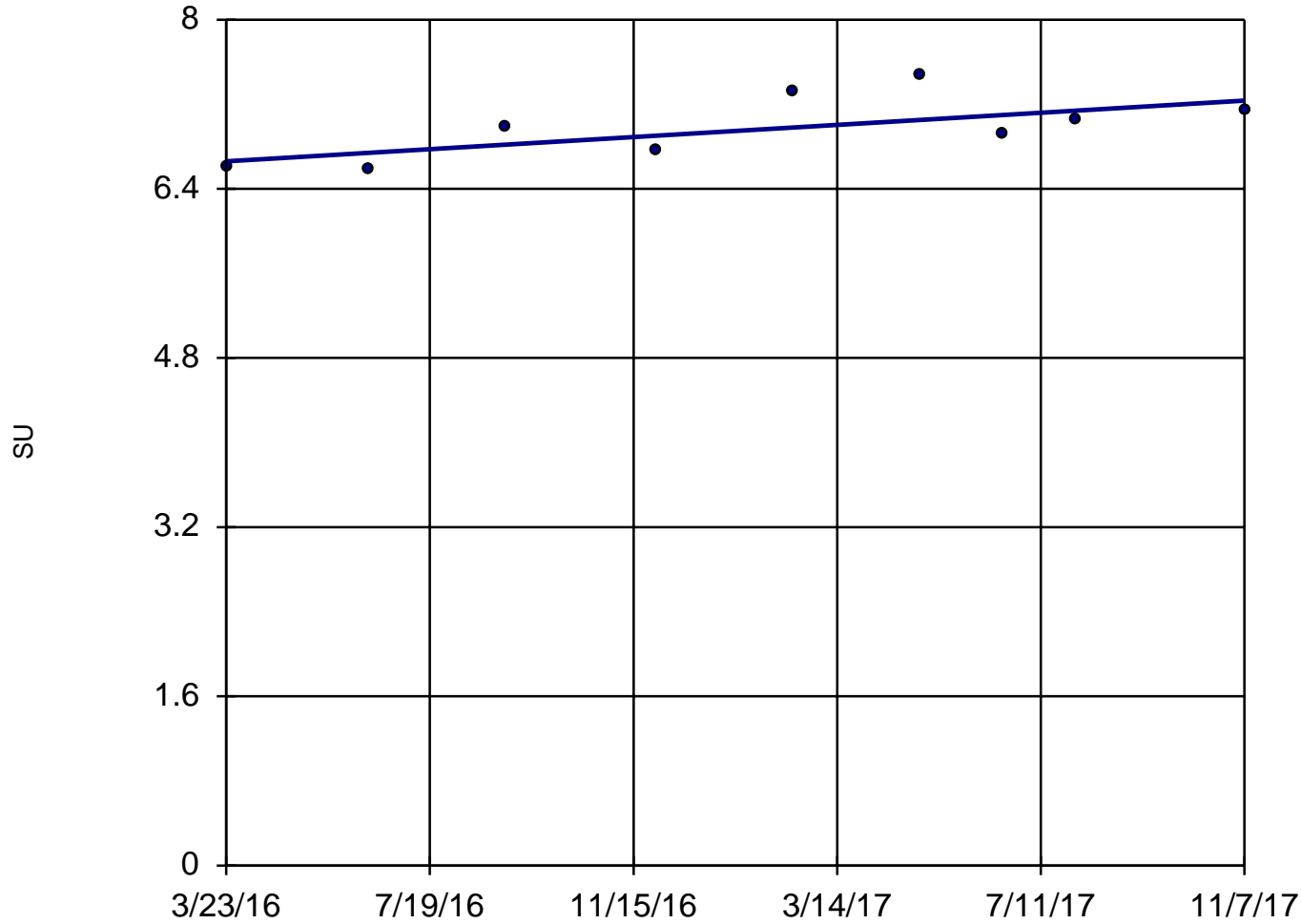


n = 9  
Slope = 0.08805  
units per year.  
Mann-Kendall  
statistic = 7  
critical = 23  
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: pH Analysis Run 1/4/2018 10:33 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

# Sen's Slope Estimator

MW17

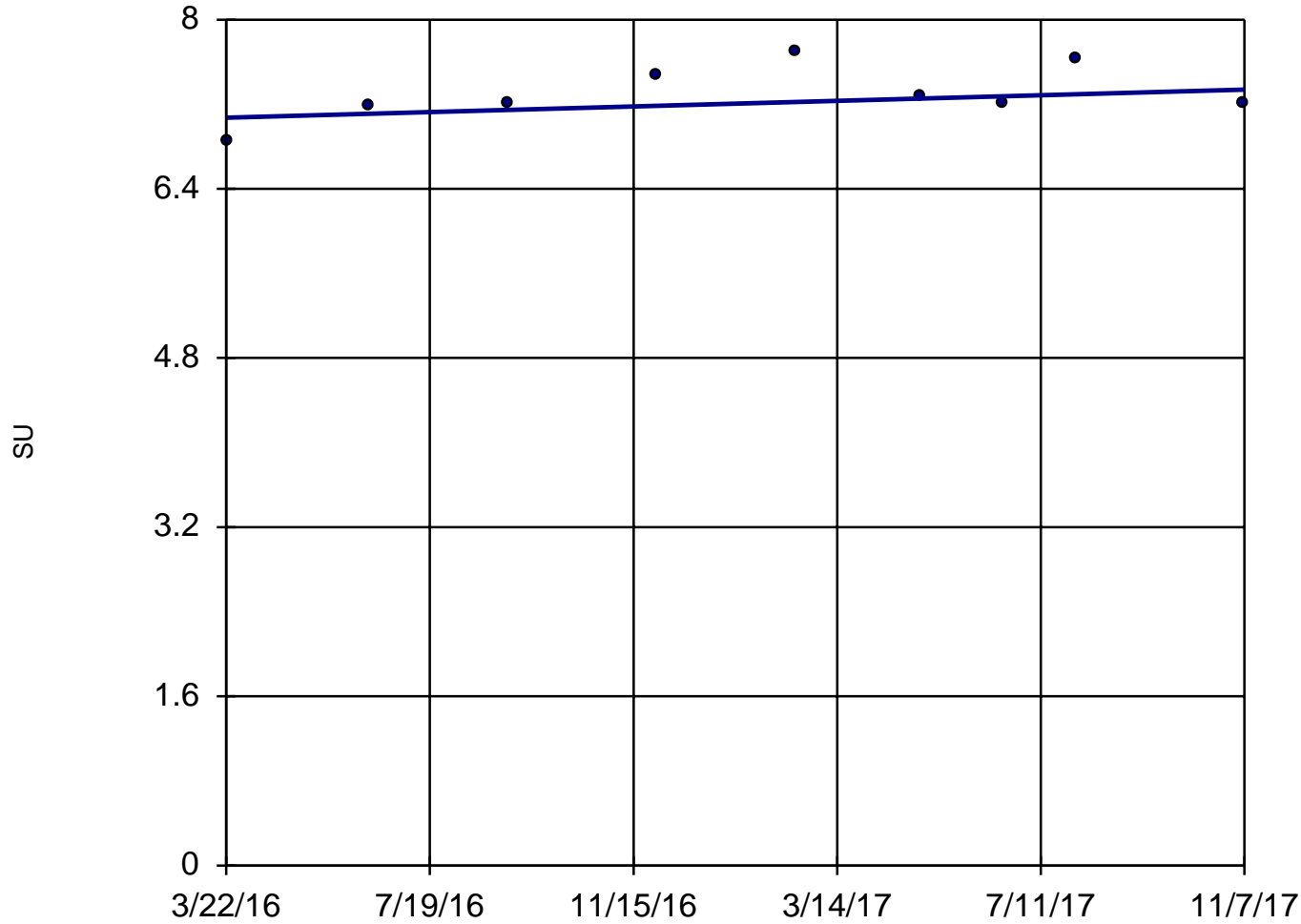


n = 9  
Slope = 0.3524  
units per year.  
Mann-Kendall  
statistic = 18  
critical = 23  
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: pH Analysis Run 1/4/2018 10:33 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

# Sen's Slope Estimator

MW18 (bg)

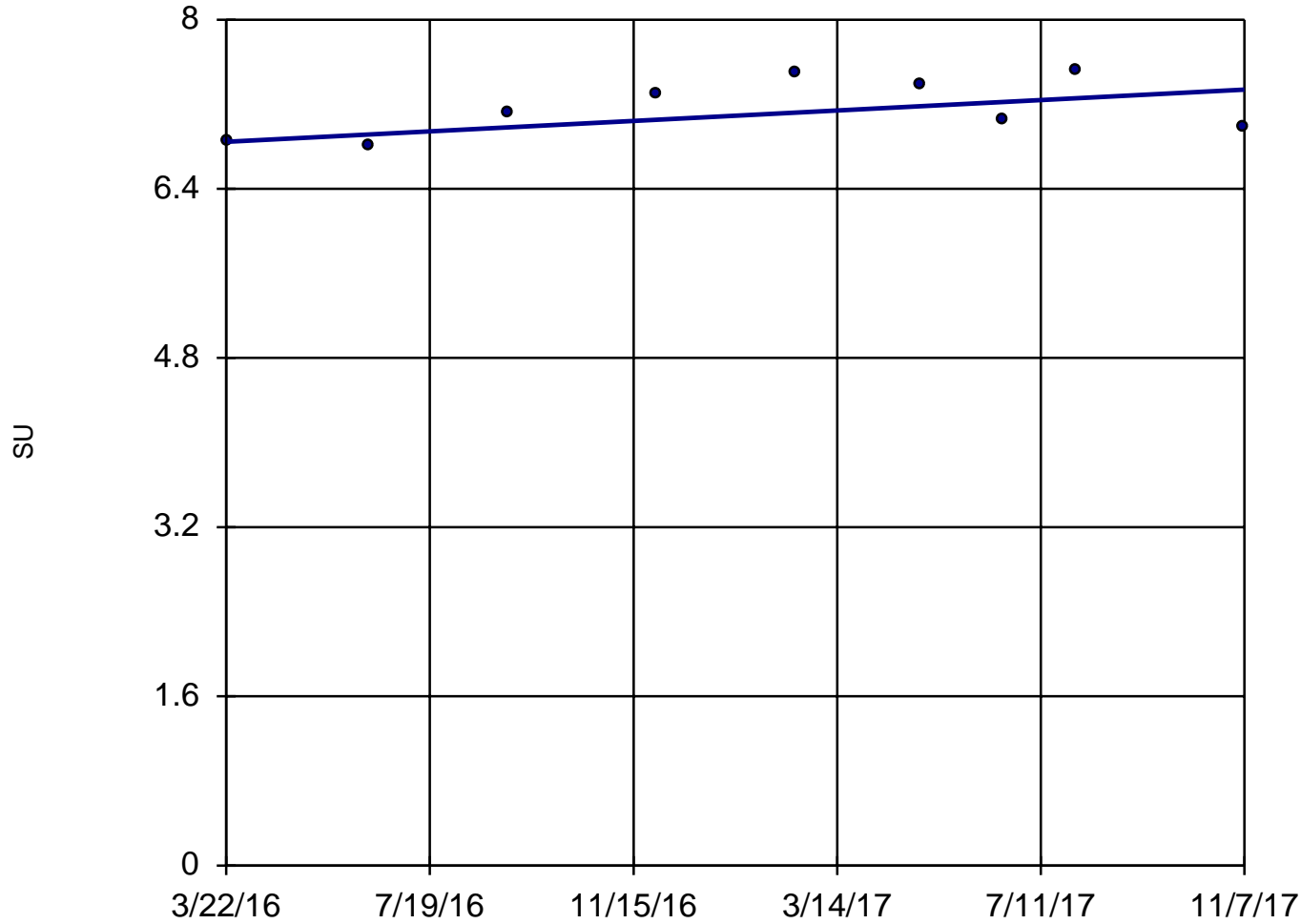


n = 9  
Slope = 0.1632  
units per year.  
Mann-Kendall  
statistic = 15  
critical = 23  
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: pH Analysis Run 1/4/2018 10:33 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

# Sen's Slope Estimator

MW19 (bg)

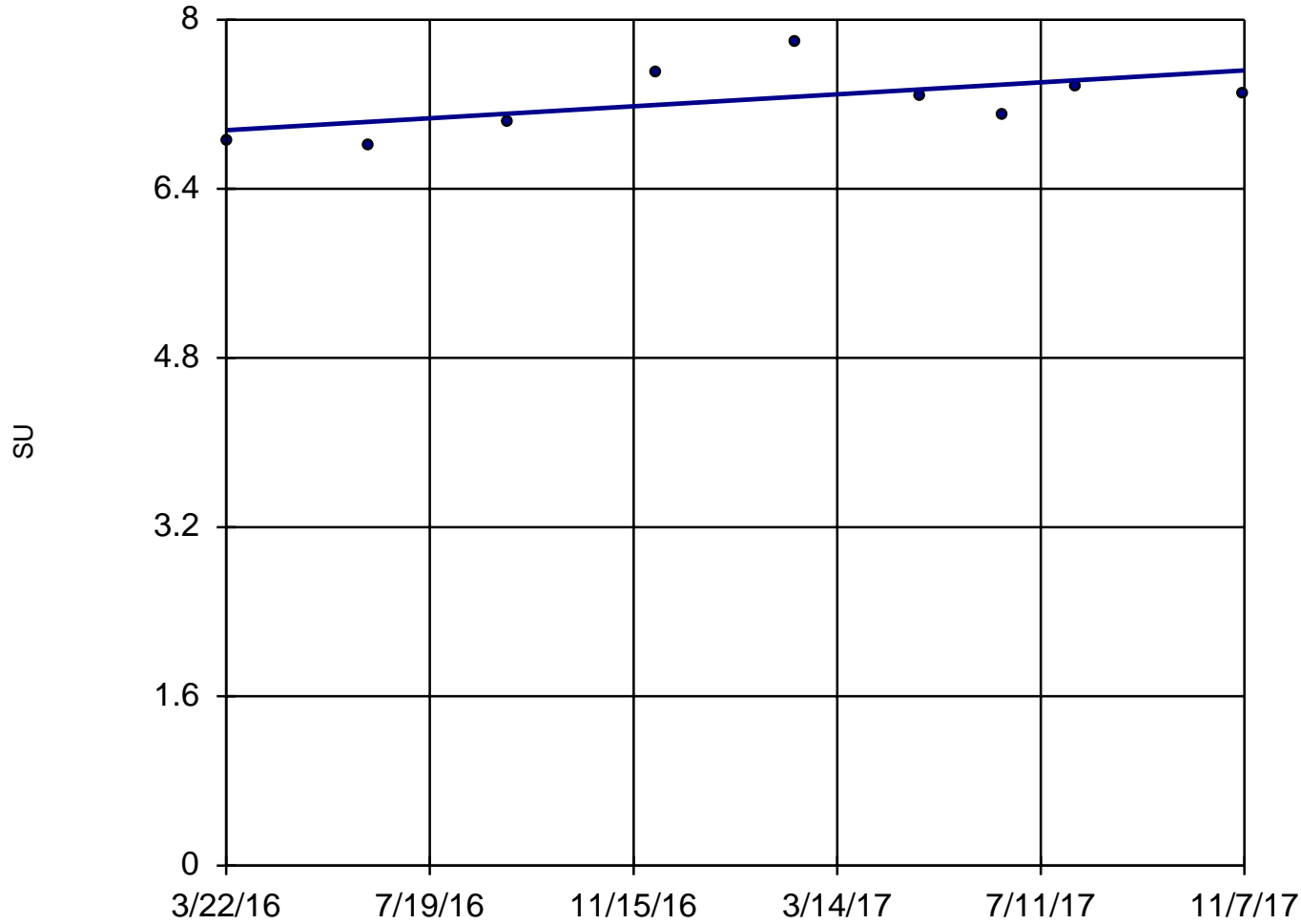


n = 9  
Slope = 0.3021 units per year.  
Mann-Kendall statistic = 12  
critical = 23  
Trend not significant at 98% confidence level ( $\alpha = 0.01$  per tail).

Constituent: pH Analysis Run 1/4/2018 10:33 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

# Sen's Slope Estimator

MW2

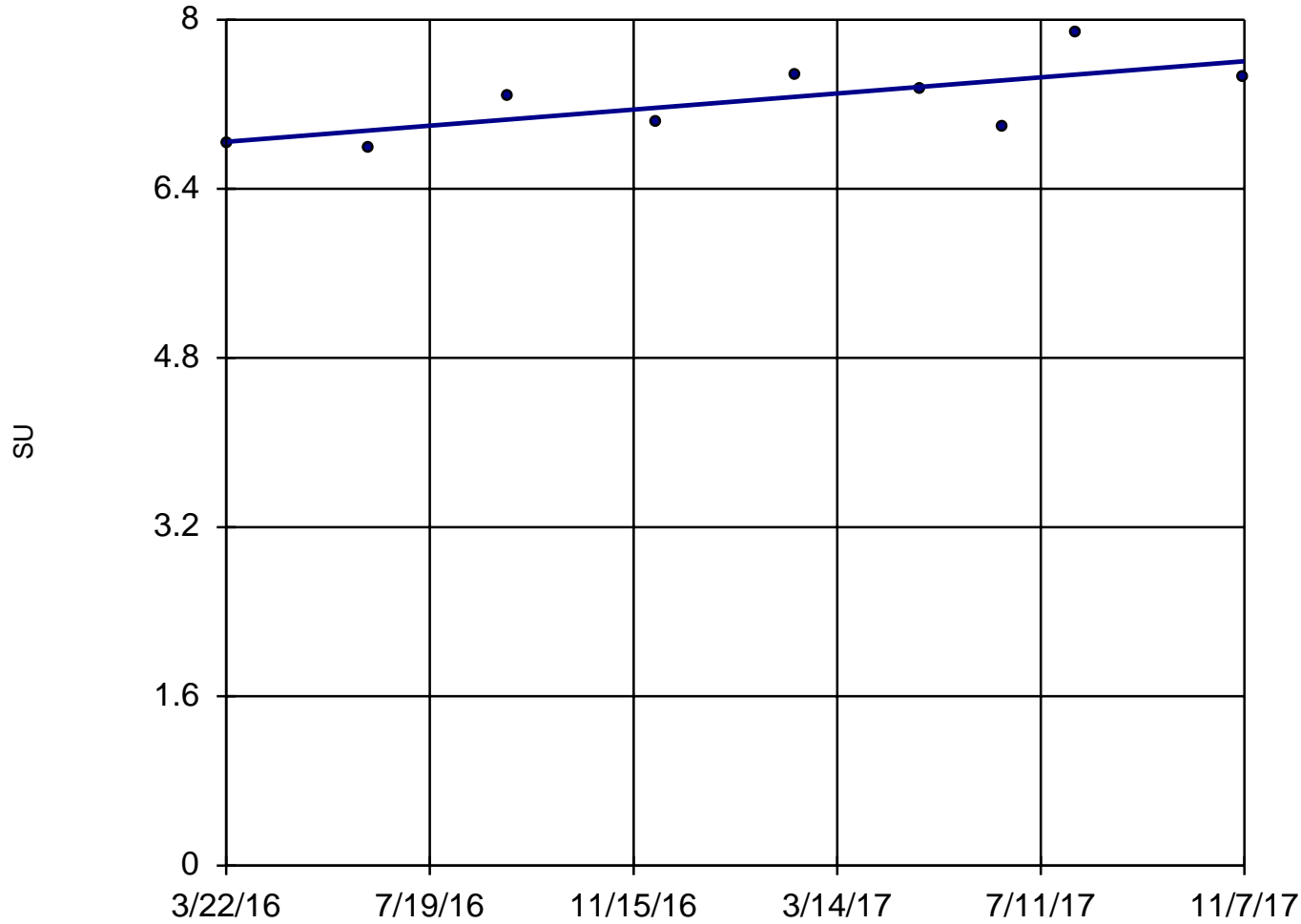


n = 9  
Slope = 0.3485  
units per year.  
Mann-Kendall  
statistic = 14  
critical = 23  
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: pH Analysis Run 1/4/2018 10:33 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

### Sen's Slope Estimator

MW9 (bg)

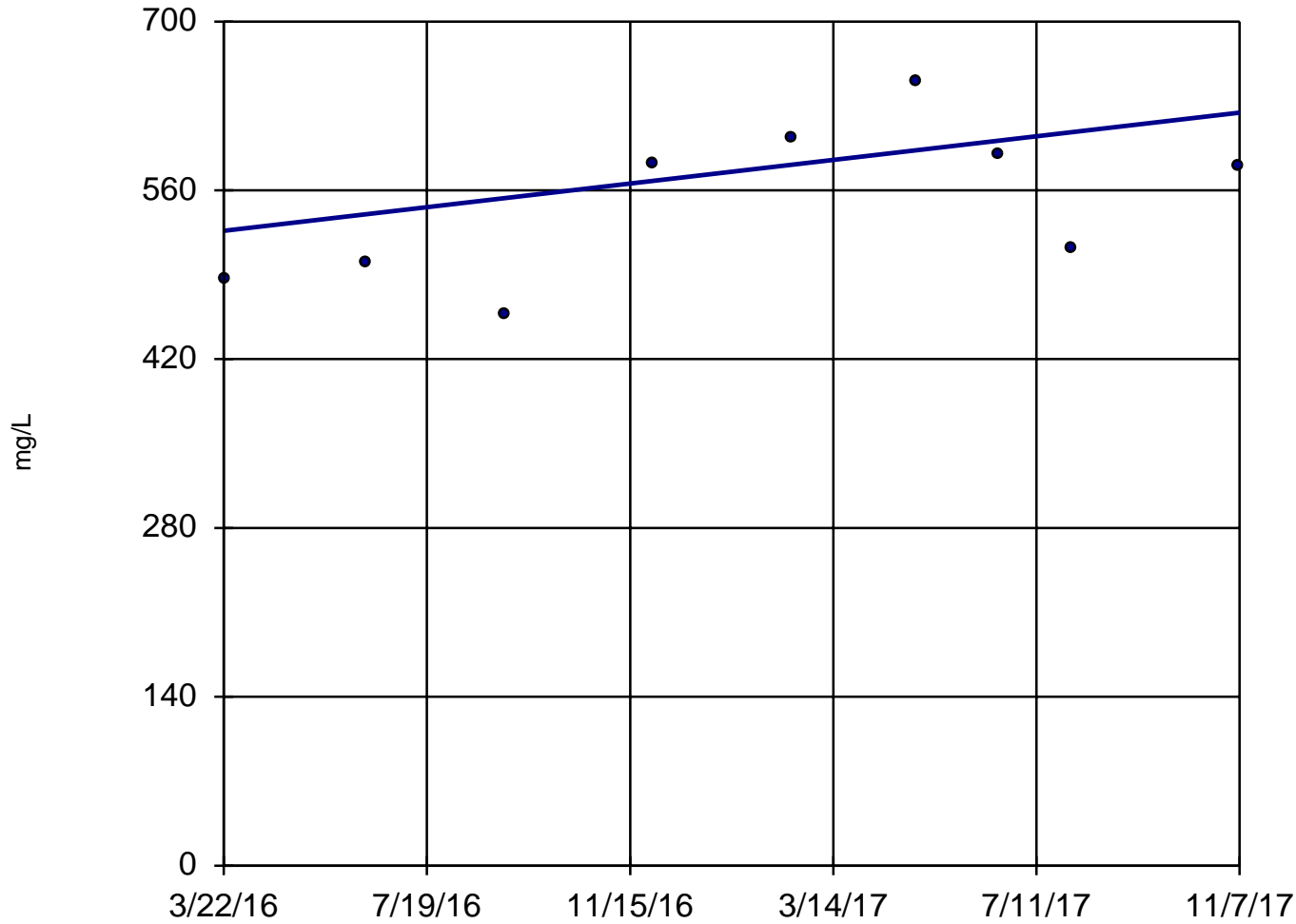


n = 9  
Slope = 0.4672 units per year.  
Mann-Kendall statistic = 18  
critical = 23  
Trend not significant at 98% confidence level ( $\alpha = 0.01$  per tail).

Constituent: pH Analysis Run 1/4/2018 10:33 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2



### Sen's Slope Estimator MW13

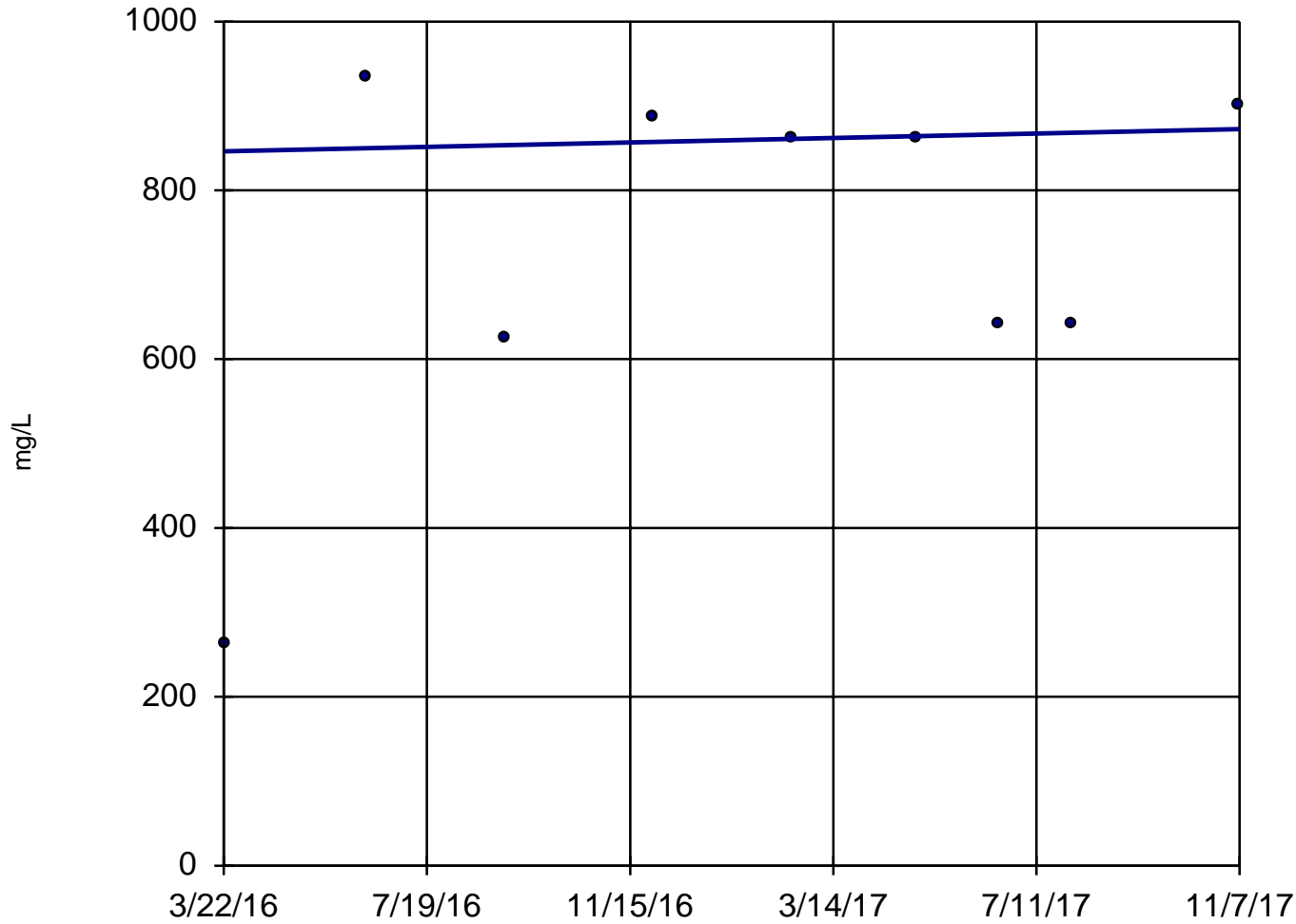


n = 9  
Slope = 60.1  
units per year.  
Mann-Kendall  
statistic = 12  
critical = 23  
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Sulfate Analysis Run 1/4/2018 10:33 AM

OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

### Sen's Slope Estimator MW15

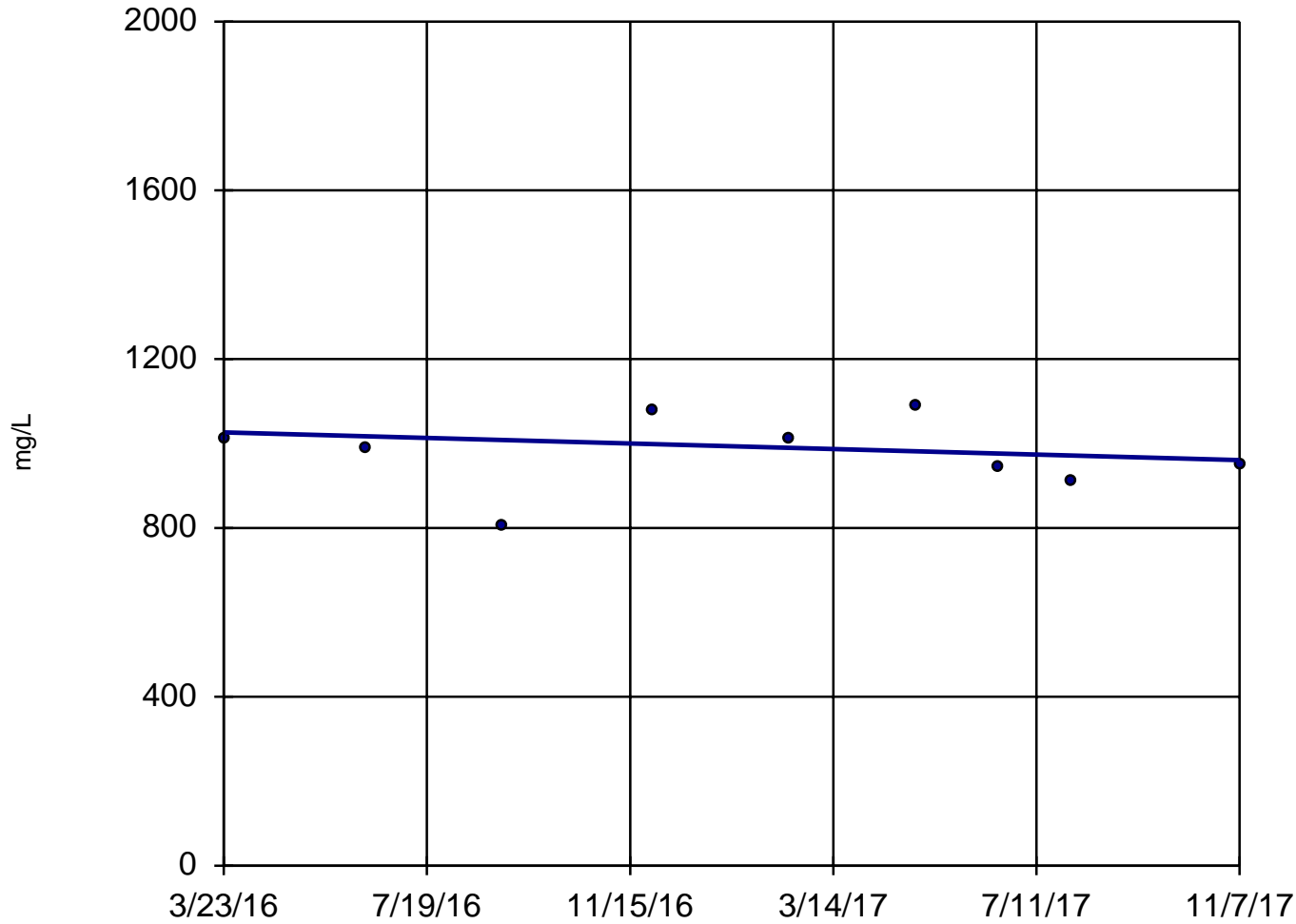


n = 9  
Slope = 16.22  
units per year.  
Mann-Kendall  
statistic = 2  
critical = 23  
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Sulfate Analysis Run 1/4/2018 10:33 AM

OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

## Sen's Slope Estimator MW17



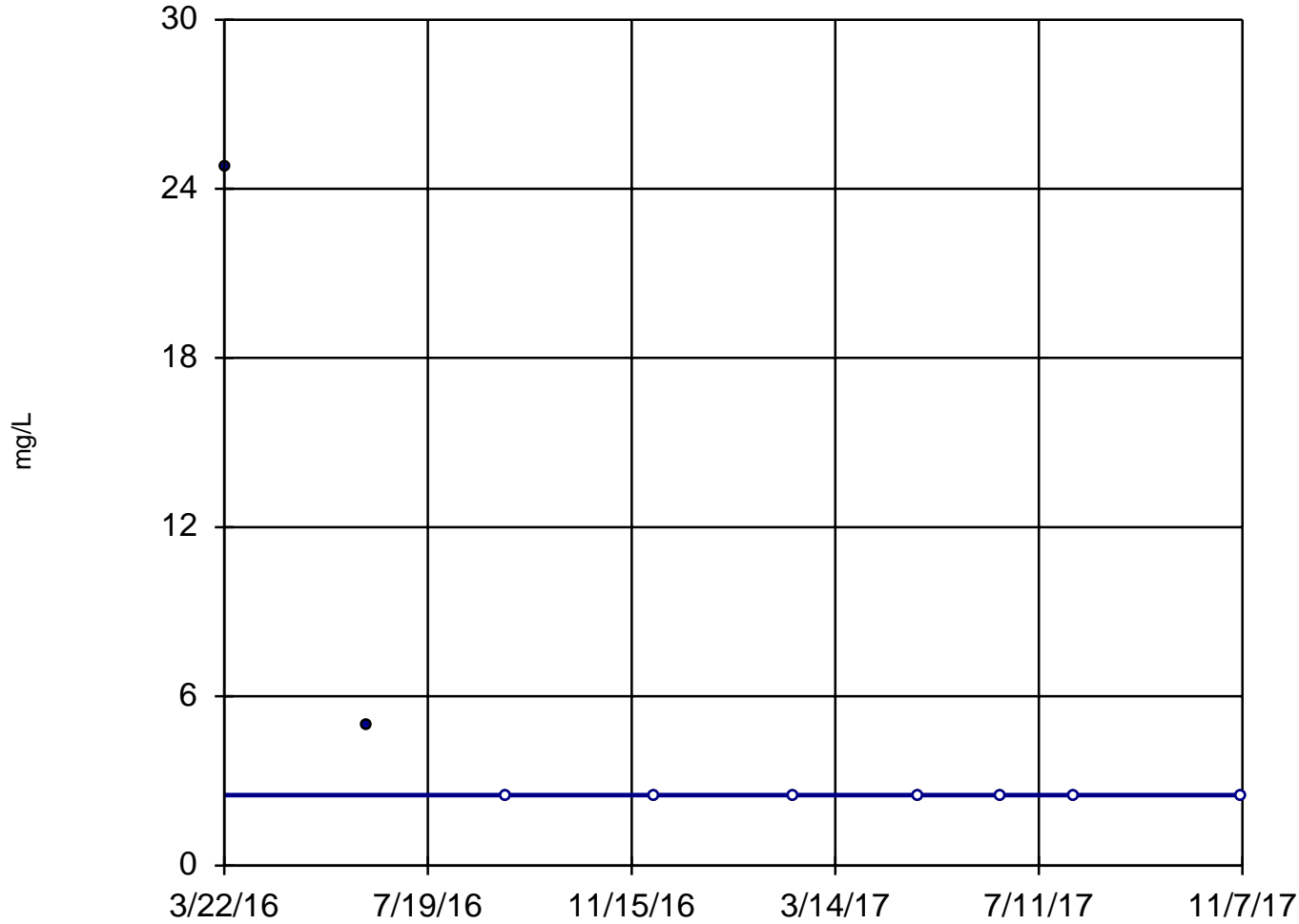
n = 9  
Slope = -40.51  
units per year.  
Mann-Kendall  
statistic = -5  
critical = -23  
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Sulfate Analysis Run 1/4/2018 10:33 AM

OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

## Sen's Slope Estimator

MW18 (bg)



n = 9

Slope = 0  
units per year.

Mann-Kendall  
statistic = -15  
critical = -23

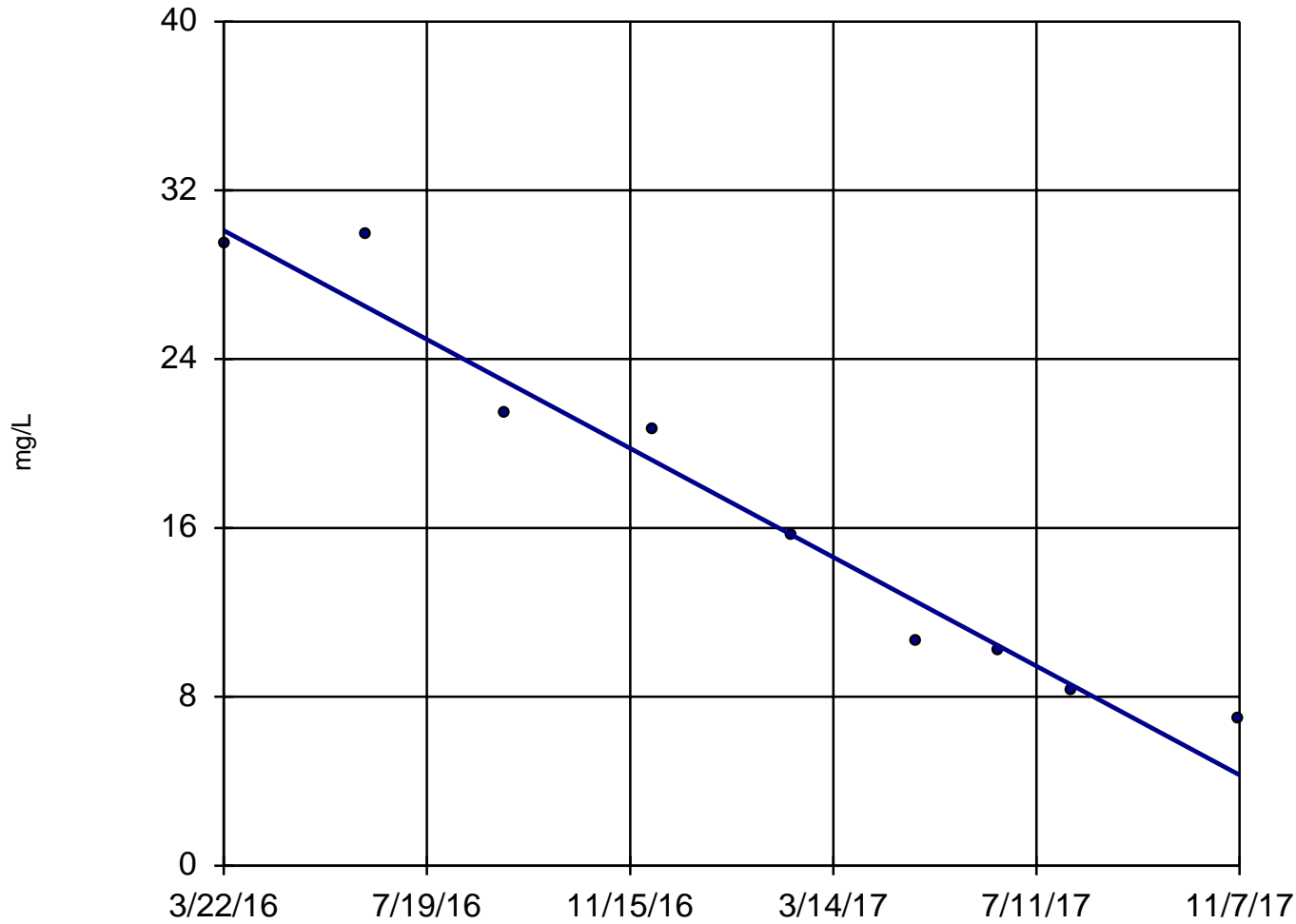
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Sulfate Analysis Run 1/4/2018 10:33 AM

OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

# Sen's Slope Estimator

MW19 (bg)



n = 9

Slope = -15.82  
units per year.

Mann-Kendall  
statistic = -34  
critical = -23

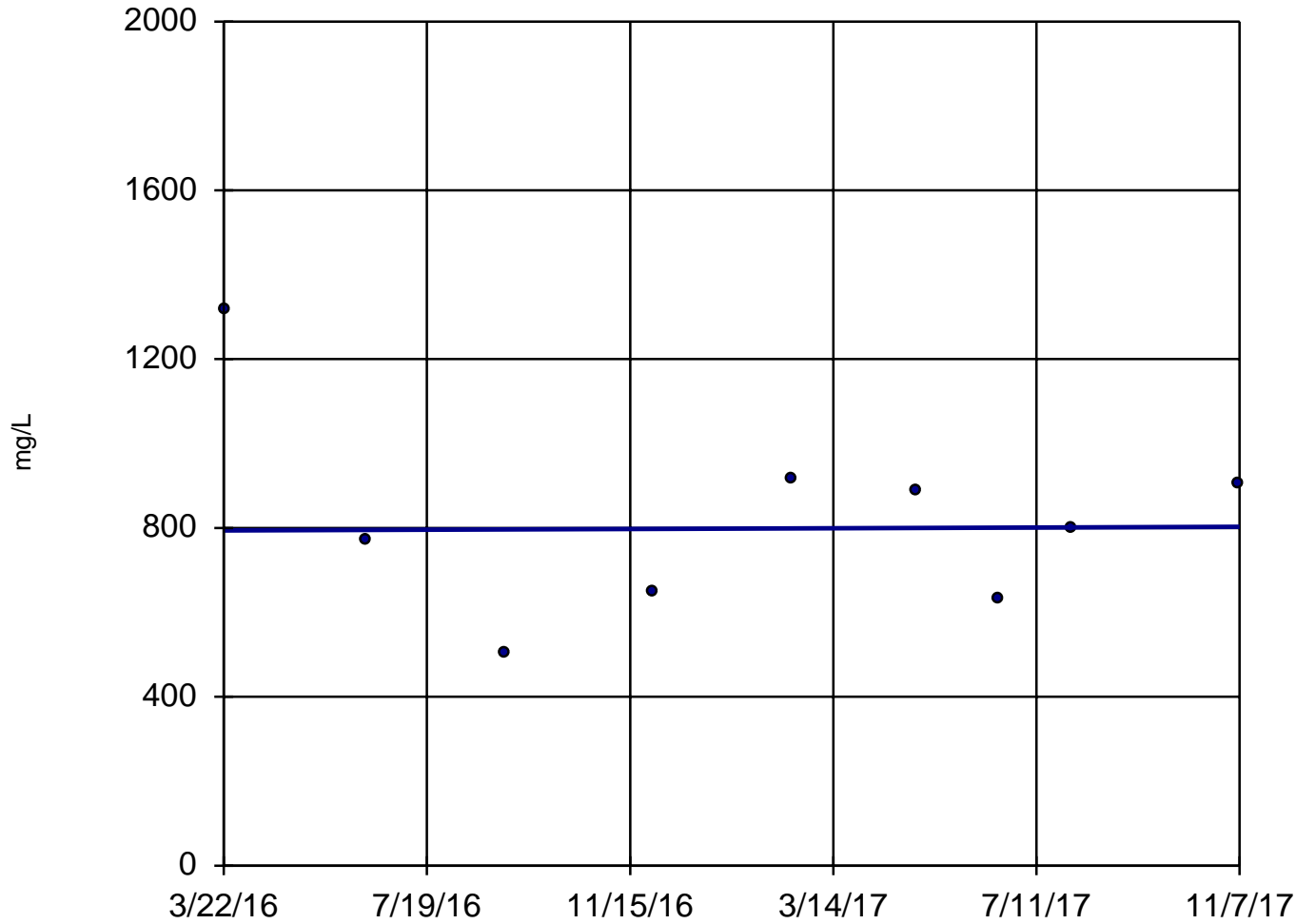
Decreasing trend  
significant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Sulfate Analysis Run 1/4/2018 10:33 AM

OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

# Sen's Slope Estimator

MW2



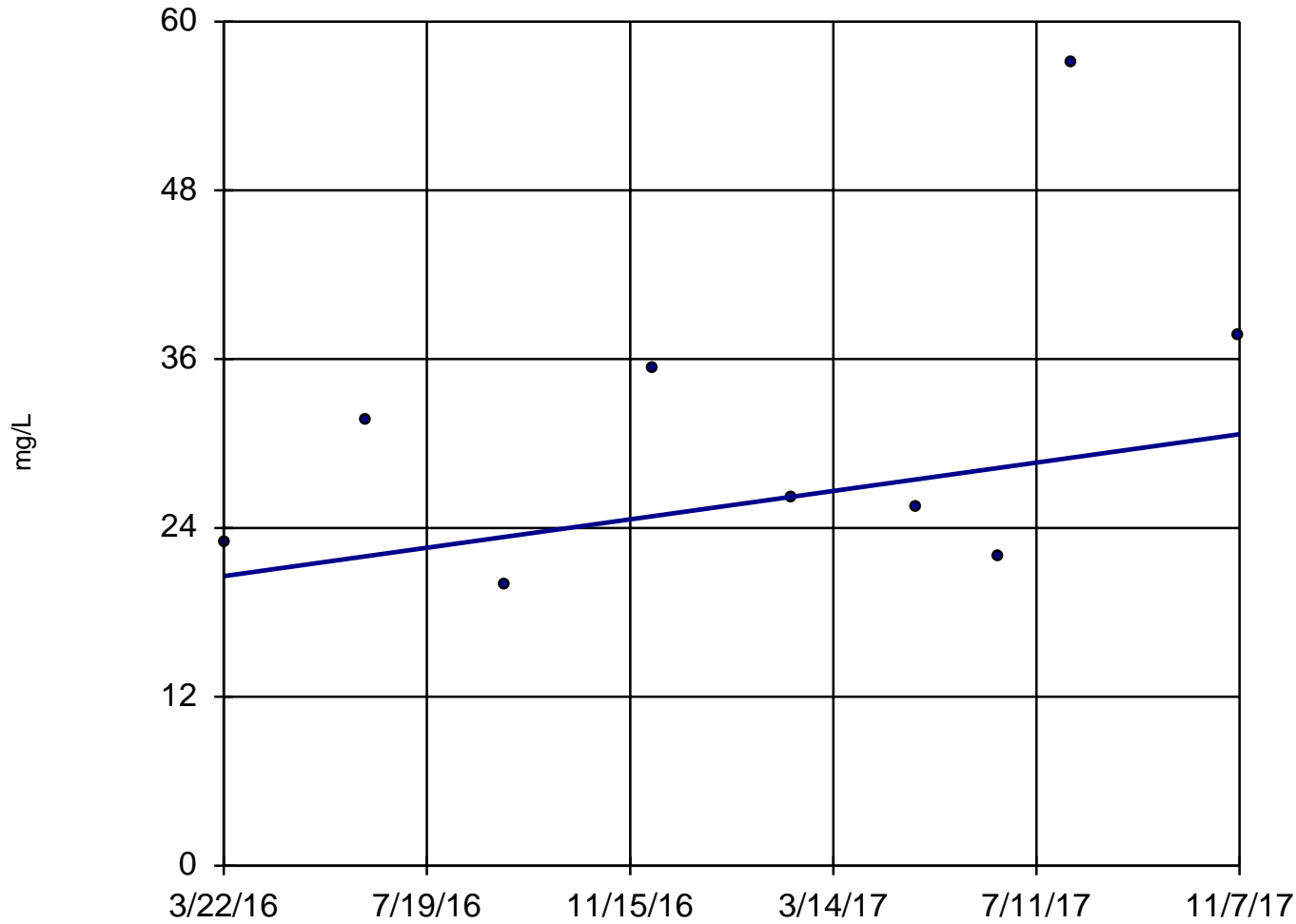
n = 9  
Slope = 5.523  
units per year.  
Mann-Kendall  
statistic = 0  
critical = 23  
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Sulfate Analysis Run 1/4/2018 10:33 AM

OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

### Sen's Slope Estimator

MW9 (bg)

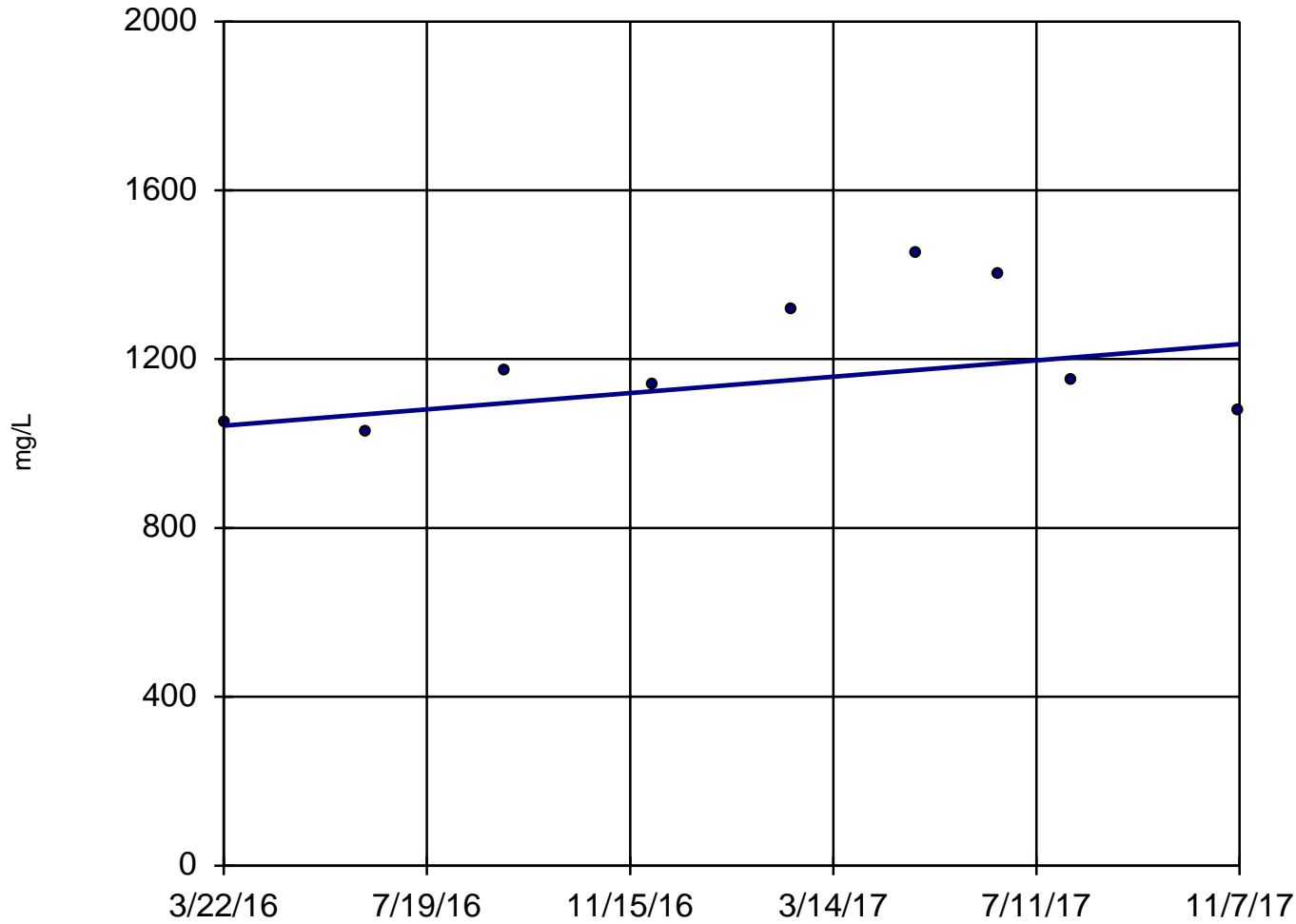


n = 9  
Slope = 6.186 units per year.  
Mann-Kendall statistic = 10  
critical = 23  
Trend not significant at 98% confidence level ( $\alpha = 0.01$  per tail).

Constituent: Sulfate Analysis Run 1/4/2018 10:33 AM

OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

### Sen's Slope Estimator MW13

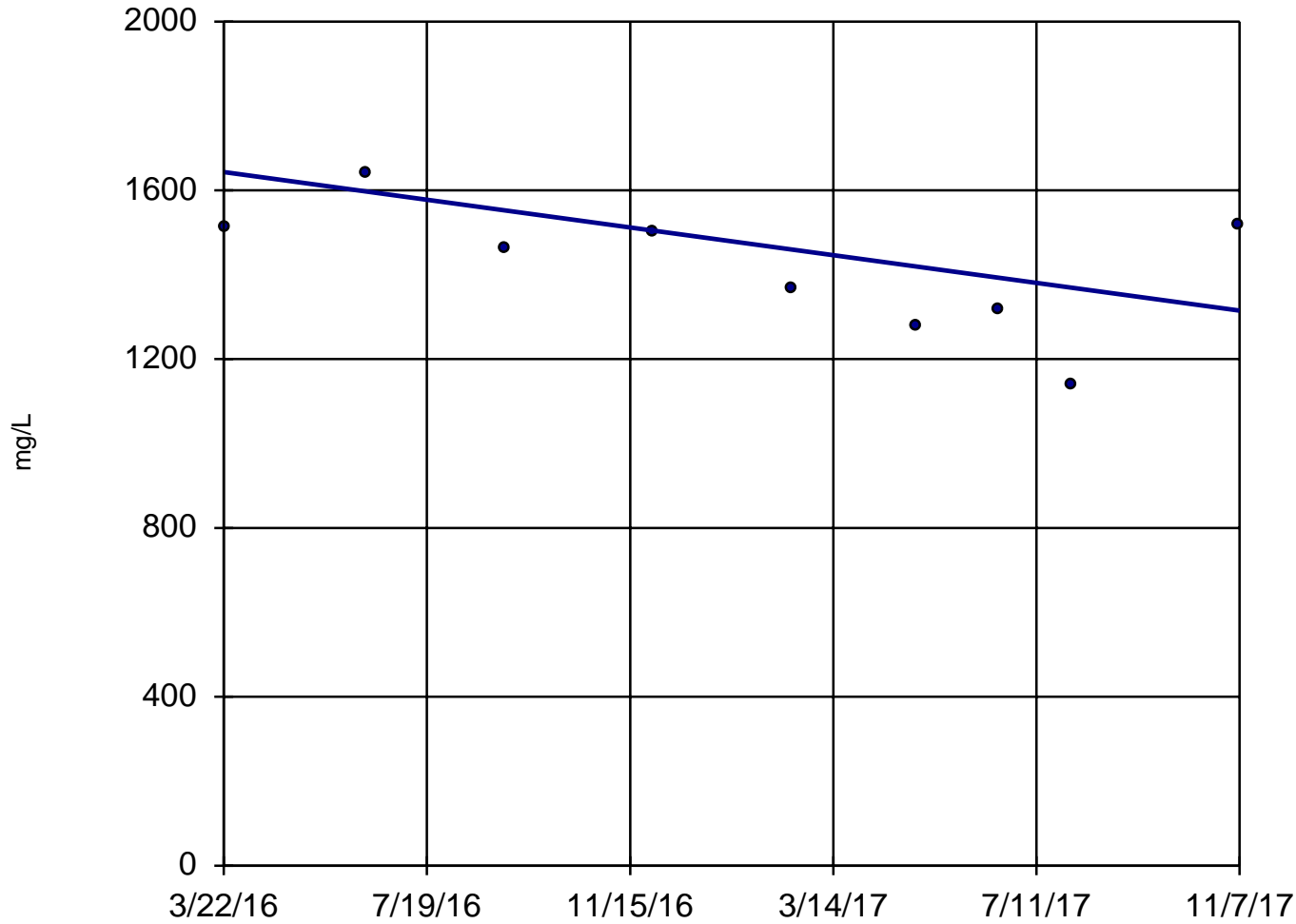


n = 9  
Slope = 118.6  
units per year.  
Mann-Kendall  
statistic = 10  
critical = 23  
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Total Dissolved Solids Analysis Run 1/4/2018 10:33 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2



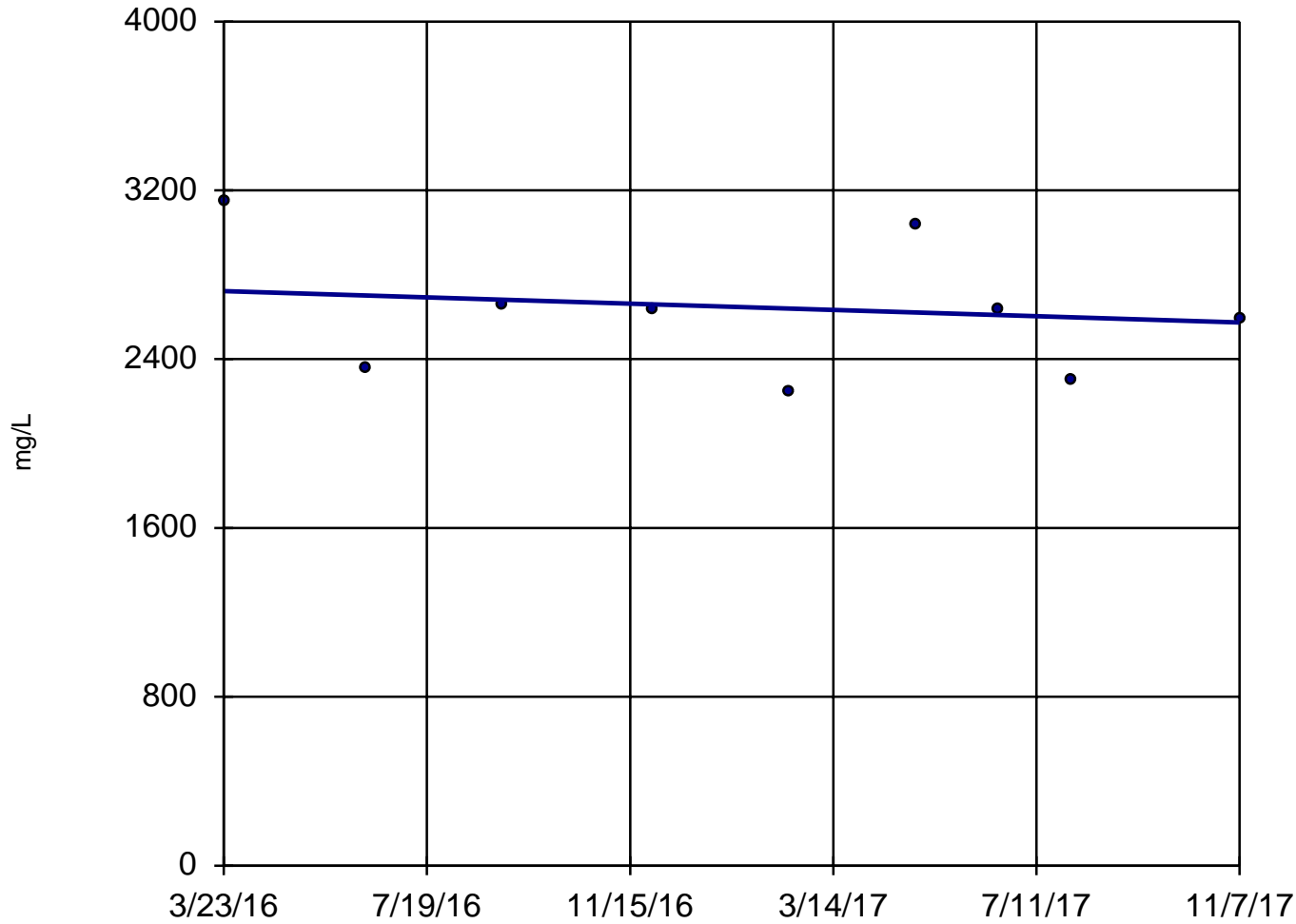
## Sen's Slope Estimator MW15



n = 9  
Slope = -201.2  
units per year.  
Mann-Kendall  
statistic = -16  
critical = -23  
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Total Dissolved Solids Analysis Run 1/4/2018 10:33 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

## Sen's Slope Estimator MW17

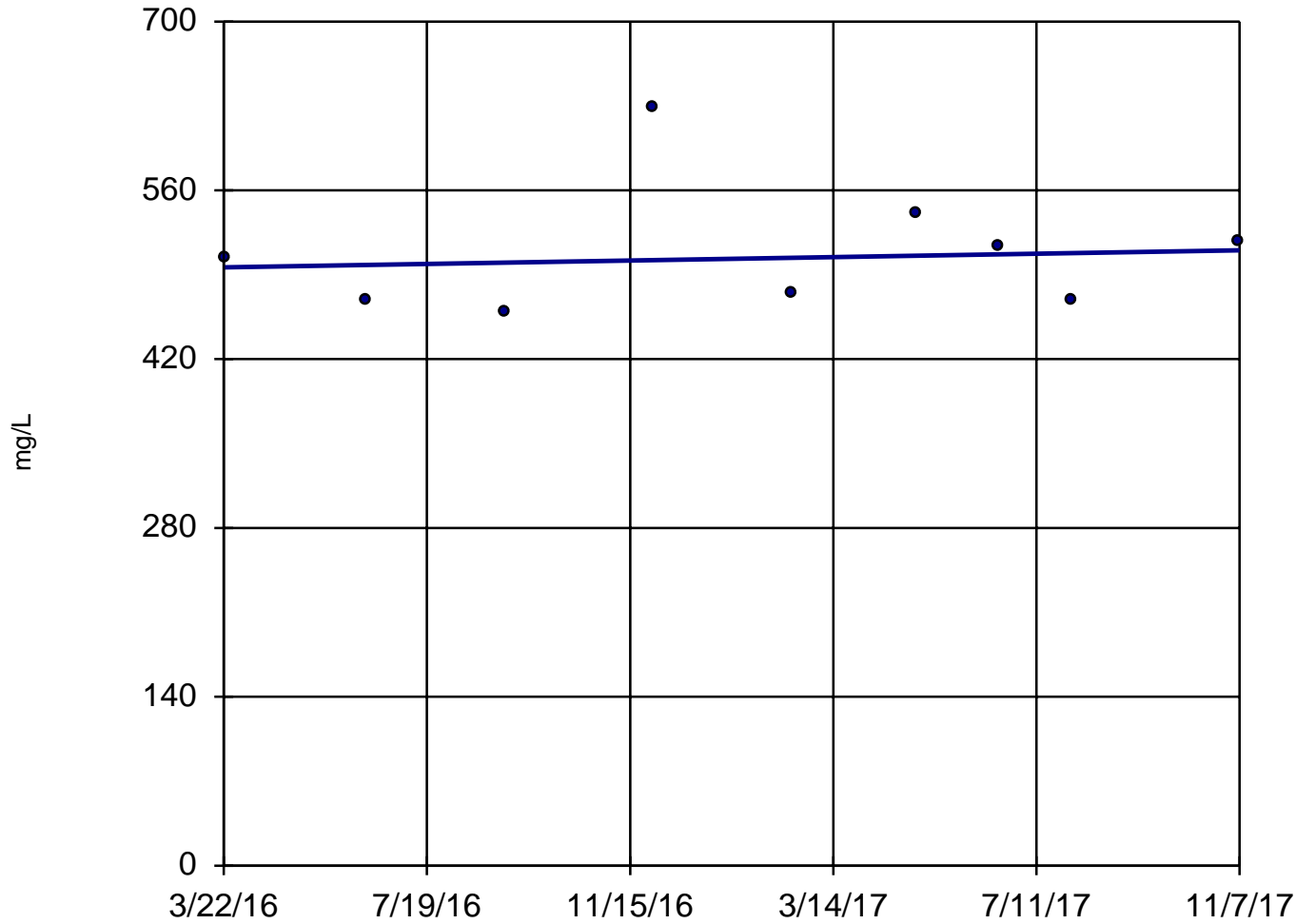


n = 9  
Slope = -91.05  
units per year.  
Mann-Kendall  
statistic = -11  
critical = -23  
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Total Dissolved Solids Analysis Run 1/4/2018 10:33 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

### Sen's Slope Estimator

MW18 (bg)

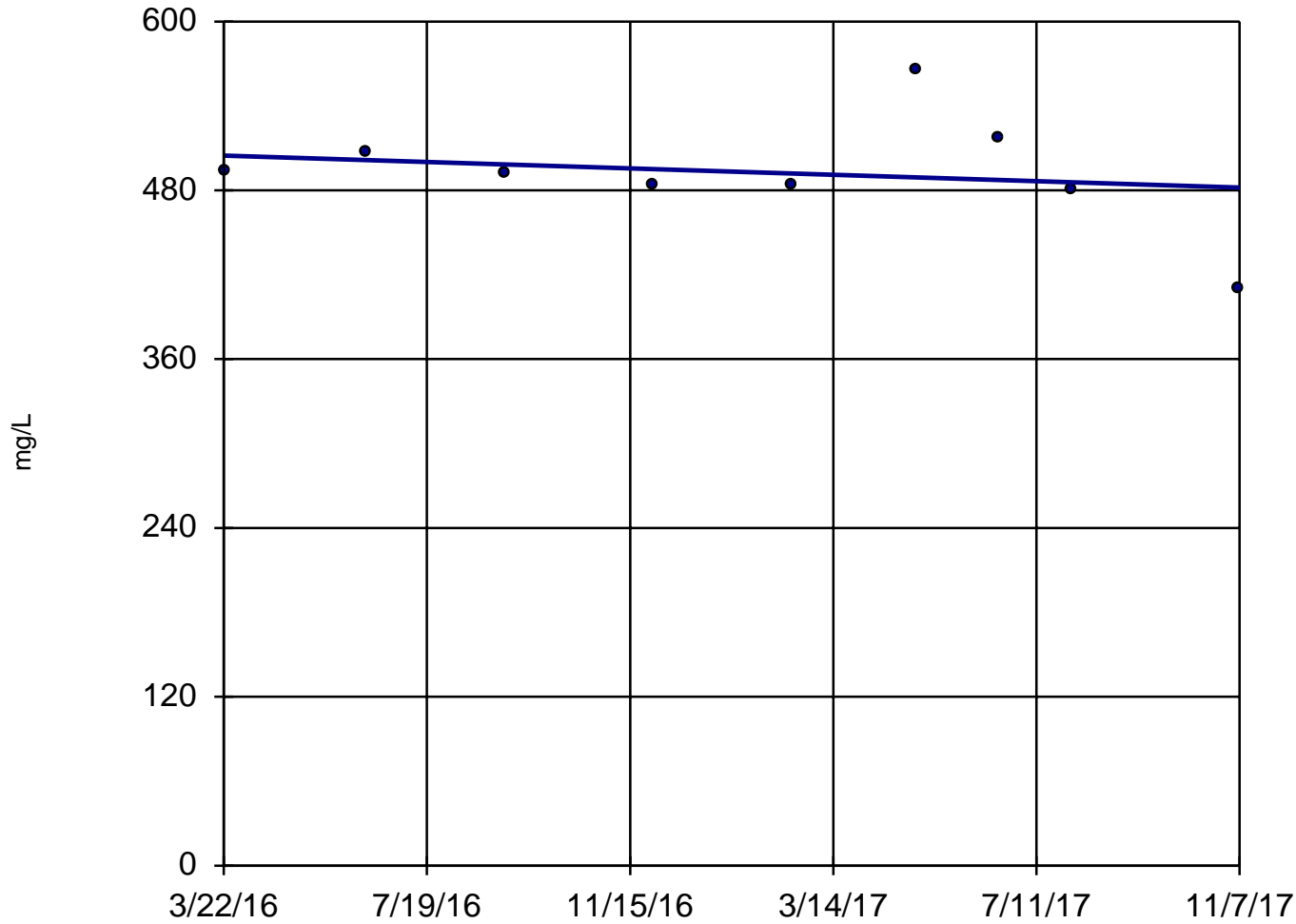


n = 9  
Slope = 8.692  
units per year.  
Mann-Kendall  
statistic = 5  
critical = 23  
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Total Dissolved Solids Analysis Run 1/4/2018 10:33 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

### Sen's Slope Estimator

MW19 (bg)

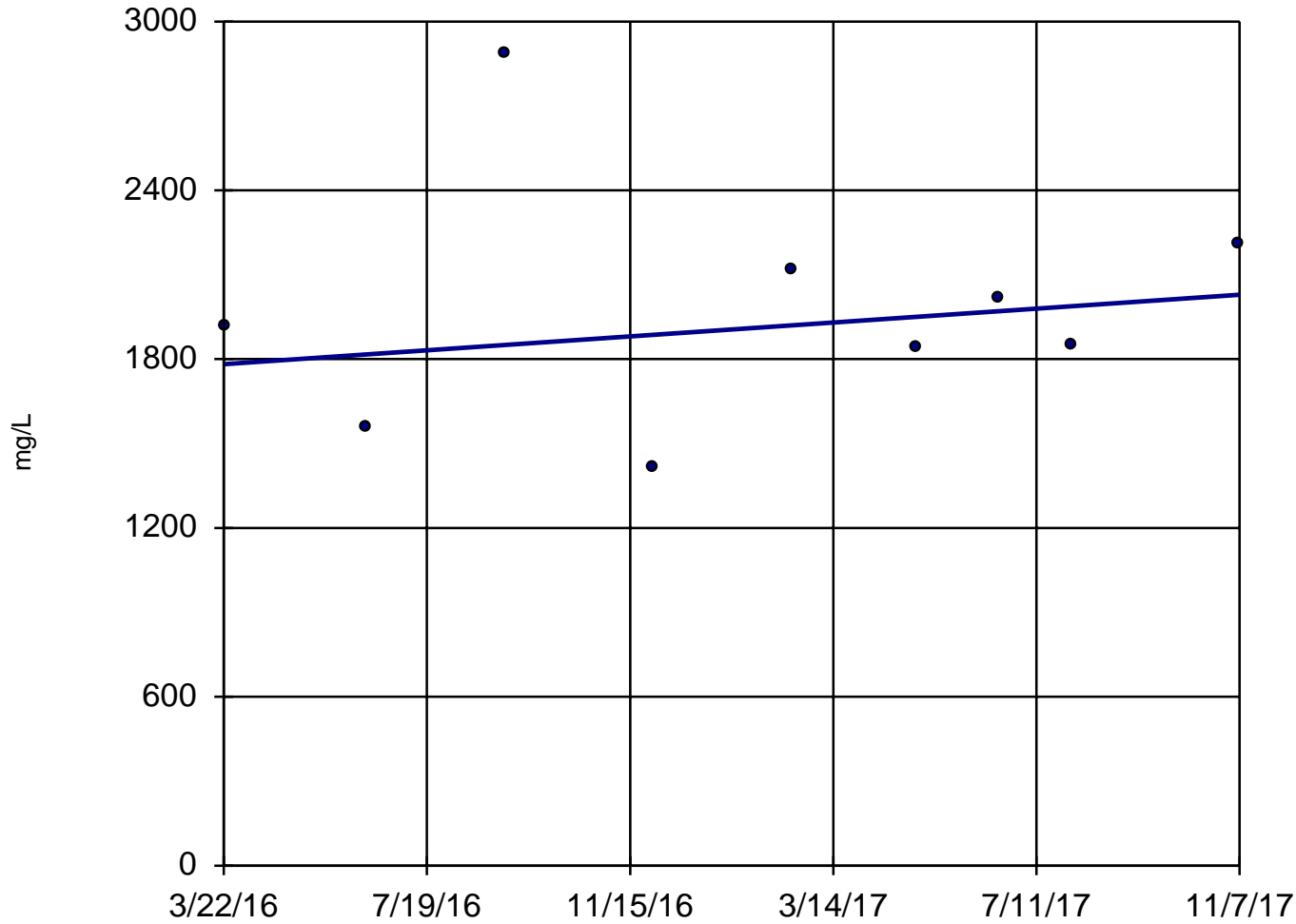


n = 9  
Slope = -13.87 units per year.  
Mann-Kendall statistic = -13  
critical = -23  
Trend not significant at 98% confidence level ( $\alpha = 0.01$  per tail).

Constituent: Total Dissolved Solids Analysis Run 1/4/2018 10:33 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

# Sen's Slope Estimator

MW2

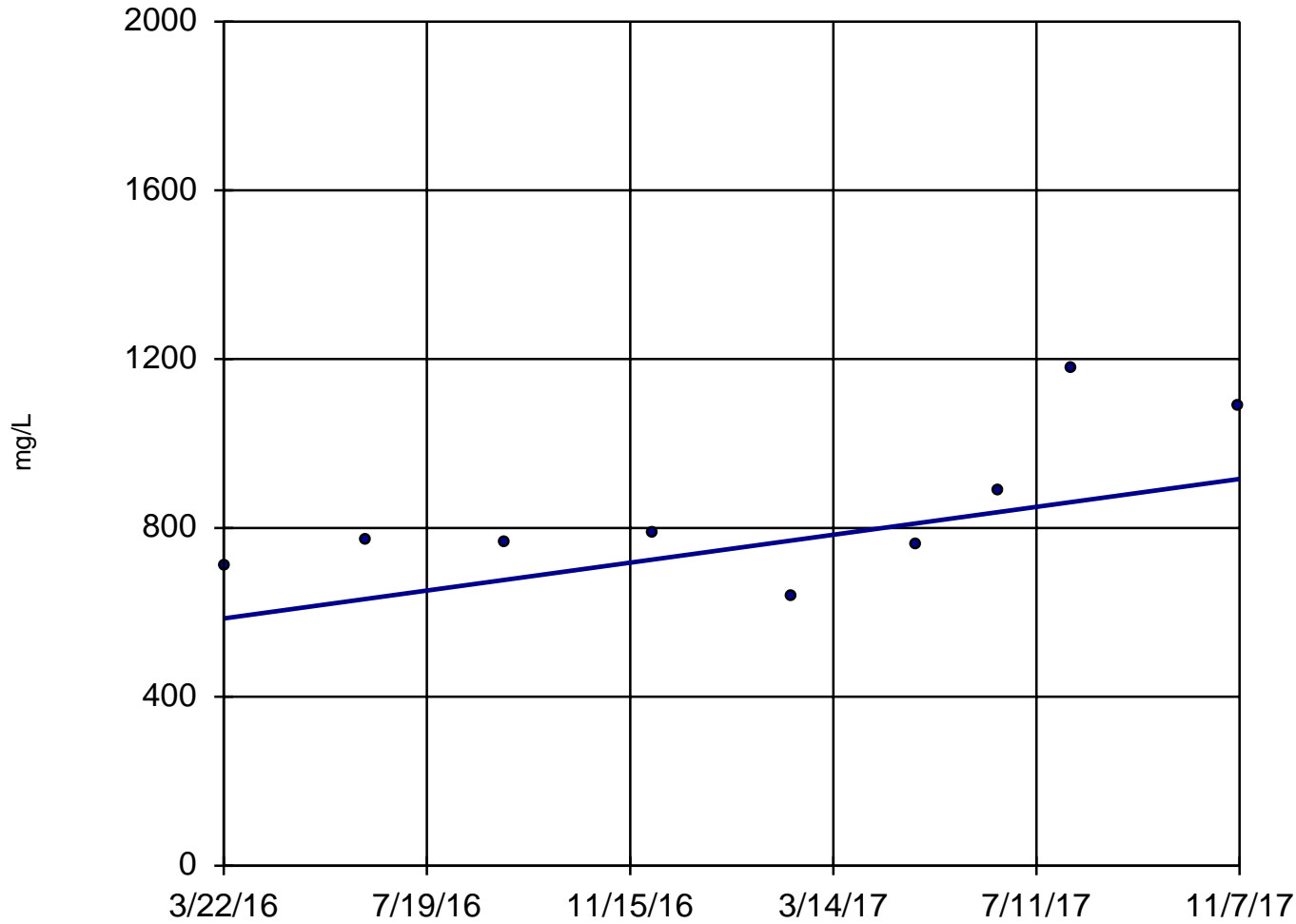


n = 9  
Slope = 151.4 units per year.  
Mann-Kendall statistic = 6  
critical = 23  
Trend not significant at 98% confidence level ( $\alpha = 0.01$  per tail).

Constituent: Total Dissolved Solids Analysis Run 1/4/2018 10:33 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2

## Sen's Slope Estimator

MW9 (bg)



n = 9

Slope = 202.4  
units per year.

Mann-Kendall  
statistic = 18  
critical = 23

Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Total Dissolved Solids Analysis Run 1/4/2018 10:34 AM  
OPPD Client: Terracon Data: no SanitasMatrix CCR (Q4 2017) V2