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March 2017
File No. 41753-004

RACER Trust
1400 Lowell Ave.
Elyria, Ohio 44035

Attention: Pamela Barnett

Subject: 2016 Biennial Groundwater Monitoring - Closed RCRA Landfill
1400 Lowell Ave.
Elyria, Ohio

Ladies and Gentlemen:

Please find attached the Biennial Groundwater Monitoring Report for 2016 for the Closed Landfill in Elyria, Ohio. We appreciate the opportunity to provide environmental consulting services on this project, and if you have any questions or comments, please do not hesitate to call or email.

Sincerely yours,
HALEY & ALDRICH, INC.

A handwritten signature in black ink that reads "Ban Aragona".

Ban Aragona
Project Manager

Enclosures

\\cle\common\Projects\41753_RacerElyria\004_GW Monitoring\Deliverables\2017_0227_GW Monitoring F.docx

REPORT ON
2016 BIENNIAL GROUNDWATER MONITORING –
CLOSED RCRA LANDFILL
1400 LOWELL AVE.
ELYRIA, OHIO

by Haley & Aldrich, Inc.
Cleveland, Ohio

for RACER Trust
Elyria, Ohio

File No. 41753-004
March 2017



Introduction

This report presents the 2016 Biennial Groundwater Monitoring Event for the Closed Landfill (Site) in Elyria, Ohio as described in the Revised Post-Closure Plan (Revised PCP) (Haley & Aldrich,2015). The Revised PCP was approved by the Ohio EPA on December 29, 2015. This work is required under the Ohio Environmental Protection Agency's (Ohio EPA) Ohio Administrative Code (OAC) Rule 3745-54-75. This report has been prepared by Haley & Aldrich, Inc. (Haley & Aldrich), on behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust. The Site is located in Lorain County, Ohio, at 1400 Lowell Street, in the City of Elyria, as presented on Figure 1.1.

The groundwater monitoring event included the following activities:

- Annual water level measurements were collected from Site monitoring wells, piezometers, and primary sumps (July 2016); and
- Annual water quality samples were collected from select Site monitoring wells (July 2016)

Haley & Aldrich performed the field activities associated with the sampling events. Samples were submitted to TestAmerica Laboratories, Inc. in North Canton, Ohio for laboratory analysis.

The results of the water level and water quality monitoring are presented in subsequent sections of this report.

The data collected in 2016 are being submitted electronically as Microsoft Excel (MS Excel) files, as per the 2013 generic Form and Instructions from Ohio EPA. The five MS Excel files are labeled as: Facility, Wells, Sampling, Params, GW Data, and are included on the enclosed compact disc (CD) in Appendix A.

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3	Bedrock Groundwater Elevations

1. Facility Database

The 2016 Biennial Report Form for Section 1 has been completed and is included in Appendix A-1.

2. Well Database

The 2016 Biennial Report Form for Section 2 has been completed and is included in Appendix A-2.

3. Sampling Database

The 2016 Biennial Report Form for Section 3 has been completed and is included in Appendix A-3.

4. Parameter Database

The 2016 Biennial Report Form for Section 4 has been completed and is included in Appendix A-4.

5. Groundwater Database

The 2016 Biennial Report Form for Section 5 has been completed and is included in Appendix A-5.

6. Other Required Information

6.1 GROUNDWATER CONTOURS

There are 18 monitoring wells and 8 piezometers that are currently part of the Site's hydraulic monitoring network. These locations are either required according to the Revised PCP.

Groundwater elevations were collected in July 2016. Groundwater elevations were collected from 26 wells and piezometers. The groundwater elevations for 2016 are summarized in Table I.

The groundwater elevations, contours, and generalized flow direction for the till contact, and bedrock aquifers for July 2016 are presented in Figures 2 and 3, respectively. During the July 2016 monitoring event, groundwater flow directions in the till contact and bedrock aquifers beneath the landfill secure cell were from southwest to northeast, which is consistent with previous monitoring events.

6.2 GROUNDWATER FLOW

Groundwater flow velocity was calculated based on the July 2016 water level measurements using an average hydraulic conductivity of 4.1×10^{-4} centimeters per second (cm/sec), and 1.9×10^{-4} cm/sec (Supplemental Annual Report, CRA, 2002) for till contact and bedrock water-bearing zones, respectively. The groundwater flow velocity beneath the landfill in the till contact zone was calculated at a rate of 33.87 feet per year as detailed in Appendix B-1. The groundwater flow velocity beneath the landfill in the bedrock water-bearing zone was calculated at a rate of 15.77 feet per year as detailed in Appendix B-2.

6.3 JULY 2016 BIENNIAL MONITORING EVENT

Groundwater samples were analyzed for the following site specific parameters:

- Barium (waste indicator parameter);
- Select metals (calcium, chromium, iron, magnesium, manganese, nickel, potassium, and sodium);
- Total cyanide; and
- Chloride and Sulfate.

Total and dissolved metals analysis was requested from samples collected at many of the monitoring wells due to turbidity being greater than 5 NTU. Dissolved metals samples were passed through a 0.45 micron filter prior to collection. Specific conductance, pH, temperature, turbidity, dissolved oxygen and oxygen reduction potential were measured in the field at monitoring wells prior to sampling.

There were no exceedances of the current Maximum Contaminant Levels (MCLs) as established by US EPA in any of the groundwater samples analyzed for metals or general chemistry that were collected in 2016. MCLs currently exist for barium (2 milligrams per liter [mg/L]), chromium (0.1 mg/L), and total cyanide (0.2 mg/L).

6.3.1 Groundwater

Groundwater samples were collected July 25-27, 2016. During the July 2016 biennial monitoring event, groundwater samples were collected from 18 landfill monitoring wells. The groundwater quality samples were collected using a peristaltic pump and both low flow, and purge and sample methods in accordance with the Revised PCP. One field duplicate sample, one matrix spike, and one matrix spike duplicate sample were collected and analyzed for quality control purposes. The well purge forms for the landfill monitoring wells are presented in Appendix C. The laboratory analytical report and chains-of-custody are presented in Appendix D. The associated data quality assessment and validation memorandum are presented in Appendix E, in accordance with the Revised PCP.

7. Statistical Evaluation

The Revised PCP was approved by Ohio EPA on December 29, 2015. The previously approved statistical evaluation has been replaced by comparisons of groundwater results to MCLs for screening purposes under the Revised PCP.

There were no exceedances of the current MCLs (which exist for barium, and total cyanide) in any of the groundwater samples analyzed for metals or general chemistry, collected in 2016.

8. Compliance Groundwater Monitoring


Compliance groundwater monitoring is not required because the Site is currently being monitored under a Detection Monitoring Program in accordance with the approved Revised PCP.

9. Corrective Action Groundwater Monitoring

Corrective action groundwater monitoring is not required because there were no groundwater corrective action measures taken at this Site in 2016.

Declaration

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Ban N. Aragón

Haley & Aldrich, Inc. (Consultant for Closed Landfill in Elyria, Ohio OHD004201091)

TABLES

**TABLE I
GROUNDWATER ELEVATION SUMMARY
CLOSED RCRA LANDFILL
ELYRIA, OHIO**

Well ID	TOC Elevation (feet)	7/25/2016			Well Status	Stratigraphic Unit
		Water Depth (feet TOC)	Groundwater Elevation (feet amsl)	Depth to Bottom (feet TOC)		
Monitoring Wells						
P-1T	749.74	12.40	737.34	12.44	Piezometer	Till Contact
P-1	749.00	12.73	736.27	21.10	Piezometer	Bedrock
P-2T	749.80	8.42	741.38	15.16	Monitoring Well	Till Contact
P-2	748.87	7.48	741.39	22.60	Monitoring Well	Bedrock
P-3T	748.77	7.92	740.85	12.77	Monitoring Well	Till Contact
P-3R	748.87	7.62	741.25	21.50	Monitoring Well	Bedrock
P-8T	751.13	8.12	743.01	12.49	Monitoring Well	Till Contact
P-8R	751.09	7.71	743.38	22.53	Monitoring Well	Bedrock
P-11	749.52	9.71	739.81	15.17	Piezometer	Till Contact
P-12TR	752.22	8.92	743.30	14.02	Monitoring Well	Till Contact
P-12	751.83	8.57	743.26	22.52	Monitoring Well	Bedrock
P-13T	750.24	8.60	741.64	10.78	Piezometer	Till Contact
P-13	750.38	8.68	741.70	19.50	Piezometer	Bedrock
P-14T	751.68	6.90	744.78	14.39	Monitoring Well	Till Contact
P-14	751.64	6.97	744.67	22.15	Monitoring Well	Bedrock
P-15T	753.59	10.30	743.29	15.97	Monitoring Well	Till Contact
P-15	753.73	10.55	743.18	24.15	Monitoring Well	Bedrock
P-16T	747.40	10.48	736.92	12.15	Monitoring Well	Till Contact
P-16	747.62	10.89	736.73	20.27	Monitoring Well	Bedrock
P-17	754.96	11.53	743.43	25.30	Piezometer	Bedrock
P-18T	750.25	6.97	743.28	19.92	Monitoring Well	Till Contact
P-18	751.35	8.04	743.31	31.22	Monitoring Well	Bedrock
P-19	750.24	10.13	740.11	21.06	Piezometer	Bedrock
P-20	748.94	10.55	738.39	20.77	Piezometer	Bedrock
P-21T	751.28	10.21	741.07	15.90	Monitoring Well	Till Contact
P-21	751.35	10.62	740.73	24.02	Monitoring Well	Bedrock

Notes:
TOC = top of casing
amsl = above mean sea level

**TABLE II
SUMMARY OF ANALYTICAL RESULTS
RACER ELYRIA
ELYRIA, OHIO**

Location Group	Location	Down-Gradient						Down/Side-Gradient						
		P-08R	P-08R	P-08T	P-16	P-16T	P-21	P-21T	P-02	P-02T	P-03R	P-03T	P-18	P-18T
Sample Date		07/27/2016	07/27/2016	07/27/2016	07/26/2016	07/27/2016	07/27/2016	07/27/2016	07/26/2016	07/26/2016	07/26/2016	07/26/2016	07/27/2016	07/26/2016
Sample Type		N	FD	N	N	N	N	N	N	N	N	N	N	N
GW Unit		BEDROCK	BEDROCK	TILL	BEDROCK	TILL	BEDROCK	TILL	BEDROCK	TILL	BEDROCK	TILL	BEDROCK	TILL
Sample Name	MCLs	P08R-072716-1410	0908-072716-0001	P08T-072716-1300	P16-072616-1730	P16T-072716-0900	P21-072716-1030	P21T-072716-1135	P02-072616-1600	P02T-072616-1640	P3R-072616-1335	P3T-072616-1435	P18-072716-0800	P18T-072616-1210
Field Parameters (mg/L)														
Temperature (Deg C)	-	17.97	-	19.39	17.61	15.52	14.94	14.94	16.16	16.26	14.44	16.53	17.75	15.24
Conductivity (ms/cm)	-	0.897	-	0.549	1.38	1.01	1.06	1.06	0.9	1.87	1.02	1.59	1.17	0.727
Dissolved Oxygen (mg/L)	-	0.44	-	0.56	4.75	1.5	0.54	0.54	0.65	7.22	1.05	0.89	4.1	1.82
pH (s.u.)	-	6.98	-	6.51	6.2	6.96	6.98	6.98	6.38	6.12	6.7	6.37	8.07	6.36
ORP (mV)	-	-18	-	141	56	229	-25	-25	45	113	116	181	185	12
Turbidity (NTU)	-	2.7	-	8.7	16.1	42.3	38.5	38.5	6.8	69.3	151	32.3	107	42.4
Inorganic Compounds, Total (mg/L)														
Barium, Total	2	0.082 J	0.083 J	0.067 J	0.036 J	0.031 J	0.054 J	0.04 J	0.058 J	0.032 J	0.049 J	0.032 J	0.013 J	0.049 J
Calcium, Total	-	95	96	100	260	200	140	230	140	310	28	170	10	64
Chromium, Total	0.1	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)
Iron, Total	-	0.12 J	0.13 J	ND (0.15)	4	1.6	1.4	1.9	0.82	6.1	3	1.2	2.1	2.4
Magnesium, Total	-	20	20	40	74	57	36	57	47	120	20	94	3.4 J	20
Manganese, Total	-	0.053	0.053	0.49	0.21	0.046	0.12	0.6	0.51	0.61	0.033	0.043	0.022	0.09
Nickel, Total	-	0.011 J	0.011 J	0.0086 J	0.24	0.022 J	0.16	0.34	0.0069 J	0.016 J	ND (0.04)	ND (0.04)	0.21	0.057
Potassium, Total	-	3.5 J	3.5 J	8.1	2.7 J	1.6 J	3.7 J	2.3 J	3.7 J	2.1 J	4.1 J	1.8 J	4 J	5.1
Sodium, Total	-	170	180	18	81	52	140	120	100	44	280	170	300	120
Inorganic Compounds, Dissolved (mg/L)														
Barium, Dissolved	2	-	-	0.065 J	0.035 J	0.02 J	0.055 J	0.04 J	0.056 J	0.02 J	0.039 J	0.025 J	0.011 J	0.049 J
Calcium, Dissolved	-	-	-	95	300	210	140	230	140	130	29	170	10	68
Chromium, Dissolved	0.1	-	-	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)
Iron, Dissolved	-	-	-	ND (0.15)	3.4	ND (0.15)	1.1	1.7	0.6	0.66	ND (0.15)	ND (0.15)	ND (0.15)	1.1
Magnesium, Dissolved	-	-	-	38	73	59	37	56	45	130	21	96	3.1 J	21
Manganese, Dissolved	-	-	-	0.37	0.2	0.0094 J	0.12	0.56	0.43	0.57	0.017	ND (0.015)	0.0059 J	0.08
Nickel, Dissolved	-	-	-	0.0073 J	0.24	0.023 J	0.16	0.34	0.0062 J	0.012 J	ND (0.04)	ND (0.04)	0.22	0.061
Potassium, Dissolved	-	-	-	7.9	2.6 J	1.5 J	3.6 J	2.3 J	3.6 J	1.5 J	3.9 J	1.7 J	3.8 J	5.3
Sodium, Dissolved	-	-	-	17	81	53	140	120	100	46	270	180	340	140
Other (mg/L)														
Chloride	-	140	140	17	62	16	81	68	41	100	36	30	42	31
Cyanide	0.2	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)
Sulfate	-	98	39	100	490	390	220	400	300	720	110	610	170	95

- Notes:**
1. Results in **bold** were detected.
 2. Results in **red** exceed the MCL.
 3. ND - Not detected above the reporting limit.
J - Estimated result
 4. Sample Type codes:
N - Normal Sample
FD - Field Duplicate
 5. Data validated by Haley & Aldrich, Inc.

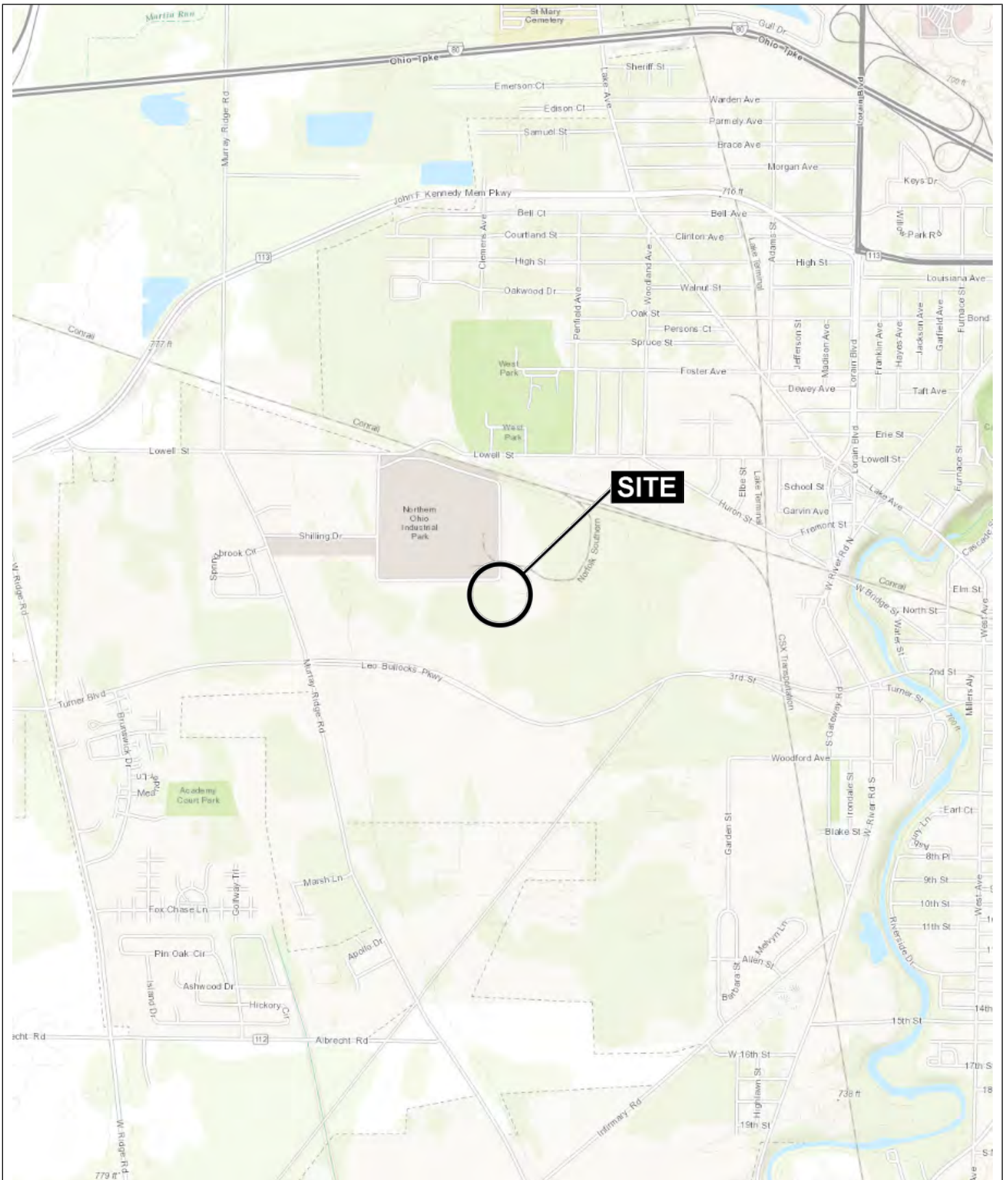
**TABLE III
SUMMARY OF ANALYTICAL RESULTS
RACER ELYRIA
ELYRIA, OHIO**

Location Group	Location	Up-Gradient						
		P-12	P-12TR	P-14	P-14T	P-14T	P-15	P-15T
Sample Date		07/26/2016	07/25/2016	07/25/2016	07/25/2016	07/25/2016	07/25/2016	07/26/2016
Sample Type		N	N	N	N	FD	N	N
GW Unit		BEDROCK	TILL	BEDROCK	TILL	TILL	BEDROCK	TILL
Sample Name	MCLs	P12-072616-0800	P12TR-072516-1545	P14-072516-1420	P14T-072516-1320	0908-072516-0001	P15-072516-1640	P15T-072616-1015
Field Parameters (mg/L)								
Temperature (Deg C)	-	14.41	18.1	14.16	17.48	-	14.2	16.04
Conductivity (ms/cm)	-	0.691	0.692	0.551	0.486	-	0.748	0.849
Dissolved Oxygen (mg/L)	-	10.95	3.55	1.08	0.74	-	0.88	0.74
pH (s.u.)	-	6.81	6.14	1.31	5.29	-	2	6.07
ORP (mV)	-	178	117	256	156	-	247	71
Turbidity (NTU)	-	60.6	57	4.6	0	-	0.9	1.7
Inorganic Compounds, Total (mg/L)								
Barium, Total	2	0.064 J	-	-	0.017 J	0.017 J	0.1 J	0.092 J
Calcium, Total	-	92	-	-	110	110	170	200
Chromium, Total	0.1	ND (0.01)	-	-	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)
Iron, Total	-	1.8	-	-	0.1 J	0.092 J	2.3	2
Magnesium, Total	-	22	-	-	20	20	32	43
Manganese, Total	-	0.052	-	-	0.37	0.37	1.2	0.73
Nickel, Total	-	0.0054 J	-	-	ND (0.04)	ND (0.04)	ND (0.04)	0.0071 J
Potassium, Total	-	4 J	-	-	1.1 J	1.1 J	3.3 J	2 J
Sodium, Total	-	75	-	-	13	13	19	16
Inorganic Compounds, Dissolved (mg/L)								
Barium, Dissolved	2	0.046 J	0.084 J	0.058 J	-	-	-	-
Calcium, Dissolved	-	86	130	120	-	-	-	-
Chromium, Dissolved	0.1	ND (0.01)	ND (0.01)	ND (0.01)	-	-	-	-
Iron, Dissolved	-	ND (0.15)	0.32	1.9	-	-	-	-
Magnesium, Dissolved	-	21	32	25	-	-	-	-
Manganese, Dissolved	-	0.024	0.053	0.14	-	-	-	-
Nickel, Dissolved	-	ND (0.04)	ND (0.04)	ND (0.04)	-	-	-	-
Potassium, Dissolved	-	4 J	2.5 J	1.3 J	-	-	-	-
Sodium, Dissolved	-	91	52	8.2	-	-	-	-
Other (mg/L)								
Chloride	-	22	14	6.9	5.1	5.6	9	11
Cyanide	0.2	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)
Sulfate	-	74	86	41	26	26	140	230

Notes:

1. Results in **bold** were detected.
2. Results in **red** exceed the MCL.
3. ND - Not detected above the reporting limit.
J - Estimated result
4. Sample Type codes:
N - Normal Sample
FD - Field Duplicate
5. Data validated by Haley & Aldrich, Inc.

FIGURES



MAP SOURCE: ESRI

SITE COORDINATES: 41°22'11"N, 82°8'8"W



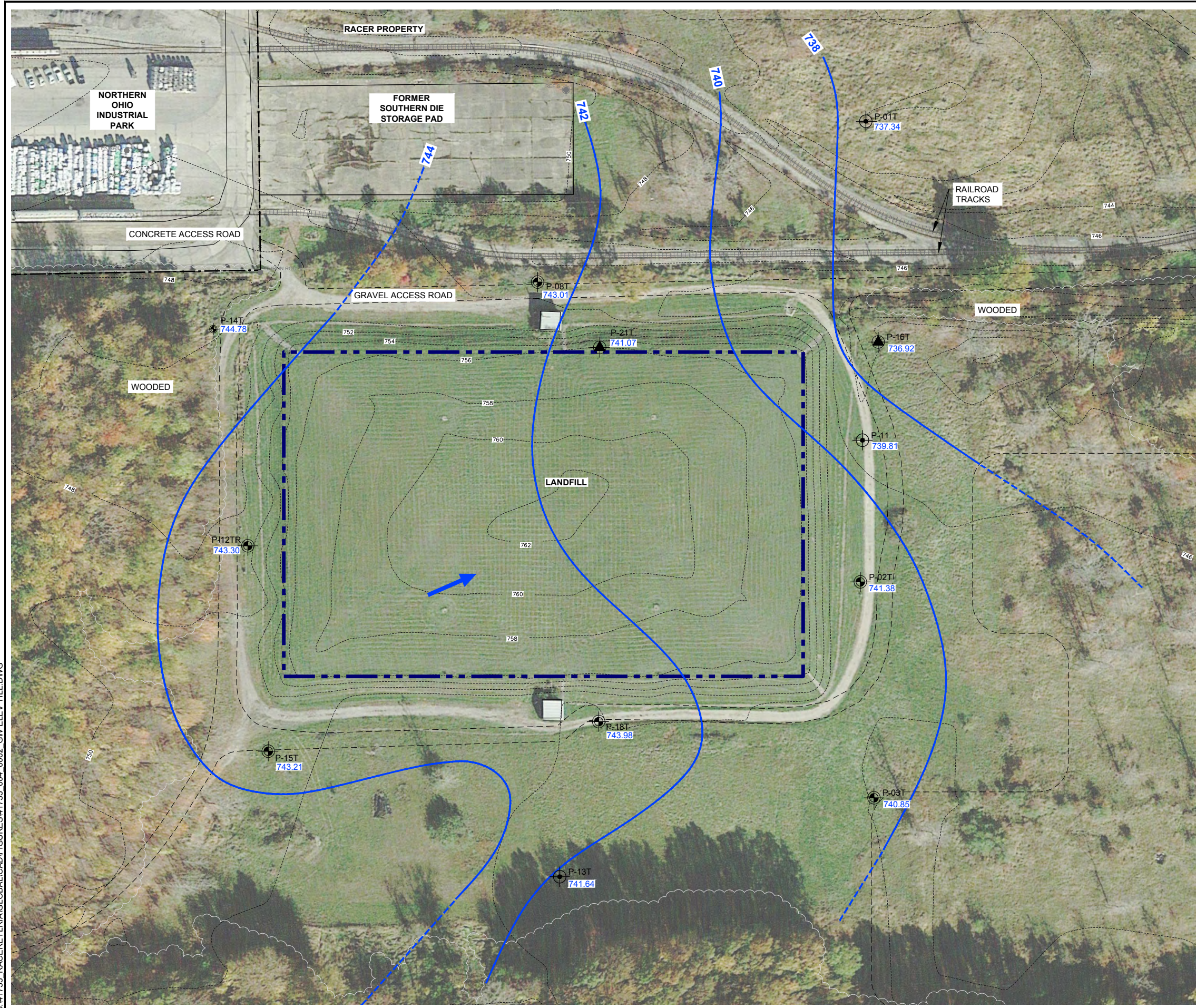
**HALEY
ALDRICH**

RACER TRUST LANDFILL
1400 LOWELL STREET
ELROY, OHIO

PROJECT LOCUS

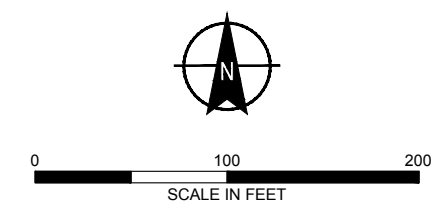
APPROXIMATE SCALE: 1 IN = 2000 FT
JUNE 2015

FIGURE 1



- LEGEND**
- 750 — SURFACE CONTOUR/ELEVATION
 - SITE BOUNDARY
 - x — FENCE
 - ⊙ BIENNIAL MONITORING WELLS
 - ⊙ PIEZOMETER FOR POST CLOSURE CARE WATER ELEVATION MONITORING
 - 737.34 GROUNDWATER ELEVATION IN FEET, JULY 2016
 - 738 — INTERPRETED GROUNDWATER ELEVATION CONTOUR, FEET, BASED ON JULY 2016 MEASUREMENTS, DASHED WHERE INFERRED
 - ← GROUNDWATER FLOW DIRECTION

- NOTES**
1. SURVEY PROVIDED BY CRA, DRAWING 12616-TO1 (PRES040GN-WA001), DATED FEBRUARY 26, 2015.
 2. IMAGE FROM GOOFL EARTH PRO, DATED OCTOBER 25, 2015.



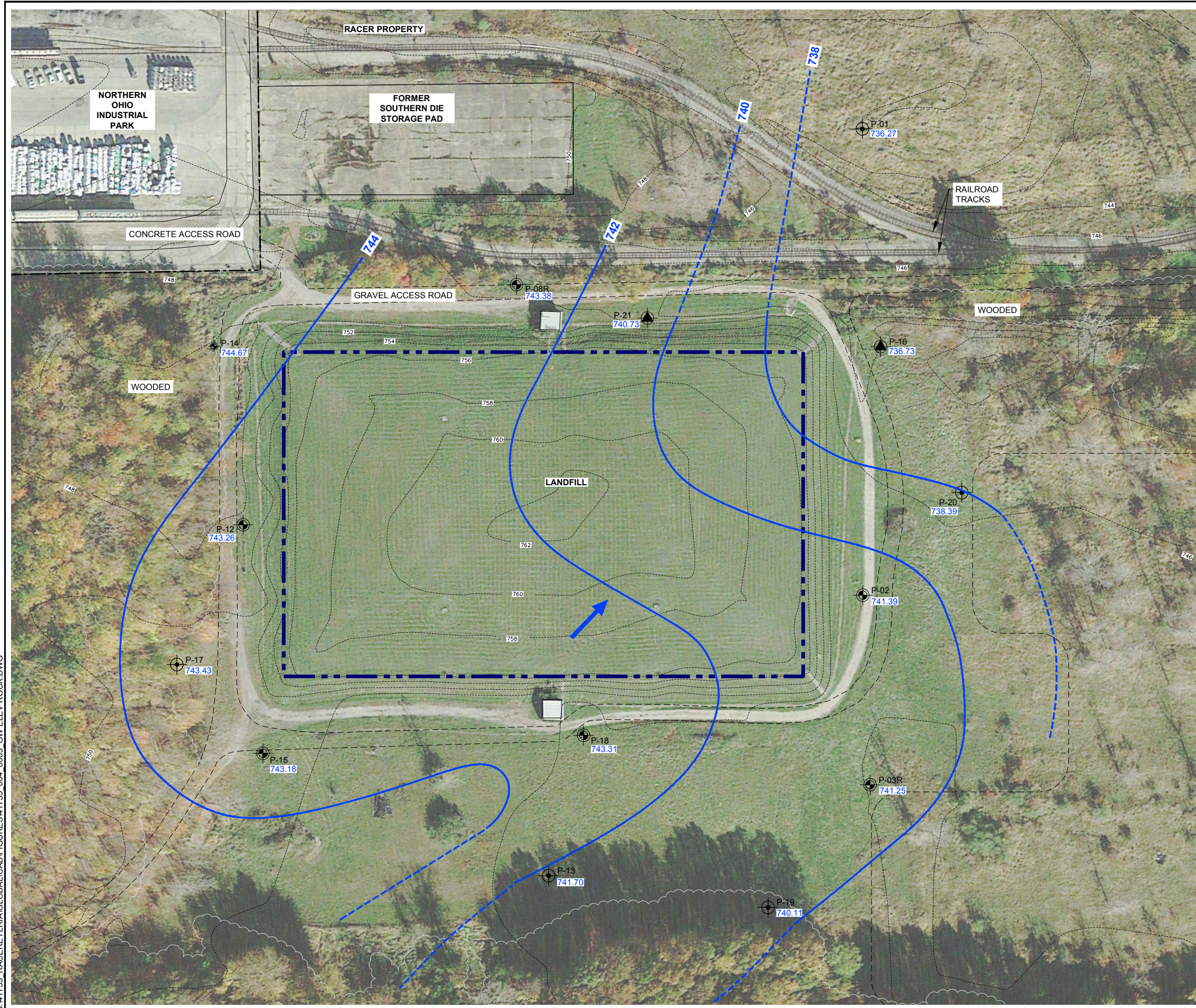
HALEY ALDRICH RACER TRUST ELYRIA
1400 LOWELL STREET
ELYRIA, OHIO

**TILL CONTACT GROUNDWATER ELEVATIONS
JULY 2016**

SCALE: AS SHOWN
FEBRUARY 2017

FIGURE 2

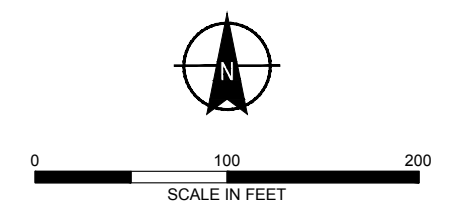
VARI, KATALIN Printed: 2/8/2017 2:58 PM Layout: JULY 2016
 G:\1753_RACEREYLRIAG\GLOBAL\CAD\FIGURES\1753_004_0002_GW ELEV TILL.DWG



LEGEND

- 750 — SURFACE CONTOUR/ELEVATION
- — — — — SITE BOUNDARY
- x — FENCE
- ⊙ BIENNIAL MONITORING WELLS
- ⊙ PIEZOMETER FOR POST CLOSURE CARE WATER ELEVATION MONITORING
- 736.73 GROUNDWATER ELEVATION IN FEET, JULY 2016
- 738 — INTERPRETED GROUNDWATER ELEVATION CONTOUR, FEET, BASED ON JULY 2016 MEASUREMENTS, DASHED WHERE INFERRED
- ← GROUNDWATER FLOW DIRECTION

- NOTES**
1. SURVEY PROVIDED BY CRA, DRAWING 12616-TO1 (PRES040GN-WA001), DATED FEBRUARY 26, 2015.
 2. IMAGE FROM GOOFL EARTH PRO, DATED OCTOBER 25, 2015.



HALEY ALDRICH RACER TRUST ELYRIA
1400 LOWELL STREET
ELYRIA, OHIO

**BEDROCK GROUNDWATER ELEVATIONS
JULY 2016**

SCALE: AS SHOWN
FEBRUARY 2017

FIGURE 3

VARI, KATALIN
 G:\1753_RACER\ELI\GLOB\ALCAD\FIGURES\1753_004_0003_GW ELEV ROCK.DWG
 Printed: 2/8/2017 4:10 PM
 Layout: JULY 2016

APPENDIX A

2016 Biennial Groundwater Monitoring Report Forms

Facility.xls
Closed Landfill
Elyria, OH

FACILITY	FCID	ADDR1	ADDR2	CITY	STATE	ZIP	PHONE	CONTACT	SECTION	TWNSHIP
RACER Elyria Closed Landfill	OHD004201091	1400 Lowell Street		Elyria	OH	44035	937.751.8635	Pam Barnett		

Facility.xls
Closed Landfill
Elyria, OH

RANGE	LATITUDE	LONGITUDE	GEOG_METHOD	NUM_WELLS	COUNTY_NAM	FIPS_CO	FIPS_ST
	412219 740	820806 840	S	57	Lorain		

Wells.xls
Closed Landfill
Elyria, OH

FCID	WELL_ID	DATUM	DEPTH	TOP_CAST	TOP_SCR	BOT_SCR	GRAD_PC	CAS_MA	PIPE_DIA	COMMENT
OHD004201091	Northeast Primary Sump	MSL	18.4	760.21						O
OHD004201091	Northeast Secondary Sump	MSL	19.7	756.70						O
OHD004201091	Northwest Primary Sump	MSL	17.48	760.36						O
OHD004201091	Northwest Secondary Sump	MSL	16.8	756.80						O
OHD004201091	P-01	MSL	21.1	749.57	15.00	20.00	U	PVC	2	
OHD004201091	P-01T	MSL	12.44	750.44	5.00	10.00	U	PVC	2	
OHD004201091	P-02	MSL	22.6	748.87	17.00	22.00	U	PVC	2	
OHD004201091	P-02T	MSL	15.16	749.80	8.50	13.50	U	PVC	2	
OHD004201091	P-03R	MSL	21.5	748.87	14.00	19.00	U	PVC	2	
OHD004201091	P-03T	MSL	12.77	748.77	5.00	10.00	U	PVC	2	
OHD004201091	P-08R	MSL	22.53	751.09	15.00	20.00	U	PVC	2	
OHD004201091	P-08T	MSL	12.49	751.13	5.00	10.00	U	PVC	2	
OHD004201091	P-11	MSL	15.16	749.52	8	13	U	PVC	2	
OHD004201091	P-12	MSL	22.52	751.83	15	20	U	PVC	2	
OHD004201091	P-12TR	MSL	14.02	752.22	6.5	11.5	U	PVC	2	
OHD004201091	P-13	MSL	19.5	750.94	12	17	U	PVC	2	
OHD004201091	P-13T	MSL	10.78	750.83	3	8	U	PVC	2	
OHD004201091	P-14	MSL	22.15	751.64	15	20	U	PVC	2	
OHD004201091	P-14T	MSL	14.39	751.68	7	12	U	PVC	2	
OHD004201091	P-15	MSL	24.15	753.73	17	22	U	PVC	2	
OHD004201091	P-15T	MSL	15.97	753.59	8.5	13.5	U	PVC	2	
OHD004201091	P-16	MSL	20.27	747.62	13	18	U	PVC	2	
OHD004201091	P-16T	MSL	12.15	747.4	5	10	U	PVC	2	
OHD004201091	P-17	MSL	25.3	754.96	17	22	U	PVC	2	
OHD004201091	P-18	MSL	31.22	751.35	23.2	28.2	U	PVC	2	
OHD004201091	P-18T	MSL	19.92	750.25	12.5	17.5	U	PVC	2	
OHD004201091	P-19	MSL	21.06	750.24	12.8	17.8	U	PVC	2	
OHD004201091	P-20	MSL	20.77	748.94	13	18	U	PVC	2	
OHD004201091	P-21	MSL	24.02	751.35	16	21	U	PVC	2	
OHD004201091	P-21T	MSL	15.9	751.28	9	14	U	PVC	2	
OHD004201091	Southeast Primary Sump	MSL	16.42	760.34						O
OHD004201091	Southeast Secondary Sump	MSL	13.1	757.1						O
OHD004201091	Southwest Primary Sump	MSL	16.29	760.26						O
OHD004201091	Southwest Secondary Sump	MSL	17.4	758.4						O

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WELL_ID	SURFACE	LATITUDE	LONGITUDE	X_VAR	Y_VAR	GEOG_M	ELEV_ME	WELL_US	WELL_LO	DATE_INS	DPHTH_IN	GWL_INS
Northeast Primary Sump		412211 321	820802 863			S		8C	D	01/01/98		
Northeast Secondary Sump		412211 966	820802 864			S		8C	D	01/01/98		
Northwest Primary Sump		412211 310	820805 561			S		8C	D	01/01/98		
Northwest Secondary Sump		412211 988	820805 533			S		8C	D	01/01/98		
P-01	748.47	412214 120	820800 161			S		8B	D	05/14/81	20'	NA
P-01T	747.05	412214 209	820800 126			S		8B	D	10/26/88	12.5'	NA
P-02	747.12	412209 566	820800 180			S		8A	D	05/15/81	22'	NA
P-02T	747.54	412209 696	820800 212			S		8A	D	10/26/88	13.5'	NA
P-03R	746.45	412207 715	820800 097			S		8A	D	06/03/02	19'	NA
P-03T	746.56	412207 587	820800 046			S		8A	D	05/23/02	10'	NA
P-08R	748.58	412212 620	820804 654			S		8A	D	05/29/02	20'	NA
P-08T	748.00	412212 638	820804 381			S		8A	D	10/26/88	10'	NA
P-11	747	412211 080	820800 176			S		8B	D	10/27/88	13'	NA
P-12	750	412212 280	820808 211			S		8A	D	02/03/00	24.5'	NA
P-12TR	749.83	412210 280	820808 151			S		8A	D	06/11/02	11.5'	NA
P-13	748.52	412206 840	820804 269			S		8B	D	03/09/00	17'	NA
P-13T	747.4	412206 835	820804 090			S		8B	D	03/09/00	8.17'	NA
P-14	749.28	412212 025	820808 577			S		8A	D	06/05/02	20'	NA
P-14T	749.37	412212 191	820808 586			S		8A	D	05/24/02	12'	NA
P-15	751.31	412208 046	820807 966			S		8A	D	05/30/02	22'	NA
P-15T	751.24	412208 067	820807 898			S		8A	D	05/23/02	14'	NA
P-16	745.03	412211 993	820759 937			S		8A	D	06/05/02	18'	NA
P-16T	745.01	412212 038	820759 966			S		8A	D	05/24/02	10'	NA
P-17	752.16	412208 917	820809 077			S		8B	D	06/23/03	22.7'	NA
P-18	748.47	412208 209	820803 807			S		8A	D	06/30/03	28.3'	NA
P-18T	747.8	412208 343	820803 611			S		8A	D	04/22/09	17.5'	NA
P-19	747.59	412206 522	820801 426			S		8B	D	06/27/03	20.2'	NA
P-20	745.98	412210 565	820758 891			S		8B	D	07/01/03	18.2'	NA
P-21	748.4	412212 281	820802 958			S		8A	D	07/02/03	22'	NA
P-21T	748.5	412211 997	820803 578			S		8A	D	04/22/09	14'	NA
Southeast Primary Sump		412209 451	820802 830			S		8C	D	01/01/98		
Southeast Secondary Sump		412208 800	820802 815			S		8C	D	01/01/98		
Southwest Primary Sump		412209 427	820805 575			S		8C	D	01/01/98		
Southwest Secondary Sump		412208 810	820805 580			S		8C	D	01/01/98		

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FCID	SAMP_DATE	SAMP_SCHEM	COMMENT
OHD00420109	07/25/16	BE	Biennial Groundwater Monitoring Event - 25-27 July 2016

**Params.xls
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FCID	NAME	UNITS	DET_LMT	ACL	MCL	METH_CODE
OHD004201091	Ba dis	ug/l	5.5		2	6010C
OHD004201091	Ba	ug/l	5.5		2	6010C
OHD004201091	Ca dis	ug/l	320			6010C
OHD004201091	Ca	ug/l	320			6010C
OHD004201091	Chloride	mg/l	0.3			9056A
OHD004201091	Cond F	mS/cm	0.001			Field
OHD004201091	Cyanide	mg/l	0.004		0.2	9012B
OHD004201091	Cr dis	ug/l	4.5		0.1	6010C
OHD004201091	Cr	ug/l	4.5		0.1	6010C
OHD004201091	DO	mg/l	0.01			Field
OHD004201091	Fe dis	ug/l	65			6010C
OHD004201091	Fe	ug/l	65			6010C
OHD004201091	K dis	ug/l	120			6010C
OHD004201091	K	ug/l	120			6010C
OHD004201091	Mg dis	ug/l	260			6010C
OHD004201091	Mg	ug/l	260			6010C
OHD004201091	Mn dis	ug/l	4.9			6010C
OHD004201091	Mn	ug/l	4.9			6010C
OHD004201091	Na dis	ug/l	320			6010C
OHD004201091	Na	ug/l	320			6010C
OHD004201091	Ni dis	ug/l	5.4			6010C
OHD004201091	Ni	ug/l	5.4			6010C
OHD004201091	ORP F	mS/cm	1			Field
OHD004201091	pH F	SU	0.1			Field
OHD004201091	Sulfate	mg/L	1.1			mg/L
OHD004201091	Temp F	deg C	0.01			Field
OHD004201091	Turb F	NTU	0.1			Field
OHD004201091	GWL	feet	0.01			Field

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FCID	WELL_ID	PARAMETER	SAMP_DATE	CHR_DATA	REAL_DATA	UNITS	DUP_CODE	REP_CODE	METH_CODE	DATA_QUAL
OHD004201091	P-2T	Ba dis	07/26/16	200	20	ug/l			6010C	J
OHD004201091	P-2	Ba dis	07/26/16	200	56	ug/l			6010C	J
OHD004201091	P-3T	Ba dis	07/26/16	200	25	ug/l			6010C	J
OHD004201091	P-3R	Ba dis	07/26/16	200	39.000	ug/l			6010C	J
OHD004201091	P-8T	Ba dis	07/27/16	200	65.000	ug/l			6010C	J
OHD004201091	P-12TR	Ba dis	07/25/16	200	84.000	ug/l			6010C	J
OHD004201091	P-12	Ba dis	07/26/16	200	46.000	ug/l			6010C	J
OHD004201091	P-14	Ba dis	07/25/16	200	58.000	ug/l			6010C	J
OHD004201091	P-16T	Ba dis	07/27/16	200	20.000	ug/l			6010C	J
OHD004201091	P-16	Ba dis	07/26/16	200	35.000	ug/l			6010C	J
OHD004201091	P-18T	Ba dis	07/26/16	200	49.000	ug/l			6010C	J
OHD004201091	P-18	Ba dis	07/27/16	200	11.000	ug/l			6010C	J
OHD004201091	P-21T	Ba dis	07/27/16	200	40.000	ug/l			6010C	J
OHD004201091	P-21	Ba dis	07/27/16	200	55.000	ug/l			6010C	J
OHD004201091	P-2T	Ca dis	07/26/16	5000	130000.000	ug/l			6010C	
OHD004201091	P-2	Ca dis	07/26/16	5000	140000.000	ug/l			6010C	
OHD004201091	P-3T	Ca dis	07/26/16	5000	170000.000	ug/l			6010C	
OHD004201091	P-3R	Ca dis	07/26/16	5000	29000.000	ug/l			6010C	
OHD004201091	P-8T	Ca dis	07/27/16	5000	95000.000	ug/l			6010C	
OHD004201091	P-12TR	Ca dis	07/25/16	5000	130000.000	ug/l			6010C	
OHD004201091	P-12	Ca dis	07/26/16	5000	86000.000	ug/l			6010C	
OHD004201091	P-14	Ca dis	07/25/16	5000	120000.000	ug/l			6010C	
OHD004201091	P-16T	Ca dis	07/27/16	5000	210000.000	ug/l			6010C	
OHD004201091	P-16	Ca dis	07/26/16	5000	300000.000	ug/l			6010C	
OHD004201091	P-18T	Ca dis	07/26/16	5000	68000.000	ug/l			6010C	
OHD004201091	P-18	Ca dis	07/27/16	5000	10000.000	ug/l			6010C	
OHD004201091	P-21T	Ca dis	07/27/16	5000	230000.000	ug/l			6010C	
OHD004201091	P-21	Ca dis	07/27/16	5000	140000.000	ug/l			6010C	
OHD004201091	P-2T	Cr dis	07/26/16	ND<10	ND	ug/l			6010C	U
OHD004201091	P-2	Cr dis	07/26/16	ND<10	ND	ug/l			6010C	U
OHD004201091	P-3T	Cr dis	07/26/16	ND<10	ND	ug/l			6010C	U
OHD004201091	P-3R	Cr dis	07/26/16	ND<10	ND	ug/l			6010C	U
OHD004201091	P-8T	Cr dis	07/27/16	ND<10	ND	ug/l			6010C	U
OHD004201091	P-12TR	Cr dis	07/25/16	ND<10	ND	ug/l			6010C	U
OHD004201091	P-12	Cr dis	07/26/16	ND<10	ND	ug/l			6010C	U
OHD004201091	P-14	Cr dis	07/25/16	ND<10	ND	ug/l			6010C	U
OHD004201091	P-16T	Cr dis	07/27/16	ND<10	ND	ug/l			6010C	U
OHD004201091	P-16	Cr dis	07/26/16	ND<10	ND	ug/l			6010C	U
OHD004201091	P-18T	Cr dis	07/26/16	ND<10	ND	ug/l			6010C	U

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OHD004201091	P-18	Cr dis	07/27/16	ND<10	ND	ug/l	6010C	U
OHD004201091	P-21T	Cr dis	07/27/16	ND<10	ND	ug/l	6010C	U
OHD004201091	P-21	Cr dis	07/27/16	ND<10	ND	ug/l	6010C	U
OHD004201091	P-2T	Fe dis	07/26/16	150	660.000	ug/l	6010C	
OHD004201091	P-2	Fe dis	07/26/16	150	600	ug/l	6010C	
OHD004201091	P-3T	Fe dis	07/26/16	150	ND	ug/l	6010C	U
OHD004201091	P-3R	Fe dis	07/26/16	150	ND	ug/l	6010C	U
OHD004201091	P-8T	Fe dis	07/27/16	150	ND	ug/l	6010C	U
OHD004201091	P-12TR	Fe dis	07/25/16	150	320	ug/l	6010C	
OHD004201091	P-12	Fe dis	07/26/16	150	ND	ug/l	6010C	U
OHD004201091	P-14	Fe dis	07/25/16	150	1900	ug/l	6010C	
OHD004201091	P-16T	Fe dis	07/27/16	150	ND	ug/l	6010C	U
OHD004201091	P-16	Fe dis	07/26/16	150	3400	ug/l	6010C	
OHD004201091	P-18T	Fe dis	07/26/16	150	1100	ug/l	6010C	
OHD004201091	P-18	Fe dis	07/27/16	150	ND	ug/l	6010C	U
OHD004201091	P-21T	Fe dis	07/27/16	150	1700	ug/l	6010C	
OHD004201091	P-21	Fe dis	07/27/16	150	1100	ug/l	6010C	
OHD004201091	P-2T	K dis	07/26/16	5000	1500	ug/l	6010C	J
OHD004201091	P-2	K dis	07/26/16	5000	3600	ug/l	6010C	J
OHD004201091	P-3T	K dis	07/26/16	5000	1700	ug/l	6010C	J
OHD004201091	P-3R	K dis	07/26/16	5000	3900	ug/l	6010C	J
OHD004201091	P-8T	K dis	07/27/16	5000	7900	ug/l	6010C	
OHD004201091	P-12TR	K dis	07/25/16	5000	2500	ug/l	6010C	J
OHD004201091	P-12	K dis	07/26/16	5000	4000	ug/l	6010C	J
OHD004201091	P-14	K dis	07/25/16	5000	1300	ug/l	6010C	J
OHD004201091	P-16T	K dis	07/27/16	5000	1500	ug/l	6010C	J
OHD004201091	P-16	K dis	07/26/16	5000	2600	ug/l	6010C	J
OHD004201091	P-18T	K dis	07/26/16	5000	5300	ug/l	6010C	
OHD004201091	P-18	K dis	07/27/16	5000	3800	ug/l	6010C	J
OHD004201091	P-21T	K dis	07/27/16	5000	2300	ug/l	6010C	J
OHD004201091	P-21	K dis	07/27/16	5000	3600	ug/l	6010C	J
OHD004201091	P-2T	Mg dis	07/26/16	5000	130000	ug/l	6010C	
OHD004201091	P-2	Mg dis	07/26/16	5000	45000	ug/l	6010C	
OHD004201091	P-3T	Mg dis	07/26/16	5000	96000	ug/l	6010C	
OHD004201091	P-3R	Mg dis	07/26/16	5000	21000	ug/l	6010C	
OHD004201091	P-8T	Mg dis	07/27/16	5000	38000	ug/l	6010C	
OHD004201091	P-12TR	Mg dis	07/25/16	5000	320000.000	ug/l	6010C	
OHD004201091	P-12	Mg dis	07/26/16	5000	21000.000	ug/l	6010C	
OHD004201091	P-14	Mg dis	07/25/16	5000	25000.000	ug/l	6010C	
OHD004201091	P-16T	Mg dis	07/27/16	5000	59000.000	ug/l	6010C	

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OHD004201091	P-16	Mg dis	07/26/16	5000	73000.000	ug/l	6010C	
OHD004201091	P-18T	Mg dis	07/26/16	5000	21000.000	ug/l	6010C	
OHD004201091	P-18	Mg dis	07/27/16	5000	3100.000	ug/l	6010C	J
OHD004201091	P-21T	Mg dis	07/27/16	5000	56000.000	ug/l	6010C	
OHD004201091	P-21	Mg dis	07/27/16	5000	37000.000	ug/l	6010C	
OHD004201091	P-2T	Mn dis	07/26/16	15	570.000	ug/l	6010C	
OHD004201091	P-2	Mn dis	07/26/16	15	430.000	ug/l	6010C	
OHD004201091	P-3T	Mn dis	07/26/16	15	ND	ug/l	6010C	U
OHD004201091	P-3R	Mn dis	07/26/16	15	17.000	ug/l	6010C	
OHD004201091	P-8T	Mn dis	07/27/16	15	370.000	ug/l	6010C	
OHD004201091	P-12TR	Mn dis	07/25/16	15	53.000	ug/l	6010C	
OHD004201091	P-12	Mn dis	07/26/16	15	24.000	ug/l	6010C	
OHD004201091	P-14	Mn dis	07/25/16	15	140.000	ug/l	6010C	
OHD004201091	P-16T	Mn dis	07/27/16	15	9.400	ug/l	6010C	J
OHD004201091	P-16	Mn dis	07/26/16	15	200.000	ug/l	6010C	
OHD004201091	P-18T	Mn dis	07/26/16	15	80.000	ug/l	6010C	
OHD004201091	P-18	Mn dis	07/27/16	15	5.900	ug/l	6010C	J
OHD004201091	P-21T	Mn dis	07/27/16	15	560.000	ug/l	6010C	
OHD004201091	P-21	Mn dis	07/27/16	15	120.000	ug/l	6010C	
OHD004201091	P-2T	Na dis	07/26/16	5000	46000	ug/l	6010C	
OHD004201091	P-2	Na dis	07/26/16	5000	100000	ug/l	6010C	
OHD004201091	P-3T	Na dis	07/26/16	5000	180000	ug/l	6010C	
OHD004201091	P-3R	Na dis	07/26/16	5000	270000	ug/l	6010C	
OHD004201091	P-8T	Na dis	07/27/16	5000	17000.000	ug/l	6010C	
OHD004201091	P-12TR	Na dis	07/25/16	5000	52000.000	ug/l	6010C	
OHD004201091	P-12	Na dis	07/26/16	5000	91000.000	ug/l	6010C	
OHD004201091	P-14	Na dis	07/25/16	5000	8200.000	ug/l	6010C	
OHD004201091	P-16T	Na dis	07/27/16	5000	53000.000	ug/l	6010C	
OHD004201091	P-16	Na dis	07/26/16	5000	81000.000	ug/l	6010C	
OHD004201091	P-18T	Na dis	07/26/16	5000	140000.000	ug/l	6010C	
OHD004201091	P-18	Na dis	07/27/16	5000	340000.000	ug/l	6010C	
OHD004201091	P-21T	Na dis	07/27/16	5000	120000.000	ug/l	6010C	
OHD004201091	P-21	Na dis	07/27/16	5000	140000.000	ug/l	6010C	
OHD004201091	P-2T	Ni dis	07/26/16	40	12.000	ug/l	6010C	J
OHD004201091	P-2	Ni dis	07/26/16	40	6.200	ug/l	6010C	J
OHD004201091	P-3T	Ni dis	07/26/16	40	ND	ug/l	6010C	U
OHD004201091	P-3R	Ni dis	07/26/16	40	ND	ug/l	6010C	U
OHD004201091	P-8T	Ni dis	07/27/16	40	7.300	ug/l	6010C	J
OHD004201091	P-12TR	Ni dis	07/25/16	40	ND	ug/l	6010C	U
OHD004201091	P-12	Ni dis	07/26/16	40	ND	ug/l	6010C	U

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OHD004201091	P-14	Ni dis	07/25/16	40	ND	ug/l		6010C	U
OHD004201091	P-16T	Ni dis	07/27/16	40	23.000	ug/l		6010C	J
OHD004201091	P-16	Ni dis	07/26/16	40	240.000	ug/l		6010C	
OHD004201091	P-18T	Ni dis	07/26/16	40	61.000	ug/l		6010C	
OHD004201091	P-18	Ni dis	07/27/16	40	220.000	ug/l		6010C	
OHD004201091	P-21T	Ni dis	07/27/16	40	340.000	ug/l		6010C	
OHD004201091	P-21	Ni dis	07/27/16	40	160.000	ug/l		6010C	
OHD004201091	P-2T	Ba	07/26/16	200	32	ug/l		6010C	J
OHD004201091	P-2	Ba	07/26/16	200	58	ug/l		6010C	J
OHD004201091	P-3T	Ba	07/26/16	200	32	ug/l		6010C	J
OHD004201091	P-3R	Ba	07/26/16	200	49	ug/l		6010C	J
OHD004201091	P-8T	Ba	07/27/16	200	67	ug/l		6010C	J
OHD004201091	P-8R	Ba	07/27/16	200	82	ug/l		6010C	J
OHD004201091	P-8R	Ba	07/27/16	200	83	ug/l	Dup	6010C	J
OHD004201091	P-12	Ba	07/26/16	200	64	ug/l		6010C	J
OHD004201091	P-14T	Ba	07/25/16	200	17	ug/l		6010C	J
OHD004201091	P-14T	Ba	07/25/16	200	17	ug/l	Dup	6010C	J
OHD004201091	P-15T	Ba	07/26/16	200	92	ug/l		6010C	J
OHD004201091	P-15	Ba	07/25/16	200	100.000	ug/l		6010C	J
OHD004201091	P-16T	Ba	07/27/16	200	31.000	ug/l		6010C	J
OHD004201091	P-16	Ba	07/26/16	200	36.000	ug/l		6010C	J
OHD004201091	P-18T	Ba	07/26/16	200	49.000	ug/l		6010C	J
OHD004201091	P-18	Ba	07/27/16	200	13.000	ug/l		6010C	J
OHD004201091	P-21T	Ba	07/27/16	200	40.000	ug/l		6010C	J
OHD004201091	P-21	Ba	07/27/16	200	54.000	ug/l		6010C	J
OHD004201091	P-2T	Ca	07/26/16	5000	310000.000	ug/l		6010C	
OHD004201091	P-2	Ca	07/26/16	5000	140000.000	ug/l		6010C	
OHD004201091	P-3T	Ca	07/26/16	5000	170000.000	ug/l		6010C	
OHD004201091	P-3R	Ca	07/26/16	5000	28000.000	ug/l		6010C	
OHD004201091	P-8T	Ca	07/27/16	5000	100000.000	ug/l		6010C	
OHD004201091	P-8R	Ca	07/27/16	5000	95000.000	ug/l		6010C	
OHD004201091	P-8R	Ca	07/27/16	5000	96000.000	ug/l	Dup	6010C	
OHD004201091	P-12	Ca	07/26/16	5000	92000.000	ug/l		6010C	
OHD004201091	P-14T	Ca	07/25/16	5000	110000.000	ug/l		6010C	
OHD004201091	P-14T	Ca	07/25/16	5000	110000.000	ug/l	Dup	6010C	
OHD004201091	P-15T	Ca	07/26/16	5000	200000.000	ug/l		6010C	
OHD004201091	P-15	Ca	07/25/16	5000	170000	ug/l		6010C	
OHD004201091	P-16T	Ca	07/27/16	5000	200000.000	ug/l		6010C	
OHD004201091	P-16	Ca	07/26/16	5000	260000	ug/l		6010C	
OHD004201091	P-18T	Ca	07/26/16	5000	64000.000	ug/l		6010C	

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OHD004201091	P-18	Ca	07/27/16	5000	10000.000	ug/l		6010C	
OHD004201091	P-21T	Ca	07/27/16	5000	230000.000	ug/l		6010C	
OHD004201091	P-21	Ca	07/27/16	5000	140000	ug/l		6010C	
OHD004201091	P-2T	Cr	07/26/16	ND<10	ND	ug/l		6010C	U
OHD004201091	P-2	Cr	07/26/16	ND<10	ND	ug/l		6010C	U
OHD004201091	P-3T	Cr	07/26/16	ND<10	ND	ug/l		6010C	U
OHD004201091	P-3R	Cr	07/26/16	ND<10	ND	ug/l		6010C	U
OHD004201091	P-8T	Cr	07/27/16	ND<10	ND	ug/l		6010C	U
OHD004201091	P-8R	Cr	07/27/16	ND<10	ND	ug/l		6010C	U
OHD004201091	P-8R	Cr	07/28/16	ND<10	ND	ug/l	Dup	6010C	U
OHD004201091	P-12	Cr	07/26/16	ND<10	ND	ug/l		6010C	U
OHD004201091	P-14T	Cr	07/25/16	ND<10	ND	ug/l		6010C	U
OHD004201091	P-14T	Cr	07/25/16	ND<10	ND	ug/l	Dup	6010C	U
OHD004201091	P-15T	Cr	07/26/16	ND<10	ND	ug/l		6010C	U
OHD004201091	P-15	Cr	07/25/16	ND<10	ND	ug/l		6010C	U
OHD004201091	P-16T	Cr	07/27/16	ND<10	ND	ug/l		6010C	U
OHD004201091	P-16	Cr	07/26/16	ND<10	ND	ug/l		6010C	U
OHD004201091	P-18T	Cr	07/26/16	ND<10	ND	ug/l		6010C	U
OHD004201091	P-18	Cr	07/27/16	ND<10	ND	ug/l		6010C	U
OHD004201091	P-21T	Cr	07/27/16	ND<10	ND	ug/l		6010C	U
OHD004201091	P-21	Cr	07/27/16	ND<10	ND	ug/l		6010C	U
OHD004201091	P-2T	Fe	07/26/16	150	6100.000	ug/l		6010C	
OHD004201091	P-2	Fe	07/26/16	150	820	ug/l		6010C	
OHD004201091	P-3T	Fe	07/26/16	150	1200.000	ug/l		6010C	
OHD004201091	P-3R	Fe	07/26/16	150	3000.000	ug/l		6010C	
OHD004201091	P-8T	Fe	07/27/16	150	ND	ug/l		6010C	U
OHD004201091	P-8R	Fe	07/27/16	150	120.000	ug/l		6010C	J
OHD004201091	P-8R	Fe	07/27/16	150	130.000	ug/l	Dup	6010C	J
OHD004201091	P-12	Fe	07/26/16	150	1800.000	ug/l		6010C	
OHD004201091	P-14T	Fe	07/25/16	150	100.000	ug/l		6010C	J
OHD004201091	P-14T	Fe	07/25/16	150	92.000	ug/l	Dup	6010C	J
OHD004201091	P-15T	Fe	07/26/16	150	2000.000	ug/l		6010C	
OHD004201091	P-15	Fe	07/25/16	150	2300	ug/l		6010C	
OHD004201091	P-16T	Fe	07/27/16	150	1600	ug/l		6010C	
OHD004201091	P-16	Fe	07/26/16	150	4000	ug/l		6010C	
OHD004201091	P-18T	Fe	07/26/16	150	2400	ug/l		6010C	
OHD004201091	P-18	Fe	07/27/16	150	2100	ug/l		6010C	
OHD004201091	P-21T	Fe	07/27/16	150	1900	ug/l		6010C	
OHD004201091	P-21	Fe	07/27/16	150	1400	ug/l		6010C	
OHD004201091	P-2T	K	07/26/16	5000	2100	ug/l		6010C	J

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OHD004201091	P-2	K	07/26/16	5000	3700.000	ug/l		6010C	J
OHD004201091	P-3T	K	07/26/16	5000	1800.000	ug/l		6010C	J
OHD004201091	P-3R	K	07/26/16	5000	4100.000	ug/l		6010C	J
OHD004201091	P-8T	K	07/27/16	5000	8100.000	ug/l		6010C	
OHD004201091	P-8R	K	07/27/16	5000	3500.000	ug/l		6010C	J
OHD004201091	P-8R	K	07/27/16	5000	3500.000	ug/l	Dup	6010C	J
OHD004201091	P-12	K	07/26/16	5000	4000.000	ug/l		6010C	J
OHD004201091	P-14T	K	07/25/16	5000	1100.000	ug/l		6010C	J
OHD004201091	P-14T	K	07/25/16	5000	1100.000	ug/l	Dup	6010C	J
OHD004201091	P-15T	K	07/26/16	5000	2000.000	ug/l		6010C	J
OHD004201091	P-15	K	07/25/16	5000	3300.000	ug/l		6010C	J
OHD004201091	P-16T	K	07/27/16	5000	1600.000	ug/l		6010C	J
OHD004201091	P-16	K	07/26/16	5000	2700.000	ug/l		6010C	J
OHD004201091	P-18T	K	07/26/16	5000	5100.000	ug/l		6010C	
OHD004201091	P-18	K	07/27/16	5000	4000.000	ug/l		6010C	J
OHD004201091	P-21T	K	07/27/16	5000	2300.000	ug/l		6010C	J
OHD004201091	P-21	K	07/27/16	5000	3700.000	ug/l		6010C	J
OHD004201091	P-2T	Mg	07/26/16	5000	120000.000	ug/l		6010C	
OHD004201091	P-2	Mg	07/26/16	5000	47000.000	ug/l		6010C	
OHD004201091	P-3T	Mg	07/26/16	5000	94000.000	ug/l		6010C	
OHD004201091	P-3R	Mg	07/26/16	5000	20000.000	ug/l		6010C	
OHD004201091	P-8T	Mg	07/27/16	5000	40000.000	ug/l		6010C	
OHD004201091	P-8R	Mg	07/27/16	5000	20000.000	ug/l		6010C	
OHD004201091	P-8R	Mg	07/27/16	5000	20000.000	ug/l	Dup	6010C	
OHD004201091	P-12	Mg	07/26/16	5000	22000.000	ug/l		6010C	
OHD004201091	P-14T	Mg	07/25/16	5000	20000.000	ug/l		6010C	
OHD004201091	P-14T	Mg	07/25/16	5000	20000.000	ug/l	Dup	6010C	
OHD004201091	P-15T	Mg	07/26/16	5000	43000.000	ug/l		6010C	
OHD004201091	P-15	Mg	07/25/16	5000	32000.000	ug/l		6010C	
OHD004201091	P-16T	Mg	07/27/16	5000	57000.000	ug/l		6010C	
OHD004201091	P-16	Mg	07/26/16	5000	74000.000	ug/l		6010C	
OHD004201091	P-18T	Mg	07/26/16	5000	20000.000	ug/l		6010C	
OHD004201091	P-18	Mg	07/27/16	5000	3400.000	ug/l		6010C	J
OHD004201091	P-21T	Mg	07/27/16	5000	57000.000	ug/l		6010C	
OHD004201091	P-21	Mg	07/27/16	5000	36000.000	ug/l		6010C	
OHD004201091	P-2T	Mn	07/26/16	15	610.000	ug/l		6010C	
OHD004201091	P-2	Mn	07/26/16	15	510.000	ug/l		6010C	
OHD004201091	P-3T	Mn	07/26/16	15	43.000	ug/l		6010C	
OHD004201091	P-3R	Mn	07/26/16	15	33.000	ug/l		6010C	
OHD004201091	P-8T	Mn	07/27/16	15	490.000	ug/l		6010C	

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OHD004201091	P-8R	Mn	07/27/16	15	53.000	ug/l		6010C	
OHD004201091	P-8R	Mn	07/27/16	15	53.000	ug/l	Dup	6010C	
OHD004201091	P-12	Mn	07/26/16	15	52.000	ug/l		6010C	
OHD004201091	P-14T	Mn	07/25/16	15	370.000	ug/l		6010C	
OHD004201091	P-14T	Mn	07/25/16	15	370.000	ug/l	Dup	6010C	
OHD004201091	P-15T	Mn	07/26/16	15	730.000	ug/l		6010C	
OHD004201091	P-15	Mn	07/25/16	15	1200	ug/l		6010C	
OHD004201091	P-16T	Mn	07/27/16	15	46.000	ug/l		6010C	
OHD004201091	P-16	Mn	07/26/16	15	210.000	ug/l		6010C	
OHD004201091	P-18T	Mn	07/26/16	15	90.000	ug/l		6010C	
OHD004201091	P-18	Mn	07/27/16	15	22.000	ug/l		6010C	
OHD004201091	P-21T	Mn	07/27/16	15	600.000	ug/l		6010C	
OHD004201091	P-21	Mn	07/27/16	15	120.000	ug/l		6010C	
OHD004201091	P-2T	Na	07/26/16	5000	44000.000	ug/l		6010C	
OHD004201091	P-2	Na	07/26/16	5000	100000.000	ug/l		6010C	
OHD004201091	P-3T	Na	07/26/16	5000	170000.000	ug/l		6010C	
OHD004201091	P-3R	Na	07/26/16	5000	280000.000	ug/l		6010C	
OHD004201091	P-8T	Na	07/27/16	5000	180000.000	ug/l		6010C	
OHD004201091	P-8R	Na	07/27/16	5000	170000.000	ug/l		6010C	
OHD004201091	P-8R	Na	07/27/16	5000	180000.000	ug/l	Dup	6010C	
OHD004201091	P-12	Na	07/26/16	5000	75000.000	ug/l		6010C	
OHD004201091	P-14T	Na	07/25/16	5000	13000.000	ug/l		6010C	
OHD004201091	P-14T	Na	07/25/16	5000	13000.000	ug/l	Dup	6010C	
OHD004201091	P-15T	Na	07/26/16	5000	16000.000	ug/l		6010C	
OHD004201091	P-15	Na	07/25/16	5000	19000.000	ug/l		6010C	
OHD004201091	P-16T	Na	07/27/16	5000	52000.000	ug/l		6010C	
OHD004201091	P-16	Na	07/26/16	5000	81000.000	ug/l		6010C	
OHD004201091	P-18T	Na	07/26/16	5000	120000.000	ug/l		6010C	
OHD004201091	P-18	Na	07/27/16	5000	300000.000	ug/l		6010C	
OHD004201091	P-21T	Na	07/27/16	5000	120000.000	ug/l		6010C	
OHD004201091	P-21	Na	07/27/16	5000	140000.000	ug/l		6010C	
OHD004201091	P-2T	Ni	07/26/16	40	16.000	ug/l		6010C	J
OHD004201091	P-2	Ni	07/26/16	40	6.900	ug/l		6010C	J
OHD004201091	P-3T	Ni	07/26/16	40	ND	ug/l		6010C	U
OHD004201091	P-3R	Ni	07/26/16	40	ND	ug/l		6010C	U
OHD004201091	P-8T	Ni	07/27/16	40	8.600	ug/l		6010C	J
OHD004201091	P-8R	Ni	07/27/16	40	11.000	ug/l		6010C	J
OHD004201091	P-8R	Ni	07/27/16	40	11.000	ug/l	Dup	6010C	J
OHD004201091	P-12	Ni	07/26/16	40	5.4	ug/l		6010C	J
OHD004201091	P-14T	Ni	07/25/16	40	ND	ug/l		6010C	U

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OHD004201091	P-14T	Ni	07/25/16	40	ND	ug/l	Dup	6010C	U
OHD004201091	P-15T	Ni	07/26/16	40	7.100	ug/l		6010C	J
OHD004201091	P-15	Ni	07/25/16	40	ND	ug/l		6010C	U
OHD004201091	P-16T	Ni	07/27/16	40	22	ug/l		6010C	J
OHD004201091	P-16	Ni	07/26/16	40	240	ug/l		6010C	
OHD004201091	P-18T	Ni	07/26/16	40	57	ug/l		6010C	
OHD004201091	P-18	Ni	07/27/16	40	210	ug/l		6010C	
OHD004201091	P-21T	Ni	07/27/16	40	340	ug/l		6010C	
OHD004201091	P-21	Ni	07/27/16	40	160	ug/l		6010C	
OHD004201091	P-2T	Cyanide	07/26/16	0.01	ND	mg/l		9012B	U
OHD004201091	P-2	Cyanide	07/26/16	0.01	ND	mg/l		9012B	U
OHD004201091	P-3T	Cyanide	07/26/16	0.01	ND	mg/l		9012B	U
OHD004201091	P-3R	Cyanide	07/26/16	0.01	ND	mg/l		9012B	U
OHD004201091	P-8T	Cyanide	07/27/16	0.01	ND	mg/l		9012B	U
OHD004201091	P-8R	Cyanide	07/27/16	0.01	ND	mg/l		9012B	U
OHD004201091	P-8R	Cyanide	07/27/16	0.01	ND	mg/l	Dup	9012B	U
OHD004201091	P-12TR	Cyanide	07/25/16	0.01	ND	mg/l		9012B	U
OHD004201091	P-12	Cyanide	07/26/16	0.01	ND	mg/l		9012B	U
OHD004201091	P-14T	Cyanide	07/25/16	0.01	ND	mg/l		9012B	U
OHD004201091	P-14T	Cyanide	07/25/16	0.01	ND	mg/l	Dup	9012B	U
OHD004201091	P-14	Cyanide	07/25/16	0.01	ND	mg/l		9012B	U
OHD004201091	P-15T	Cyanide	07/26/16	0.01	ND	mg/l		9012B	U
OHD004201091	P-15	Cyanide	07/25/16	0.01	ND	mg/l		9012B	U
OHD004201091	P-16T	Cyanide	07/27/16	0.01	ND	mg/l		9012B	U
OHD004201091	P-16	Cyanide	07/26/16	0.01	ND	mg/l		9012B	U
OHD004201091	P-18T	Cyanide	07/26/16	0.01	ND	mg/l		9012B	U
OHD004201091	P-18	Cyanide	07/27/16	0.01	ND	mg/l		9012B	U
OHD004201091	P-21T	Cyanide	07/27/16	0.01	ND	mg/l		9012B	U
OHD004201091	P-21	Cyanide	07/27/16	0.01	ND	mg/l		9012B	U
OHD004201091	P-2T	Chloride	07/26/16	1.2	100.000	mg/l		9056A	
OHD004201091	P-2	Chloride	07/26/16	1.2	41.000	mg/l		9056A	
OHD004201091	P-3T	Chloride	07/26/16	1.2	30.000	mg/l		9056A	
OHD004201091	P-3R	Chloride	07/26/16	1.2	36.000	mg/l		9056A	
OHD004201091	P-8T	Chloride	07/27/16	1.2	17.000	mg/l		9056A	
OHD004201091	P-8R	Chloride	07/27/16	1.2	140.000	mg/l		9056A	
OHD004201091	P-8R	Chloride	07/27/16	1.2	140.000	mg/l	Dup	9056A	
OHD004201091	P-12TR	Chloride	07/25/16	1.2	14.000	mg/l		9056A	
OHD004201091	P-12	Chloride	07/26/16	1.2	22.000	mg/l		9056A	
OHD004201091	P-14T	Chloride	07/25/16	1.2	5.100	mg/l		9056A	
OHD004201091	P-14T	Chloride	07/25/16	1.2	5.600	mg/l	Dup	9056A	

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OHD004201091	P-14	Chloride	07/25/16	1.2	6.900	mg/l		9056A
OHD004201091	P-15T	Chloride	07/26/16	1.2	11.000	mg/l		9056A
OHD004201091	P-15	Chloride	07/25/16	1.2	9.000	mg/l		9056A
OHD004201091	P-16T	Chloride	07/27/16	1.2	16.000	mg/l		9056A
OHD004201091	P-16	Chloride	07/26/16	1.2	62.000	mg/l		9056A
OHD004201091	P-18T	Chloride	07/26/16	1.2	31.000	mg/l		9056A
OHD004201091	P-18	Chloride	07/27/16	1.2	42.000	mg/l		9056A
OHD004201091	P-21T	Chloride	07/27/16	1.2	68.000	mg/l		9056A
OHD004201091	P-21	Chloride	07/27/16	1.2	81.000	mg/l		9056A
OHD004201091	P-2T	Sulfate	07/26/16	6	720.000	mg/l		9056A
OHD004201091	P-2	Sulfate	07/26/16	6	300.000	mg/l		9056A
OHD004201091	P-3T	Sulfate	07/26/16	6	610.000	mg/l		9056A
OHD004201091	P-3R	Sulfate	07/26/16	6	110.000	mg/l		9056A
OHD004201091	P-8T	Sulfate	07/27/16	6	100.000	mg/l		9056A
OHD004201091	P-8R	Sulfate	07/27/16	6	98.000	mg/l		9056A
OHD004201091	P-8R	Sulfate	07/27/16	6	39.000	mg/l	Dup	9056A
OHD004201091	P-12TR	Sulfate	07/25/16	6	86.000	mg/l		9056A
OHD004201091	P-12	Sulfate	07/26/16	6	490.000	mg/l		9056A
OHD004201091	P-14T	Sulfate	07/25/16	6	26.000	mg/l		9056A
OHD004201091	P-14T	Sulfate	07/25/16	6	26.000	mg/l	Dup	9056A
OHD004201091	P-14	Sulfate	07/25/16	6	41.000	mg/l		9056A
OHD004201091	P-15T	Sulfate	07/26/16	6	230.000	mg/l		9056A
OHD004201091	P-15	Sulfate	07/25/16	6	140.000	mg/l		9056A
OHD004201091	P-16T	Sulfate	07/27/16	6	390.000	mg/l		9056A
OHD004201091	P-16	Sulfate	07/26/16	6	490.000	mg/l		9056A
OHD004201091	P-18T	Sulfate	07/26/16	6	95.000	mg/l		9056A
OHD004201091	P-18	Sulfate	07/27/16	6	170.000	mg/l		9056A
OHD004201091	P-21T	Sulfate	07/27/16	6	400.000	mg/l		9056A
OHD004201091	P-21	Sulfate	07/27/16	6	220.000	mg/l		9056A
OHD004201091	P-2T	Cond F	07/26/16	1.87	1.87	mS/cm		Field
OHD004201091	P-2	Cond F	07/26/16	0.9	0.9	mS/cm		Field
OHD004201091	P-3T	Cond F	07/26/16	1.59	1.59	mS/cm		Field
OHD004201091	P-3R	Cond F	07/26/16	1.02	1.02	mS/cm		Field
OHD004201091	P-8T	Cond F	07/27/16	0.549	0.549	mS/cm		Field
OHD004201091	P-8R	Cond F	07/27/16	0.897	0.897	mS/cm		Field
OHD004201091	P-12TR	Cond F	07/25/16	0.692	0.692	mS/cm		Field
OHD004201091	P-12	Cond F	07/26/16	0.691	0.691	mS/cm		Field
OHD004201091	P-14T	Cond F	07/25/16	0.486	0.486	mS/cm		Field
OHD004201091	P-14	Cond F	07/25/16	0.551	0.551	mS/cm		Field
OHD004201091	P-15T	Cond F	07/26/16	0.849	0.849	mS/cm		Field

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OHD004201091	P-15	Cond F	07/25/16	0.748	0.748	mS/cm	Field
OHD004201091	P-16T	Cond F	07/27/16	1.01	1.01	mS/cm	Field
OHD004201091	P-16	Cond F	07/26/16	1.38	1.38	mS/cm	Field
OHD004201091	P-18T	Cond F	07/26/16	0.727	0.727	mS/cm	Field
OHD004201091	P-18	Cond F	07/27/16	1.17	1.17	mS/cm	Field
OHD004201091	P-21T	Cond F	07/27/16	1.06	1.06	mS/cm	Field
OHD004201091	P-21	Cond F	07/27/16	1.06	1.06	mS/cm	Field
OHD004201091	P-2T	DO F	07/26/16	7.22	7.22	mg/l	Field
OHD004201091	P-2	DO F	07/26/16	0.65	0.65	mg/l	Field
OHD004201091	P-3T	DO F	07/26/16	0.89	0.89	mg/l	Field
OHD004201091	P-3R	DO F	07/26/16	1.05	1.05	mg/l	Field
OHD004201091	P-8T	DO F	07/27/16	0.56	0.56	mg/l	Field
OHD004201091	P-8R	DO F	07/27/16	0.44	0.44	mg/l	Field
OHD004201091	P-12TR	DO F	07/25/16	3.55	3.55	mg/l	Field
OHD004201091	P-12	DO F	07/26/16	10.95	10.95	mg/l	Field
OHD004201091	P-14T	DO F	07/25/16	0.74	0.74	mg/l	Field
OHD004201091	P-14	DO F	07/25/16	1.08	1.08	mg/l	Field
OHD004201091	P-15T	DO F	07/26/16	0.74	0.74	mg/l	Field
OHD004201091	P-15	DO F	07/25/16	0.88	0.88	mg/l	Field
OHD004201091	P-16T	DO F	07/27/16	1.5	1.5	mg/l	Field
OHD004201091	P-16	DO F	07/26/16	4.75	4.75	mg/l	Field
OHD004201091	P-18T	DO F	07/26/16	1.82	1.82	mg/l	Field
OHD004201091	P-18	DO F	07/27/16	4.1	4.1	mg/l	Field
OHD004201091	P-21T	DO F	07/27/16	0.54	0.54	mg/l	Field
OHD004201091	P-21	DO F	07/27/16	0.54	0.54	mg/l	Field
OHD004201091	P-2T	ORP F	07/26/16	113	113	mV	Field
OHD004201091	P-2	ORP F	07/26/16	45	45	mV	Field
OHD004201091	P-3T	ORP F	07/26/16	181	181	mV	Field
OHD004201091	P-3R	ORP F	07/26/16	116	116	mV	Field
OHD004201091	P-8T	ORP F	07/27/16	141	141	mV	Field
OHD004201091	P-8R	ORP F	07/27/16	-18	-18	mV	Field
OHD004201091	P-12TR	ORP F	07/25/16	117	117	mV	Field
OHD004201091	P-12	ORP F	07/26/16	178	178	mV	Field
OHD004201091	P-14T	ORP F	07/25/16	156	156	mV	Field
OHD004201091	P-14	ORP F	07/25/16	256	256	mV	Field
OHD004201091	P-15T	ORP F	07/26/16	71	71	mV	Field
OHD004201091	P-15	ORP F	07/25/16	247	247	mV	Field
OHD004201091	P-16T	ORP F	07/27/16	229	229	mV	Field
OHD004201091	P-16	ORP F	07/26/16	56	56	mV	Field
OHD004201091	P-18T	ORP F	07/26/16	12	12	mV	Field

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OHD004201091	P-18	ORP F	07/27/16	185	185	mV	Field
OHD004201091	P-21T	ORP F	07/27/16	-25	-25	mV	Field
OHD004201091	P-21	ORP F	07/27/16	-25	-25	mV	Field
OHD004201091	P-2T	pH F	07/26/16	6.12	6.12	SU	Field
OHD004201091	P-2	pH F	07/26/16	6.38	6.38	SU	Field
OHD004201091	P-3T	pH F	07/26/16	6.37	6.37	SU	Field
OHD004201091	P-3R	pH F	07/26/16	6.7	6.7	SU	Field
OHD004201091	P-8T	pH F	07/27/16	6.51	6.51	SU	Field
OHD004201091	P-8R	pH F	07/27/16	6.98	6.98	SU	Field
OHD004201091	P-12TR	pH F	07/25/16	6.14	6.14	SU	Field
OHD004201091	P-12	pH F	07/26/16	6.81	6.81	SU	Field
OHD004201091	P-14T	pH F	07/25/16	5.29	5.29	SU	Field
OHD004201091	P-14	pH F	07/25/16	1.31	1.31	SU	Field
OHD004201091	P-15T	pH F	07/26/16	6.07	6.07	SU	Field
OHD004201091	P-15	pH F	07/25/16	2	2	SU	Field
OHD004201091	P-16T	pH F	07/27/16	6.96	6.96	SU	Field
OHD004201091	P-16	pH F	07/26/16	6.2	6.2	SU	Field
OHD004201091	P-18T	pH F	07/26/16	6.36	6.36	SU	Field
OHD004201091	P-18	pH F	07/27/16	8.07	8.07	SU	Field
OHD004201091	P-21T	pH F	07/27/16	6.98	6.98	SU	Field
OHD004201091	P-21	pH F	07/27/16	6.98	6.98	SU	Field
OHD004201091	P-2T	Temp F	07/26/16	16.26	16.26	deg C	Field
OHD004201091	P-2	Temp F	07/26/16	16.16	16.16	deg C	Field
OHD004201091	P-3T	Temp F	07/26/16	16.53	16.53	deg C	Field
OHD004201091	P-3R	Temp F	07/26/16	14.44	14.44	deg C	Field
OHD004201091	P-8T	Temp F	07/27/16	19.39	19.39	deg C	Field
OHD004201091	P-8R	Temp F	07/27/16	17.97	17.97	deg C	Field
OHD004201091	P-12TR	Temp F	07/25/16	18.1	18.1	deg C	Field
OHD004201091	P-12	Temp F	07/26/16	14.41	14.41	deg C	Field
OHD004201091	P-14T	Temp F	07/25/16	17.48	17.48	deg C	Field
OHD004201091	P-14	Temp F	07/25/16	14.16	14.16	deg C	Field
OHD004201091	P-15T	Temp F	07/26/16	16.04	16.04	deg C	Field
OHD004201091	P-15	Temp F	07/25/16	14.2	14.2	deg C	Field
OHD004201091	P-16T	Temp F	07/27/16	15.52	15.52	deg C	Field
OHD004201091	P-16	Temp F	07/26/16	17.61	17.61	deg C	Field
OHD004201091	P-18T	Temp F	07/26/16	15.24	15.24	deg C	Field
OHD004201091	P-18	Temp F	07/27/16	17.75	17.75	deg C	Field
OHD004201091	P-21T	Temp F	07/27/16	14.94	14.94	deg C	Field
OHD004201091	P-21	Temp F	07/27/16	14.94	14.94	deg C	Field
OHD004201091	P-2T	Turb F	07/26/16	69.3	69.3	NTU	Field

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OHD004201091	P-2	Turb F	07/26/16	6.8	6.8	NTU	Field
OHD004201091	P-3T	Turb F	07/26/16	32.3	32.3	NTU	Field
OHD004201091	P-3R	Turb F	07/26/16	151	151	NTU	Field
OHD004201091	P-8T	Turb F	07/27/16	8.7	8.7	NTU	Field
OHD004201091	P-8R	Turb F	07/27/16	2.7	2.7	NTU	Field
OHD004201091	P-12TR	Turb F	07/25/16	57	57	NTU	Field
OHD004201091	P-12	Turb F	07/26/16	60.6	60.6	NTU	Field
OHD004201091	P-14T	Turb F	07/25/16	0	0	NTU	Field
OHD004201091	P-14	Turb F	07/25/16	4.6	4.6	NTU	Field
OHD004201091	P-15T	Turb F	07/26/16	1.7	1.7	NTU	Field
OHD004201091	P-15	Turb F	07/25/16	0.9	0.9	NTU	Field
OHD004201091	P-16T	Turb F	07/27/16	42.3	42.3	NTU	Field
OHD004201091	P-16	Turb F	07/26/16	16.1	16.1	NTU	Field
OHD004201091	P-18T	Turb F	07/26/16	42.4	42.4	NTU	Field
OHD004201091	P-18	Turb F	07/27/16	107	107	NTU	Field
OHD004201091	P-21T	Turb F	07/27/16	38.5	38.5	NTU	Field
OHD004201091	P-21	Turb F	07/27/16	38.5	38.5	NTU	Field
OHD004201091	P-1T	GWL	07/25/16	12.4	12.4	feet	Field
OHD004201091	P-1	GWL	07/25/16	12.73	12.73	feet	Field
OHD004201091	P-2T	GWL	07/25/16	8.42	8.42	feet	Field
OHD004201091	P-2	GWL	07/25/16	7.48	7.48	feet	Field
OHD004201091	P-3T	GWL	07/25/16	7.92	7.92	feet	Field
OHD004201091	P-3R	GWL	07/25/16	7.62	7.62	feet	Field
OHD004201091	P-8T	GWL	07/25/16	8.12	8.12	feet	Field
OHD004201091	P-8R	GWL	07/25/16	7.71	7.71	feet	Field
OHD004201091	P-11	GWL	07/25/16	9.71	9.71	feet	Field
OHD004201091	P-12TR	GWL	07/25/16	8.92	8.92	feet	Field
OHD004201091	P-12	GWL	07/25/16	8.57	8.57	feet	Field
OHD004201091	P-13T	GWL	07/25/16	8.6	8.6	feet	Field
OHD004201091	P-13	GWL	07/25/16	8.68	8.68	feet	Field
OHD004201091	P-14T	GWL	07/25/16	6.9	6.9	feet	Field
OHD004201091	P-14	GWL	07/25/16	6.97	6.97	feet	Field
OHD004201091	P-15T	GWL	07/25/16	10.3	10.3	feet	Field
OHD004201091	P-15	GWL	07/25/16	10.55	10.55	feet	Field
OHD004201091	P-16T	GWL	07/25/16	10.48	10.48	feet	Field
OHD004201091	P-16	GWL	07/25/16	10.89	10.89	feet	Field
OHD004201091	P-17	GWL	07/25/16	11.53	11.53	feet	Field
OHD004201091	P-18T	GWL	07/25/16	6.97	6.97	feet	Field
OHD004201091	P-18	GWL	07/25/16	8.04	8.04	feet	Field
OHD004201091	P-19	GWL	07/25/16	10.13	10.13	feet	Field

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OHD004201091	P-20	GWL	07/25/16	10.55	10.55	feet	Field
OHD004201091	P-21T	GWL	07/25/16	10.21	10.21	feet	Field
OHD004201091	P-21	GWL	07/25/16	10.62	10.62	feet	Field

APPENDIX B

Groundwater Flow Velocity Calculations

APPENDIX B-1
GROUNDWATER FLOW RATE IN TILL CONTACT WATER-BEARING ZONE
CLOSED RCRA LANDFILL
ELYRIA, OHIO

Gradient $I = \frac{(744.78 - 736.92)}{657.33} = 0.012 \text{ ft/ft}$

25 July 2016

Hydraulic Conductivity $K = 4.1 \times 10^{-4} \text{ cm/sec} = 1.16 \text{ ft/day}^*$

Porosity $n = 0.15^{**}$

Flow Rate $v = \frac{(1.16 \text{ ft/day}) \times (0.012 \text{ ft/ft})}{0.15}$

$v = 33.87 \text{ ft/yr}$

Notes:

- * - K-value of 1.16 ft/day was taken from the 2002, CRA Supplemental Annual Report for the RACER Elyria site.
- ** -Porosity - n-value used is the value for sandstone. Till contact wells are screened partially in clay till and partially in sandstone. The porosity for sandstone will provide a more conservative value for velocity.

APPENDIX B-2
GROUNDWATER FLOW RATE IN TILL BEDROCK WATER-BEARING ZONE
CLOSED RCRA LANDFILL
ELYRIA, OHIO

Gradient $I = \frac{(744.67 - 736.27)}{675.91} = 0.012 \text{ ft/ft}$

25 July 2016

Hydraulic Conductivity $K = 1.9 \times 10^{-4} \text{ cm/sec} = 5.4 \times 10^{-1} \text{ ft/day}^*$

Porosity $n = 0.15^{**}$

Flow Rate $v = \frac{(0.54 \text{ ft/day}) \times (0.012 \text{ ft/ft})}{0.15}$

$v = 15.77 \text{ ft/yr}$

Notes:

- * - K-value of 0.54 ft/day was taken from the 2002, CRA, Supplemental Annual Report for the RACER Elyria site.
- ** -Porosity - n-value used is the value for sandstone.

APPENDIX C

Field Forms

PROJECT	ELYRIA PACOL BIENNIAL GW SAMPLING	H&A FILE NO.	41753-007
LOCATION	ELYRIA, OH	PROJECT MGR.	B. PETGANT
CLIENT	PACOL TRUST	FIELD REP	C. BALVEN
CONTRACTOR	N/A	DATE	07/26/16

GROUNDWATER SAMPLING INFORMATION

Well ID	P-18	
Depth Of Well (ft.) per Log		
Reference Mark	top	
Depth to Water from Reference Mark (ft.)	8.12	
Time	10:30	
Depth to Product (ft.)	N/A	
Field Measured Depth Of Well (ft.)	31.22	NOTES: WELL PURGED DAY, ALLOW DECHARGE 1, SAMPLE
Inside Diameter (in.)	2	
Standing Water Depth (ft.)	23.1	
Volume Of Water In Well (gallons/liters)	3.67 3.7 gal	-SAMPLED 07/27/16
Purging Device	PERISTALTIC PUMP	
Volume of Bailor/Pump Capacity	500ML/min	
Cleaning Procedure	DEDICATED TUBING	
Balls Removed/ Volume Removed	1+	
Time Purging Started	1035	Ⓢ SAMPLED
Time Purging Stopped	1110	WL - 11.82
Instrument Used to Monitor Field Parameters	HORIT 0.52	TIME - 0800
Sampling Device	PERISTALTIC PUMP	
Cleaning Procedure	DEDICATED TUBE	
Color	-	
Odor		

TIME SAMPLES TAKEN	VOA	SAMPLE ID / PARAMETERS / TIME	
	ABN		
	Metals	P18-072716-0800	
	CHLORIDE NITRATE SULFATE	↓	

PARAMETERS	Time well V	1	07/27/16															
	Temp, C (+/- 3%)	16.26	17.95															
	Conductivity, us/cm (+/- 3%)	1.11	1.17															
	Dissolved Oxygen, mg/L (+/- 10%)	1.12	4.10															
	pH (+/- 0.1)	7.42	8.07															
	ORP/eH, mv (+/- 10mv)	20	185															
	Turbidity, NTU (<5 NTU)	543	107															
	Volume purged, gallons	24	20.5															
	Drawdown, ft	22.01																

Remarks: (ie: field filtrations, persons communicated with at site, etc.)

PROJECT: ELYRIA WPCOL BIGNIAR GW SAMPLING H&A FILE NO. 4170
 LOCATION: ELYRIA, OH PROJECT MGR. 42926-004
 CLIENT: RACON TRUST FIELD REP. B. HATGONA
 CONTRACTOR: N/A DATE: C. BARNETT
07/26/16

GROUNDWATER SAMPLING INFORMATION

Well ID	<u>P-18T</u>	
Depth Of Well (ft.) per Log		
Reference Mark	<u>TOR</u>	
Depth to Water from Reference Mark (ft.)	<u>6.97</u>	
Time	<u>11:20</u>	
Depth to Product (ft.)	<u>N/A</u>	<u>NOTES:</u>
Field Measured Depth Of Well (ft.)	<u>19.92</u>	<u>WELL PURGED BY, ALLOWED</u>
Inside Diameter (in.)	<u>2</u>	<u>TO EXCHANGE, SAMPLED</u>
Standing Water Depth (ft.)	<u>12.95</u>	
Volume Of Water In Well (gallons/liters)	<u>12.95 x 0.16 = 2.0</u>	<u>SAMPLE NOTES:</u>
Purging Device	<u>PERISTALTIC PUMP</u>	<u>TIME:</u>
Volume of Baller/Pump Capacity	<u>500ml (min)</u>	<u>WT</u>
Cleaning Procedure	<u>DEDICATED TUBING</u>	<u>PURGED 3 WELL VOLUMES:</u>
Balls Removed/ Volume Removed		<u>SAMPLED</u>
Time Purging Started	<u>11:25</u>	<u>SAMPLE -</u>
Time Purging Stopped	<u>12:15</u>	<u>TIME - 12:10</u>
Instrument Used to Monitor Field Parameters	<u>HORIBA U-52</u>	<u>NL - 15.73</u>
Sampling Device	<u>PERISTALTIC PUMP</u>	<u>COUNTED A FIELD</u>
Cleaning Procedure	<u>DEDICATED TUBING</u>	<u>FILTERED? NON-FILTERED</u>
Color		<u>FOR METALS</u>
Odor		

TIME-SAMPLE TAKEN	VOA	<u>SAMPLED / PARAMETERS / TIME</u>
	ABA	
	Metals	<u>P18T - 072616 - 1210</u>

PARAMETERS	Time well V	<u>1</u>	<u>2</u>	<u>3</u>															
	Temp, C (+/- 3%)	<u>16.14</u>	<u>15.46</u>	<u>15.24</u>															
	Conductivity, us/cm (+/- 3%)	<u>0.926</u>	<u>0.717</u>	<u>0.927</u>															
	Dissolved Oxygen, mg/L (+/- 10%)	<u>1.68</u>	<u>1.42</u>	<u>1.52</u>															
	pH (+/- 0.1)	<u>6.21</u>	<u>5.79</u>	<u>6.36</u>															
	ORP/eH, mv (+/- 10mv)	<u>88</u>	<u>42</u>	<u>12</u>															
	Turbidity, NTU (<5 NTU)	<u>47.1</u>	<u>68.7</u>	<u>42.4</u>															
	Volume purged, gallons	<u>2+</u>	<u>24</u>	<u>26</u>															
	Drawdown, ft	<u>12.95</u>	<u>8.70</u>	<u>8.46</u>															

Remarks: (ie: field filtrations, persons communicated with at site, etc.)

PROJECT	EVRI9 RALPH BIENNIAL GW SAMPLING	H&A FILE NO.	41253-0017
LOCATION	EVRI9, OH	PROJECT MGR.	B. BELMONT
CLIENT	RALPH TRUST	FIELD REP	C. SHENON
CONTRACTOR	H.A.	DATE	07/26/16

GROUNDWATER SAMPLING INFORMATION

Well ID	P-3R	
Depth Of Well (ft.) per Log		
Reference Mark	TOR	
Depth to Water from Reference Mark (ft.)	7.78	
Time	12:45	NOTES:
Depth to Product (ft.)		PURGE 3 WELLS - SAMPLE
Field Measured Depth Of Well (ft.)	7.78 21.50	
Inside Diameter (in.)	2	
Standing Water Depth (ft.)	13.72	
Volume Of Water In Well (gallons/liters)	$13.72 \times 0.16 = 2.2 \text{ gal}$	SAMPLE - 1395
Purging Device	PERISTALTIC PUMP	TIME - 1335
Volume of Baller/Pump Capacity	500 mL/min	WL - 16.60
Cleaning Procedure	DEDICATED TUBING	
Balls Removed/ Volume Removed	1500 12% 3 well ✓	COLLECTED FILTERED:
Time Purging Started	12:45	UNFILTERED METALS
Time Purging Stopped	1:30	SAMPLES
Instrument Used to Monitor Field Parameters	HORIBA U-52	
Sampling Device	PERISTALTIC PUMP	
Cleaning Procedure	DEDICATED TUBING	
Color	CLEAR	
Odor	NONE	

TIME SAMPLES TAKEN	VOA	
	ABN	
	Metals	P3R-072616-1395
	Cu CHLORIDE SULFATE	↓

PARAMETERS	Time well V	1	2	3															
	Temp. C (+/- 3%)	15.45	14.70	14.44															
	Conductivity, us/cm (+/- 3%)	1.02	1.02	1.02															
	Dissolved Oxygen, mg/L (+/- 10%)	1.64	0.71	1.50															
	pH (+/- 0.1)	7.61	6.72	6.70															
	ORP/eH, mv (+/- 10mv)	-17	84	116															
	Turbidity, NTU (<5 NTU)	4.2	10.5	151															
	Volume purged, gallons	2.2	4.5	6.7															
	Drawdown, ft	8.92	8.76	8.82															

Remarks: (ie: field filtrations, persons communicated with at site, etc.)

PROJECT	<u>RHON EYMA BLOWNIA GW SAMPLING</u>	H&A FILE NO.	<u>41755-007</u>
LOCATION	<u>ELYRIA, OH</u>	PROJECT MGR.	<u>B. PATRICK</u>
CLIENT	<u>RACON TRUST</u>	FIELD REP	<u>C. B. WIGG</u>
CONTRACTOR	<u>N/A</u>	DATE	<u>07/26/16</u>

GROUNDWATER SAMPLING INFORMATION

Well ID	<u>P-37</u>	
Depth Of Well (ft.) per Log		
Reference Mark	<u>TOL</u>	
Depth to Water from Reference Mark (ft.)	<u>7.8.06</u>	<u>NOTES:</u>
Time	<u>1410</u>	<u>PURGE 3 WELL VOLUMES:</u>
Depth to Product (ft.)	<u>N/A</u>	<u>SAMPLES</u>
Field Measured Depth Of Well (ft.)	<u>12.77</u>	
Inside Diameter (in.)	<u>2</u>	
Standing Water Depth (ft.)	<u>4.71</u>	
Volume Of Water In Well (gallons/liters)	<u>4.71 x 0.16 = 0.75 gal</u>	
Purging Device	<u>PERISTALTIC PUMP</u>	
Volume of Bailor/Pump Capacity	<u>150 ml/min</u>	
Cleaning Procedure	<u>DEDICATED TUBING</u>	<u>SAMPLE NOTES:</u>
Balls Removed/ Volume Removed	<u>3 well V</u>	<u>WL -</u>
Time Purging Started	<u>1415</u>	<u>TIME - 1435</u>
Time Purging Stopped	<u>1440</u>	
Instrument Used to Monitor Field Parameters	<u>HANNA HANNA</u>	<u>FILTERED: UNFILTERED</u>
Sampling Device	<u>PERISTALTIC PUMP</u>	<u>METALS SAMPLES</u>
Cleaning Procedure	<u>DEDICATED TUBING</u>	<u>UNFILTERED</u>
Color	<u>CLAR</u>	
Odor	<u>NONE</u>	

TIME SAMPLES TAKEN	VOA	<u>SAMPLE ID - P37-072616-1435</u>	
	ABN		
	Metals		
	<u>CHLORIDE</u>		
	<u>SULFATE</u>		

PARAMETERS	Time well V	<u>1</u>	<u>2</u>	<u>3</u>										
	Temp. C (+/- 0.3%)	<u>17.23</u>	<u>16.87</u>	<u>16.53</u>										
	Conductivity, us/cm (+/- 3%)	<u>1.55</u>	<u>1.59</u>	<u>1.59</u>										
	Dissolved Oxygen, mg/L (+/- 10%)	<u>1.77</u>	<u>1.11</u>	<u>0.89</u>										
	pH (+/- 0.1)	<u>6.30</u>	<u>6.26</u>	<u>6.37</u>										
	ORP/eH, mv (+/- 10mv)	<u>170</u>	<u>177</u>	<u>181</u>										
	Turbidity, NTU (<5 NTU)	<u>11.9</u>	<u>9.0</u>	<u>32.3</u>										
	Volume purged, gallons	<u>21</u>	<u>21.5</u>	<u>22.25</u>										
	Drawdown, ft	<u>0.65</u>												

Remarks: (ie: field filtrations, persons communicated with at site, etc.)

PROJECT	<u>REC'D ELYRIA BIENNIAL GW SAMPLING</u>	H&A FILE NO.	<u>41253-004</u>
LOCATION	<u>ELYRIA, OH</u>	PROJECT MGR.	<u>B. RIGOUT</u>
CLIENT	<u>REC'D TWS?</u>	FIELD REP	<u>C. ZENE??</u>
CONTRACTOR	<u>N/A</u>	DATE	<u>07/26/16</u>

GROUNDWATER SAMPLING INFORMATION

Well ID	<u>P-157</u>	
Depth Of Well (ft.) per Log		
Reference Mark	<u>706</u>	
Depth to Water from Reference Mark (ft.)	<u>10.58</u>	
Time	<u>0900</u>	<u>NOTES:</u>
Depth to Product (ft.)	<u>—</u>	<u>PURGE 3 well volumes</u>
Field Measured Depth Of Well (ft.)	<u>15.97</u>	<u>i. sample</u>
Inside Diameter (in.)	<u>2</u>	
Standing Water Depth (ft.)	<u>4.99</u>	
Volume Of Water In Well (gallons/liters)	<u>4.99 x 0.16 = 0.8 gal</u>	
Purging Device	<u>PERISTALTIC PUMP</u>	
Volume of Baller/Pump Capacity	<u>~300ML/MIN</u>	
Cleaning Procedure	<u>DEDICATED TUBING</u>	
Balls Removed/ Volume Removed	<u>3 well V / ~2.5 gal</u>	
Time Purging Started	<u>0910</u>	
Time Purging Stopped	<u>1020</u>	
Instrument Used to Monitor Field Parameters	<u>HORIBA U-52</u>	
Sampling Device	<u>PERISTALTIC PUMP</u>	
Cleaning Procedure	<u>DEDICATED TUBING</u>	
Color		
Odor	<u>NONE</u>	

TIME SAMPLES TAKEN

VOA SAMPLE ID/PARAMETERS/TIME

ABN P157-072616-1015

Metals

Cu

CHLORIDE

SULFATE

PARAMETERS	Time <u>well V</u>	<u>1</u>	<u>2</u>	<u>3</u>														
	Temp. C (+/- 0.3%)	<u>16.24</u>	<u>15.99</u>	<u>16.04</u>														
	Conductivity, us/cm (+/- 3%)	<u>0.893</u>	<u>0.865</u>	<u>0.849</u>														
	Dissolved Oxygen, mg/L (+/- 10%)	<u>1.49</u>	<u>0.83</u>	<u>0.74</u>														
	pH (+/- 0.1)	<u>5.83</u>	<u>6.04</u>	<u>6.07</u>														
	ORP/eH, mv (+/- 10mv)	<u>120</u>	<u>75</u>	<u>71</u>														
	Turbidity, NTU (<5 NTU)	<u>17.6</u>	<u>2.8</u>	<u>1.7</u>														
	Volume purged, gallons	<u>~0.5</u>	<u>~1.6</u>	<u>~2.5</u>														
	Drawdown, ft	<u>0.32</u>	<u>0.41</u>	<u>0.47</u>														

Remarks: (ie: field filtrations, persons communicated with at site, etc.)

PROJECT	<u>RACOL ELYRIA - GW MONITORING</u>	H&A FILE NO.	<u>41753-007</u>
LOCATION	<u>ELYRIA, OH</u>	PROJECT MGR.	<u>D. HATGONER</u>
CLIENT	<u>RACOL TRUST</u>	FIELD REP	<u>C. BURNETT</u>
CONTRACTOR	<u>---</u>	DATE	<u>07/25/16</u>

GROUNDWATER SAMPLING INFORMATION

Well ID	<u>HW-14T P-14T</u>	
Depth Of Well (ft.) per Log		
Reference Mark	<u>TOL</u>	
Depth to Water from Reference Mark (ft.)	<u>6.90</u>	
Time	<u>1200</u>	
Depth to Product (ft.)	<u>-</u>	
Field Measured Depth Of Well (ft.)	<u>14.39</u>	
Inside Diameter (in.)	<u>2</u>	
Standing Water Depth (ft.)	<u>7.49</u>	
Volume Of Water In Well (gallons/liters)	<u>~ 1.2 gal</u>	
Purging Device	<u>PERISTALTIC PUMP</u>	
Volume of Bailer Pump Capacity	<u>---</u>	<u>PURGE RATE ~ 100 mL/MIN</u>
Cleaning Procedure	<u>---</u>	
Back Purge Volume Removed	<u>~ 1.5</u>	
Time Purging Started	<u>12:20</u>	
Time Purging Stopped	<u>13:30</u>	
Instrument Used to Measure Field Parameters	<u>HANNA U-52</u>	
Sampling Device	<u>PERISTALTIC PUMP</u>	
Cleaning Procedure	<u>---</u>	<u>TIME SAMPLED -</u>
Color	<u>Clear</u>	<u>1320</u>
Odor	<u>NONE</u>	

PI4T-072516-1320

TH LIST

CN (TOTAL)

CHLORIDE

SULFATE

COLLECTED FIELD DUP - 0907-072516-0001

Time (BT)	20	25	30	35	40	50	55
Temp. C	17.74	17.67		17.85		17.57	17.78
Conductivity (uS/cm)	0.490	0.488		0.482		0.488	0.486
Dissolved Oxygen (mg/L)	1.21	1.04		0.86		0.77	0.74
pH	5.99	5.95		5.21		5.33	5.29
DO (mg/L)	2.04	1.80		1.61		1.60	1.56
Turbidity (NTU)	0.0	0.0		0.0		0.0	0.0
Volume Pumped (mL)	2500 2500	2500	3000	3500	4000	5000	5500
Drawdown (ft)	0.33						0.39

Remarks: ie field filtration; persons communicated with at site; etc

1.5 min V

PROJECT: RACOL ELYRIA BLENNIAL GW SAMPLING H&A FILE NO. 41753-004
 LOCATION: ELYRIA, OH PROJECT MGR. B. A. GAWA
 CLIENT: RACOL TRUST FIELD REP. C. BRUNER
 CONTRACTOR: H.A. DATE: 07/25/16

GROUNDWATER SAMPLING INFORMATION

Well ID	P-14	
Depth Of Well (ft.) per Log		
Reference Mark	TOL	
Depth to Water from Reference Mark (ft.)	6.97	
Time	1340	
Depth to Product (ft.)	—	
Field Measured Depth Of Well (ft.)	22.15	
Inside Diameter (in.)	2	
Standing Water Depth (ft.)	15.18 x 0.16	
Volume Of Water In Well (gallons/liters)	2.4 gal	
Purging Device	PERISTALTIC PUMP	
Volume of Bailor/Pump Capacity	VARIABLE - PULSE @ 200 ml/min	
Cleaning Procedure	NONE - NEW TUBING	
Balls Removed/ Volume Removed	~0.5	
Time Purging Started	1345	
Time Purging Stopped	1430	
Instrument Used to Monitor Field Parameters	HALLER U-52	
Sampling Device	PERISTALTIC PUMP	
Cleaning Procedure	NEW TUBING	
Color	CLEAR	TIME SAMPLED
Odor	NONE	1420

TIME SAMPLES TAKEN

VOA: SAMPLE 10 / PARAMETERS

ABN:

Metals: P14-072516-1420

CA: CHLORIDE

SULFATE

↓

- COLLECTED ADIC FIELD FILTERED SAMPLE FOR DISCOUNT ANALYSIS

PARAMETERS	Time (57)	10	15	20	25	35						
	Temp. C (+/- 0.2%)	14.27	14.22		14.17	14.16						
	Conductivity, us/cm (+/- 3%)	0.558	0.556		0.552	0.551						
	Dissolved Oxygen, mg/L (+/- 10%)	1.15	1.13		1.08	1.08						
	pH (+/- 0.1)	1.75	1.87		1.31	1.91						
	ORP/eH, mv (+/- 10mv)	256	258		257	256						
	Turbidity, NTU (<5 NTU)	4.5	15.1		5.9	4.6						
	Volume purged, gallons	~0.5	~0.5		~1.5	~2						
	Drawdown, ft	0.26	0.22		0.28	0.29						

Remarks: (ie: field filtrations, persons communicated with at site, etc.)

PROJECT	LACON ELYRIA BIENNIAL GW SAMPLING	H&A FILE NO.	41753-057
LOCATION	ELYRIA, OH	PROJECT MGR.	B. HATGENA
CLIENT	RACON TRUST	FIELD REP	C. BARNETT
CONTRACTOR	N/A	DATE	07/25/16

GROUNDWATER SAMPLING INFORMATION

Well ID		
Depth Of Well (ft.) per Log	P-15	
Reference Mark	To 2	
Depth to Water from Reference Mark (ft.)	10.55	
Time		
Depth to Product (ft.)		
Field Measured Depth Of Well (ft.)	29.15	
Inside Diameter (in.)		1075
Standing Water Depth (ft.)	13.60	- PURGE 3 WOU V !
Volume Of Water In Well (gallons/liters)	13.60 x 0.16 = 2.17	COLLECT SAMPLE
Purging Device	PERISTALTIC PUMP	- PURGE @ ~500ml/min
Volume of Baller/Pump Capacity	500ml/min	
Cleaning Procedure	NEW TUBING	
Balls Removed/ Volume Removed	3 WOU V	
Time Purging Started	1600	
Time Purging Stopped		
Instrument Used to Monitor Field Parameters	HORIBA U-52	
Sampling Device	PERISTALTIC PUMP	
Cleaning Procedure	DEDICATED TUBING	
Color		
Odor		

TIME SAMPLES TAKEN	WOC	SAMPLE 10/PARAMETERS/TIME	
	ABN		
	Metals	P15-072516-1640	16:40
	Ca		
	CHLORIDE		
	SULFATE		

PARAMETERS	Time WOU V	1	2	3														
	Temp. C (+/- 3%)	14.38	14.10	14.20														
	Conductivity, us/cm (+/- 3%)	0.776	0.75	0.788														
	Dissolved Oxygen, mg/L (+/- 10%)	1.17	0.88	0.88														
	pH (+/- 0.1)	3.26	2.15	2.00														
	ORP/eH, mv (+/- 10mv)	206	245	247														
	Turbidity, NTU (<5 NTU)	1.4	0.0	0.9														
	Volume purged, gallons	2.2	4.7	6.6														
	Drawdown, ft	0.30	0.31	0.34														

Remarks: (ie: field filtrations, persons communicated with at site, etc.)

PROJECT	<u>RACON ELYRIA BIENNIAL GW SAMPLING</u>	H&A FILE NO.	<u>41753-004</u>
LOCATION	<u>ELYRIA, OH</u>	PROJECT MGR.	<u>B. ALGERIA</u>
CLIENT	<u>RACON TRUST</u>	FIELD REP	<u>C. RAYNE</u>
CONTRACTOR	<u>N/A</u>	DATE	<u>07/25/16</u>

GROUNDWATER SAMPLING INFORMATION

Well ID	<u>P-12</u>	
Depth Of Well (ft.) per Log		
Reference Mark	<u>TOR</u>	
Depth to Water from Reference Mark (ft.)	<u>8.57</u>	
Time	<u>1435</u>	
Depth to Product (ft.)	<u>—</u>	
Field Measured Depth Of Well (ft.)	<u>22.52</u>	
Inside Diameter (in.)	<u>2</u>	
Standing Water Depth (ft.)	<u>13.65</u>	
Volume Of Water In Well (gallons/liters)	<u>13.65 x 0.16 = 2.18 gal</u>	
Purging Device	<u>PERISTALTIC</u>	
Volume of Bailor/Pump Capacity	<u>~100 ml/min</u>	<u>- NOTES -</u>
Cleaning Procedure	<u>NEW TUBING</u>	<u>well BEING DRY @ 30</u>
Bails Removed/ Volume Removed		<u>MIN - FLOW INCREASED TO</u>
Time Purging Started	<u>1440</u>	<u>~500 ml/min; well purged</u>
Time Purging Stopped	<u>1520</u>	<u>dry</u>
Instrument Used to Monitor Field Parameters	<u>HANNA U-52</u>	<u>- WE WILL SAMPLE ASAP</u>
Sampling Device	<u>PERISTALTIC PUMP</u>	
Cleaning Procedure	<u>NEW TUBING</u>	
Color	<u>NONE</u>	
Odor	<u>NONE</u>	

TIME SAMPLES TAKEN	VOC	<u>SAMPLE ID: PARAMETERS</u>	<u>TIME SAMPLED</u>
	ABN	<u>P12-072616-0800</u>	<u>08:00</u>
	Metals	<u>P12-072516</u>	<u>WL @ SAMPLE - 9.82'</u>
	CHLORIDE		
	SULFATE		

PARAMETERS	Time	<u>10</u>	<u>15</u>	<u>20</u>	<u>25</u>	<u>30</u>	<u>08:00</u>						
	Temp, C (+/- 0.3%)	<u>19.88</u>		<u>20.65</u>		<u>20.78</u>	<u>19.41</u>						
	Conductivity, us/cm (+/- 3%)	<u>0.580</u>		<u>0.579</u>		<u>0.576</u>	<u>0.691</u>						
	Dissolved Oxygen, mg/L (+/- 10%)	<u>0.86</u>		<u>0.57</u>		<u>0.43</u>	<u>10.95</u>						
	pH (+/- 0.1)	<u>3.02</u>		<u>4.53</u>			<u>6.81</u>						
	ORP/eH, mv (+/- 10mv)	<u>299</u>		<u>170</u>			<u>170</u>						
	Turbidity, NTU (<5 NTU)	<u>3.4</u>		<u>121</u>			<u>10.6</u>						
	Volume purged, gallons	<u>~0.25</u>		<u>~0.8</u>			<u>-</u>						
	Drawdown, ft	<u>0.19</u>		<u>3.3</u>		<u>9.03</u>	<u>-</u>						

07/26/15 PARAMETERS @ SAMPLE TIME

Remarks: (ie: field filtrations, persons communicated with at site, etc.)

PROJECT	<u>KARLEBYRIA BIENNIAL GW SAMPLING</u>	H&A FILE NO.	<u>41753-027</u>
LOCATION	<u>ELYRIA, OH</u>	PROJECT MGR.	<u>B. MCGRAW</u>
CLIENT	<u>RACER TRUST</u>	FIELD REP	<u>C. PATY577</u>
CONTRACTOR	<u>N/A</u>	DATE	<u>07/25/16</u>

GROUNDWATER SAMPLING INFORMATION

Well ID	<u>P-12TR</u>	
Depth Of Well (ft.) per Log	<u>14.4</u>	
Reference Mark	<u>TOR</u>	<p>NOTES: @ 15 MIN - WELL MADE ~ 3 gal OF WATER - STILL ~ 3' OF STANDING WATER - COLLECT 1 SET OF READINGS @ ~ 4 WELL VOLUMES: COLLECT SAMPLES</p>
Depth to Water from Reference Mark (ft.)	<u>8.92</u>	
Time	<u>1525</u>	
Depth to Product (ft.)	<u> </u>	
Field Measured Depth Of Well (ft.)	<u>17.02</u>	
Inside Diameter (in.)	<u>2</u>	
Standing Water Depth (ft.)	<u>5.10</u>	
Volume Of Water In Well (gallons/liters)	<u>5.10 x 0.16 = 0.8 gal</u>	
Purging Device	<u>POLYSTYRIC</u>	
Volume of Baller/Pump Capacity	<u>500ML/MIN</u>	
Cleaning Procedure	<u>NEW TUBING</u>	- WL - 11.13'
Balls Removed/ Volume Removed	<u>N4</u>	- TIME SAMPLED - 1545
Time Purging Started	<u>1525</u>	- COLLECTED ADDL METALS SAMPLE W/ FIELD FILTER
Time Purging Stopped	<u>1550</u>	- 0.45M FILTER
Instrument Used to Monitor Field Parameters	<u> </u>	
Sampling Device	<u>POLYSTYRIC</u>	NOTES
Cleaning Procedure	<u>NEW TUBING</u>	WELL PUMPED AND 500ML/MIN COLLECT SAMPLES LATER
Color	<u>CLOUDY</u>	
Odor	<u>NONE</u>	

TIME SAMPLES TAKEN	VOA	<u>SAMPLE ID / PARAMETERS / TIME</u>	
	ABN		
	Metals	<u>P12TR-072516-1545</u>	<u>15:45</u>
	<u>Ca</u>		
	<u>CHLORIDE</u>		
	<u>SULFATE</u>		

PARAMETERS	Time	<u>1540</u>																		
	Temp. C (+/- 3%)	<u>18.10</u>																		
	Conductivity, us/cm (+/- 3%)	<u>0692</u>																		
	Dissolved Oxygen, mg/L (+/- 10%)	<u>63.55</u>																		
	pH (+/- 0.1)	<u>6.14</u>																		
	ORP/eH, mv (+/- 10mv)	<u>117</u>																		
	Turbidity, NTU (<5 NTU)	<u>57.0</u>																		
	Volume purged, gallons	<u>23.5</u>																		
	Drawdown, ft	<u>2.21</u>																		

Remarks: (ie: field filtrations, persons communicated with at site, etc.)



LOW-FLOW GROUNDWATER SAMPLING RECORD

Page of

PROJECT	Racer Elyria Biennial GW Sampling	H&A FILE NO.	41753-004
LOCATION	Elyria, OH	PROJECT MGR.	B. Aragona
CLIENT	Racer Trust	FIELD REP	C. Barnett
CONTRACTOR	H&A	DATE	7/26/2016

GROUNDWATER SAMPLING INFORMATION

Well ID	P-02	
Depth Of Well (ft.) per Log		
Reference Mark	TOR	
Depth to Water from Reference Mark (ft.)	7.74	
Time	14:55	Sampling Notes:
Depth to Product (ft.)	N/A	Purged 3 well V and sampled
Field Measured Depth Of Well (ft.)	22.6	
Inside Diameter (in.)	2	
Standing Water Depth (ft.)	16.86	
Volume Of Water In Well (gallons/liters)	16.86 x 0.16 = 2.7 gal	
Purging Device	Peristaltic Pump	
Volume of Bailer/Pump Capacity	500 mL/min	
Cleaning Procedure	Dedicated Tubing	
Bails Removed/ Volume Removed	3 well volumes	
Time Purging Started	15:00	
Time Purging Stopped	16:05	
Instrument Used to Monitor Field Parameters	Horiba U-52	
Sampling Device	Peristaltic Pump	
Cleaning Procedure	Dedicated Tubing	
Color	Clear	
Odor	None	

PARAMETERS	Chloride	Sample ID - P02-072616-1600	WL @ sample - 7.93'
	Sulfate		Time Sampled - 16:00
	Metals		Collected filtered and unfiltered samples for metals
	Cyanide		

PARAMETERS	Well Volumes	1	2	3								
	Temp. C (+/-3%)	16.51	16.39	16.16								
	Conductivity, us/cm (+/- 3%)	0.907	0.892	0.9								
	Dissolved Oxygen, mg/L (+/- 10%)	0.61	0.59	0.65								
	pH (+/-0.1)	6.3	6.23	6.38								
	ORP/eH, mv (+/-10mv)	60	56	45								
	Turbidity, NTU (<5 NTU)	3.4	12.1	6.8								
	Volume purged, gallons	~2.7	~5.4	~8.1								
	Drawdown, ft	0.06	0.16	0.19								

Remarks: (ie: field filtrations, persons communicated with at site, etc.)



LOW-FLOW GROUNDWATER SAMPLING RECORD

Page of

PROJECT	Racer Elyria Biennial GW Sampling	H&A FILE NO.	41753-004
LOCATION	Elyria, OH	PROJECT MGR.	B. Aragona
CLIENT	Racer Trust	FIELD REP	C. Barnett
CONTRACTOR	H&A	DATE	7/26/2016

GROUNDWATER SAMPLING INFORMATION

Well ID	P-02T	
Depth Of Well (ft.) per Log		
Reference Mark	TOR	
Depth to Water from Reference Mark (ft.)	8.81	
Time	16:05	Sampling Notes:
Depth to Product (ft.)	N/A	Purged 3 well V and sampled
Field Measured Depth Of Well (ft.)	15.16	
Inside Diameter (in.)	2	
Standing Water Depth (ft.)	6.35	
Volume Of Water In Well (gallons/liters)	6.35 x 0.16 = 1.0	
Purging Device	Peristaltic Pump	
Volume of Bailer/Pump Capacity	500 mL/min	
Cleaning Procedure	Dedicated Tubing	
Bails Removed/ Volume Removed	3 well volumes	
Time Purging Started	16:10	
Time Purging Stopped	16:45	
Instrument Used to Monitor Field Parameters	Horiba U-52	
Sampling Device	Peristaltic Pump	
Cleaning Procedure	Dedicated Tubing	
Color	Red	
Odor	None	

PARAMETERS	Chloride	Sample ID - P02T-072616-1640	WL @ sample - 13.10'
	Sulfate		Time Sampled - 16:40
	Metals		Collected filtered and unfiltered samples for metals
	Cyanide		

PARAMETERS	Well Volumes	1	2	3								
	Temp. C (+/-3%)	17.11	16.69	16.26								
	Conductivity, us/cm (+/- 3%)	1.83	1.86	1.87								
	Dissolved Oxygen, mg/L (+/- 10%)	2.83	1.12	7.22								
	pH (+/-0.1)	6.46	6.09	6.12								
	ORP/eH, mv (+/-10mv)	101	109	113								
	Turbidity, NTU (<5 NTU)	34.4	91.1	69.3								
	Volume purged, gallons	~1.0	~2.0	~3.0								
	Drawdown, ft	2.14	3.67	4.29								

Remarks: (ie: field filtrations, persons communicated with at site, etc.)



LOW-FLOW GROUNDWATER SAMPLING RECORD

Page of

PROJECT	Racer Elyria Biennial GW Sampling	H&A FILE NO.	41753-004
LOCATION	Elyria, OH	PROJECT MGR.	B. Aragona
CLIENT	Racer Trust	FIELD REP	C. Barnett
CONTRACTOR	H&A	DATE	7/27/2016

GROUNDWATER SAMPLING INFORMATION

Well ID	P-08R	
Depth Of Well (ft.) per Log		
Reference Mark	TOR	
Depth to Water from Reference Mark (ft.)	8.04	
Time	13:15	Sampling Notes:
Depth to Product (ft.)	N/A	Purged 3 well V and sampled
Field Measured Depth Of Well (ft.)	22.53	
Inside Diameter (in.)	2	
Standing Water Depth (ft.)	14.49	
Volume Of Water In Well (gallons/liters)	14.49 x 0.16 = 2.3	
Purging Device	Peristaltic Pump	
Volume of Bailer/Pump Capacity	500 mL/min	
Cleaning Procedure	Dedicated Tubing	
Bails Removed/ Volume Removed	3 well volumes	
Time Purging Started	13:20	
Time Purging Stopped	14:20	
Instrument Used to Monitor Field Parameters	Horiba U-52	
Sampling Device	Peristaltic Pump	
Cleaning Procedure	Dedicated Tubing	
Color	Clear	
Odor	None	

PARAMETERS	Chloride	Sample ID - P08R-072716-1410	WL @ sample - 8.55'
	Sulfate		Time Sampled - 14:10
	Metals		Collected filtered and unfiltered samples for metals
	Cyanide		Collected field dup - 0908-072716-0001

PARAMETERS	Well Volumes	1	2	3									
	Temp. C (+/-3%)	19.4	18.53	17.97									
	Conductivity, us/cm (+/- 3%)	0.875	0.883	0.897									
	Dissolved Oxygen, mg/L (+/- 10%)	0.44	0.44	0.44									
	pH (+/-0.1)	7.15	7.12	6.98									
	ORP/eH, mv (+/-10mv)	-11	-17	-18									
	Turbidity, NTU (<5 NTU)	0	2	2.7									
	Volume purged, gallons	~2.3	~4.6	~7									
	Drawdown, ft	0.3	0.33	0.46									

Remarks: (ie: field filtrations, persons communicated with at site, etc.)



LOW-FLOW GROUNDWATER SAMPLING RECORD

Page of

PROJECT	Racer Elyria Biennial GW Sampling	H&A FILE NO.	41753-004
LOCATION	Elyria, OH	PROJECT MGR.	B. Aragona
CLIENT	Racer Trust	FIELD REP	C. Barnett
CONTRACTOR	H&A	DATE	7/27/2016

GROUNDWATER SAMPLING INFORMATION

Well ID	P-08T	
Depth Of Well (ft.) per Log		
Reference Mark	TOR	
Depth to Water from Reference Mark (ft.)	8.33	
Time	12:30	Sampling Notes:
Depth to Product (ft.)	N/A	Purged 3 well V and sampled
Field Measured Depth Of Well (ft.)	12.49	
Inside Diameter (in.)	2	
Standing Water Depth (ft.)	4.16	
Volume Of Water In Well (gallons/liters)	4.16 x 0.16 = 0.66	
Purging Device	Peristaltic Pump	
Volume of Bailer/Pump Capacity	300 mL/min	
Cleaning Procedure	Dedicated Tubing	
Bails Removed/ Volume Removed	3 well volumes	
Time Purging Started	12:35	
Time Purging Stopped	13:05	
Instrument Used to Monitor Field Parameters	Horiba U-52	
Sampling Device	Peristaltic Pump	
Cleaning Procedure	Dedicated Tubing	
Color	Clear	
Odor	None	

PARAMETERS	Chloride	Sample ID - P08T-072716-1300	WL @ sample - 8.74'
	Sulfate		Time Sampled - 13:00
	Metals		Collected filtered and unfiltered samples for metals
	Cyanide		

PARAMETERS	Well Volumes	1	2	3								
	Temp. C (+/-3%)	19.7	19.45	19.39								
	Conductivity, us/cm (+/- 3%)	0.533	0.545	0.549								
	Dissolved Oxygen, mg/L (+/- 10%)	0.63	0.57	0.56								
	pH (+/-0.1)	6.62	6.54	6.51								
	ORP/eH, mv (+/-10mv)	119	137	141								
	Turbidity, NTU (<5 NTU)	5.8	7.6	8.7								
	Volume purged, gallons	~0.75	~1.5	~2.25								
	Drawdown, ft	0.21	0.37	0.41								

Remarks: (ie: field filtrations, persons communicated with at site, etc.)



LOW-FLOW GROUNDWATER SAMPLING RECORD

Page of

PROJECT	Racer Elyria Biennial GW Sampling	H&A FILE NO.	41753-004
LOCATION	Elyria, OH	PROJECT MGR.	B. Aragona
CLIENT	Racer Trust	FIELD REP	C. Barnett
CONTRACTOR	H&A	DATE	7/26/2016

GROUNDWATER SAMPLING INFORMATION

Well ID	P-16	
Depth Of Well (ft.) per Log		
Reference Mark	TOR	
Depth to Water from Reference Mark (ft.)	11	
Time	16:55	Sampling Notes:
Depth to Product (ft.)	N/A	Purged 3 well V and sampled
Field Measured Depth Of Well (ft.)	20.27	
Inside Diameter (in.)	2	
Standing Water Depth (ft.)	9.27	
Volume Of Water In Well (gallons/liters)	9.27 x 0.16 = 1.5	
Purging Device	Peristaltic Pump	
Volume of Bailer/Pump Capacity	500 mL/min	
Cleaning Procedure	Dedicated Tubing	
Bails Removed/ Volume Removed	3 well volumes	
Time Purging Started	17:00	
Time Purging Stopped	17:35	
Instrument Used to Monitor Field Parameters	Horiba U-52	
Sampling Device	Peristaltic Pump	
Cleaning Procedure	Dedicated Tubing	
Color	Clear	
Odor	None	

PARAMETERS	Chloride	Sample ID - P16-072616-1730	WL @ sample - 13.10'
	Sulfate		Time Sampled - 16:40
	Metals		Collected filtered and unfiltered samples for metals
	Cyanide		

PARAMETERS	Well Volumes	1	2	3									
	Temp. C (+/-3%)	16.8	17.04	17.61									
	Conductivity, us/cm (+/- 3%)	1.33	1.38	1.38									
	Dissolved Oxygen, mg/L (+/- 10%)	1.58	1.73	4.75									
	pH (+/-0.1)	6.28	6.27	6.2									
	ORP/eH, mv (+/-10mv)	80	53	56									
	Turbidity, NTU (<5 NTU)	93.6	51.2	16.1									
	Volume purged, gallons	~1.5	~3.0	~4.5									
	Drawdown, ft	2.41	3.22	4.3									

Remarks: (ie: field filtrations, persons communicated with at site, etc.)



LOW-FLOW GROUNDWATER SAMPLING RECORD

Page of

PROJECT	Racer Elyria Biennial GW Sampling	H&A FILE NO.	41753-004
LOCATION	Elyria, OH	PROJECT MGR.	B. Aragona
CLIENT	Racer Trust	FIELD REP	C. Barnett
CONTRACTOR	H&A	DATE	7/26/2016

GROUNDWATER SAMPLING INFORMATION

Well ID	P-16T	
Depth Of Well (ft.) per Log		
Reference Mark	TOR	
Depth to Water from Reference Mark (ft.)	10.73	
Time	8:30	Sampling Notes:
Depth to Product (ft.)	N/A	Purged 3 well V and sampled
Field Measured Depth Of Well (ft.)	12.15	
Inside Diameter (in.)	2	
Standing Water Depth (ft.)	1.42	
Volume Of Water In Well (gallons/liters)	1.42 x 0.16 = 0.22 gal	
Purging Device	Peristaltic Pump	
Volume of Bailer/Pump Capacity	250mL/min	
Cleaning Procedure	Dedicated Tubing	
Bails Removed/ Volume Removed	3 well volumes	
Time Purging Started	8:40	
Time Purging Stopped	9:05	
Instrument Used to Monitor Field Parameters	Horiba U-52	
Sampling Device	Peristaltic Pump	
Cleaning Procedure	Dedicated Tubing	
Color	Clear	
Odor	None	

PARAMETERS	Chloride	Sample ID - P16T-072716-0900	WL @ sample - 11.66'
	Sulfate		Time Sampled - 09:00
	Metals		Collected filtered and unfiltered samples for metals
	Cyanide		

PARAMETERS	Well Volumes	1	2	3									
	Temp. C (+/-3%)	15.75	15.67	15.52									
	Conductivity, us/cm (+/- 3%)	1.01	1.01	1.01									
	Dissolved Oxygen, mg/L (+/- 10%)	1.64	1.55	1.5									
	pH (+/-0.1)	6.99	6.98	6.96									
	ORP/eH, mv (+/-10mv)	231	229	229									
	Turbidity, NTU (<5 NTU)	23.9	31.6	42.3									
	Volume purged, gallons	~0.25	~0.5	~0.75									
	Drawdown, ft	0.17	0.57	0.93									

Remarks: (ie: field filtrations, persons communicated with at site, etc.)



LOW-FLOW GROUNDWATER SAMPLING RECORD

Page of

PROJECT	Racer Elyria Biennial GW Sampling	H&A FILE NO.	41753-004
LOCATION	Elyria, OH	PROJECT MGR.	B. Aragona
CLIENT	Racer Trust	FIELD REP	C. Barnett
CONTRACTOR	H&A	DATE	7/26/2016

GROUNDWATER SAMPLING INFORMATION

Well ID	P-21	
Depth Of Well (ft.) per Log		
Reference Mark	TOR	
Depth to Water from Reference Mark (ft.)	10.84	
Time	9:20	Sampling Notes:
Depth to Product (ft.)	N/A	Purged 3 well V and sampled
Field Measured Depth Of Well (ft.)	24.02	
Inside Diameter (in.)	2	
Standing Water Depth (ft.)	13.18	
Volume Of Water In Well (gallons/liters)	13.18 x 0.16 = 2.1	
Purging Device	Peristaltic Pump	
Volume of Bailer/Pump Capacity	500 mL/min	
Cleaning Procedure	Dedicated Tubing	
Bails Removed/ Volume Removed	3 well volumes	
Time Purging Started	9:30	
Time Purging Stopped	10:50	
Instrument Used to Monitor Field Parameters	Horiba U-52	
Sampling Device	Peristaltic Pump	
Cleaning Procedure	Dedicated Tubing	
Color	Clear	
Odor	None	

PARAMETERS	Chloride	Sample ID - P21-072716-1030	WL @ sample - 15.40'
	Sulfate		Time Sampled - 10:30
	Metals		Collected filtered and unfiltered samples for metals
	Cyanide		Collected triplicate volume for MS/MSD

PARAMETERS	Well Volumes	1	2	3								
	Temp. C (+/-3%)	14.33	14.15	14.94								
	Conductivity, us/cm (+/- 3%)	1.02	1.04	1.06								
	Dissolved Oxygen, mg/L (+/- 10%)	0.61	0.56	0.54								
	pH (+/-0.1)	7.02	6.86	6.98								
	ORP/eH, mv (+/-10mv)	-19	-19	-25								
	Turbidity, NTU (<5 NTU)	325	476	38.5								
	Volume purged, gallons	~2.1	~4.2	~6.5								
	Drawdown, ft	2.79	4.33	4.56								

Remarks: (ie: field filtrations, persons communicated with at site, etc.)



LOW-FLOW GROUNDWATER SAMPLING RECORD

Page of

PROJECT	Racer Elyria Biennial GW Sampling	H&A FILE NO.	41753-004
LOCATION	Elyria, OH	PROJECT MGR.	B. Aragona
CLIENT	Racer Trust	FIELD REP	C. Barnett
CONTRACTOR	H&A	DATE	7/27/2016

GROUNDWATER SAMPLING INFORMATION

Well ID	P-21T	
Depth Of Well (ft.) per Log		
Reference Mark	TOR	
Depth to Water from Reference Mark (ft.)	10.88	
Time	11:10	Sampling Notes:
Depth to Product (ft.)	N/A	Purged 3 well V and sampled
Field Measured Depth Of Well (ft.)	15.9	
Inside Diameter (in.)	2	
Standing Water Depth (ft.)	5.02	
Volume Of Water In Well (gallons/liters)	5.02 x 0.16 = 0.8	
Purging Device	Peristaltic Pump	
Volume of Bailer/Pump Capacity	500 mL/min	
Cleaning Procedure	Dedicated Tubing	
Bails Removed/ Volume Removed	3 well volumes	
Time Purging Started	11:15	
Time Purging Stopped	11:40	
Instrument Used to Monitor Field Parameters	Horiba U-52	
Sampling Device	Peristaltic Pump	
Cleaning Procedure	Dedicated Tubing	
Color	Clear	
Odor	None	

PARAMETERS	Chloride	Sample ID - P21T-072716-1135	WL @ sample - 13.10'
	Sulfate		Time Sampled - 11:35
	Metals		Collected filtered and unfiltered samples for metals
	Cyanide		Collected triplicate volume for MS/MSD

PARAMETERS	Well Volumes	1	2	3								
	Temp. C (+/-3%)	14.33	14.15	14.94								
	Conductivity, us/cm (+/- 3%)	1.02	1.04	1.06								
	Dissolved Oxygen, mg/L (+/- 10%)	0.61	0.56	0.54								
	pH (+/-0.1)	7.02	6.86	6.98								
	ORP/eH, mv (+/-10mv)	-19	-19	-25								
	Turbidity, NTU (<5 NTU)	325	476	38.5								
	Volume purged, gallons	~2.1	~4.2	~6.5								
	Drawdown, ft	0.21	4.33	4.56								

Remarks: (ie: field filtrations, persons communicated with at site, etc.)

APPENDIX D

Laboratory Analytical Report

Chain of Custody Record

Client Information	Sampler: C. BRAWN	Lab PM: Pohl, Denise	Carrier Tracking No(s): FEDEX	COC No: 460-74659-45937.1
Client Contact: Mr. Troy Clausen BAN ARAGONA	Phone: 937.620.8524	E-Mail: denise.pohl@testamericainc.com		Page: Page 1 of 3
Company: Haley & Aldrich, Inc.	Analysis Requested			Job #:

Address: 6500 Rockside Road Suite 200	Due Date Requested:	<table border="1"> <tr><td>Field Filtered Sample (Yes or No)</td><td></td></tr> <tr><td>Perform MS/MSD (Yes or No)</td><td></td></tr> <tr><td>6010C - Metals - Ba, Ca, Fe, Mg, Mn, Na</td><td></td></tr> <tr><td>9012B - Cyanide, Total</td><td></td></tr> <tr><td>9056A_ORGFM_28D - Cl & SO4</td><td></td></tr> </table>	Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		6010C - Metals - Ba, Ca, Fe, Mg, Mn, Na		9012B - Cyanide, Total		9056A_ORGFM_28D - Cl & SO4	
Field Filtered Sample (Yes or No)												
Perform MS/MSD (Yes or No)												
6010C - Metals - Ba, Ca, Fe, Mg, Mn, Na												
9012B - Cyanide, Total												
9056A_ORGFM_28D - Cl & SO4												
City: Cleveland	TAT Requested (days): 5DP											
State, Zip: OH, 44131	PO #: 41753-005-004											
Phone:	WO #:											
Email: BAragona@haleyaldrich.com	Project #: 46020356											
Project Name: Racer - Elyria, Ohio	SSOW#:	Preservation Codes:										
Site: BIENNIAL GW SAMPLING		A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - ph 4-5 L - EDA Z - other (specify)										

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C - Metals - Ba, Ca, Fe, Mg, Mn, Na	9012B - Cyanide, Total	9056A_ORGFM_28D - Cl & SO4	Total Number of containers	Special Instructions/Note:
							D	B	N		
P14T-072516-1320	07/25/16	1320	G	Water	N	N	X	X	X		
0908-072516-0001	↓	—	↓	Water	N	N	↓	↓	↓		
P14-072516-1420	↓	1420	↓	Water	Y	N	↓	↓	↓		
P12R-072516-1545	↓	1545	↓	Water	Y	N	↓	↓	↓		
P15-072516-1640	↓	1640	↓	Water	N	N	↓	↓	↓		
				Water							
				Water							
				Water							
				Water							
				Water							
				Water							

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

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

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

Special Instructions/QC Requirements: **FILTERED SAMPLE FOR DISSOLVED METALS ANALYSIS**

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: C. Brawn	Date/Time: 07/25/16 / 1745	Company:	Received by:
Relinquished by:	Date/Time:	Company:	Received by:
Relinquished by:	Date/Time:	Company:	Received by:

Chain of Custody Record

Client Information		Sampler: C. BAUMF	Lab PM: Pohl, Denise	Carrier Tracking No(s):	COC No: 460-74659-45937.3
Client Contact: Mr. Troy Clausen BAN ARAGONA		Phone: 937.620.8524	E-Mail: denise.pohl@testamericainc.com		Page: 3 of 3 - 1/2
Company: Haley & Aldrich, Inc.					Job #:

Address: 6500 Rockside Road Suite 200		Due Date Requested: 5/20	Analysis Requested										Total Number of containers	Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - ph 4-5 L - EDA Z - other (specify)
City: Cleveland		TAT Requested (days): 5/20												
State, Zip: OH, 44131		PO #: 41753-005 004												
Phone:		WO #: BAragona@haleyaldrich.com												
Email: T.Clausen@haleyaldrich.com		Project #: 46020356												
Project Name: Racer - Elyria, Ohio		SSOW#:												
Site:														

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C - Metals- Ba, Ca, Fe, Mg, Mn, Na										9012B - Cyanide, Total	9056A - ORGFM_28D - Cl & SO4	Special Instructions/Note:
							D	B	N										
P15T - 072616 - 1015	07/26/16	1015	G	Water	Y	N	X	X	X									4	
P18T - 072616 - 1210		1210		Water															
P3R - 072616 - 1335		1335																	
P3T - 072616 - 1435		1435																	
P02 - 072616 - 1600		1600																	
P02T - 072616 - 1640		1640																	
P16 - 072616 - 1730		1730																	
P12 - 072616 - 0800		0800																	
P18 - 072716 - 0800	07/27/16	0800	G	water															
P16T - 072716 - 0900		0900																	
P21 - 072716 - 1030		1030			Y													12	

Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input checked="" 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 checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months
---	--

Deliverable Requested: I, II, III, IV, Other (specify) _____
 Special Instructions/QC Requirements: **FILTERED SAMPLES FOR DISSOLVED METALS**

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by: C. Baum	Date/Time: 07/26/16 / 18:30	Company: N/A	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time: 07/27/16 / 16:00	Company: N/A	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:
--	-------------------	---

TestAmerica Edison

777 New Durham Road
Edison, NJ 08817
Phone (732) 549-3900 Fax (732) 549-3679

Chain of Custody Record



Client Information		Sampler: <u>C. BARNETT</u>	Lab PM: Pohl, Denise	Carrier Tracking No(s): <u>FED Ex</u>	COC No: 460-74660-45938.1
Client Contact: <u>Mr. Troy Clausen BAN BRAGONA</u>		Phone: <u>937-620-8524</u>	E-Mail: denise.pohl@testamericainc.com		Page: 1 of 3 2/2
Company: Haley & Aldrich, Inc.			Analysis Requested		Job #:

Address: 6500 Rockside Road Suite 200		Due Date Requested:	
City: Cleveland		TAT Requested (days): <u>5TD</u>	
State, Zip: OH, 44131		PO #: 41753-005 <u>004</u>	
Phone:		WO #:	
Email: <u>TClausen@haleyaldrich.com</u>		Project #: 46020356	
Project Name: Racer - Elyria, Ohio		SSOW#:	

- Preservation Codes:**
- | | |
|-------------------|-----------------------|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - ph 4-5 |
| L - EDA | Z - other (specify) |
- Other:**

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C - Metals-Ba,Ca,Fe,Mg,Mn,Na,FF	4012B - Cyanide, Total	4056A - DRGM-ZED-CL:SD4	Total Number of containers	Special Instructions/Note:
P217-072716-1135	07/27/16	1135	G	Water	X	X	X	X	X	4	
P08T-072716-1300	↓	1300	↓	Water						4	
P08R-072716-1410	↓	1410	↓	Water						3	
0908-072716-0001	07/27/16	-	G	Water	X	X	X	X	X	3	
				Water							
				Water							
				Water							
				Water							
				Water							
				Water							

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input checked="" type="checkbox"/> Unknown <input type="checkbox"/> Radiological	<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

Empty Kit Relinquished by: <u>C. Barnett</u>	Date: <u>07/27/16</u>	Time: <u>16:00</u>	Company: <u>H&A</u>	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Edison
777 New Durham Road
Edison, NJ 08817
Tel: (732)549-3900

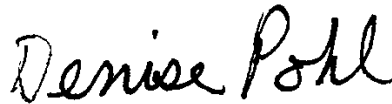
TestAmerica Job ID: 460-117594-1

Client Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling
Revision: 1

For:

Haley & Aldrich, Inc.
3840 Packard Road
Suite 100
Ann Arbor, Michigan 48108-2280

Attn: Ban Aragona



Authorized for release by:
2/15/2017 5:19:17 PM

Denise Pohl, Project Manager II
(330)966-9789
denise.pohl@testamericainc.com

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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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Definitions/Glossary

Client: Haley & Aldrich, Inc.
Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117594-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

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)

Case Narrative

Client: Haley & Aldrich, Inc.
Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117594-1

Job ID: 460-117594-1

Laboratory: TestAmerica Edison

Narrative

CASE NARRATIVE

Client: Haley & Aldrich, Inc.

Project: Racer-Elyria, Ohio-Biennial GW Sampling

Report Number: 460-117594-1

REVISED

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Revision 02/15/2017: Revision to include Chromium, Nickel and Potassium to Total and Dissolved Metals per client request 02/10/2017.

TestAmerica Edison attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 7/26/2016 9:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.5° C.

DISSOLVED METALS (ICP)

Samples P14-072516-1420 (460-117594-3) and P12TR-072516-1545 (460-117594-4) were analyzed for dissolved metals (ICP) in accordance with SW-846 Method 6010C. The samples were prepared on 07/29/2016 and 08/01/2016 and analyzed on 08/01/2016 and 08/02/2016.

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

TOTAL METALS (ICP)

Samples P14T-072516-1320 (460-117594-1), 0908-072516-0001 (460-117594-2) and P15-072516-1640 (460-117594-5) were analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared and analyzed on 07/28/2016.

Case Narrative

Client: Haley & Aldrich, Inc.
Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117594-1

Job ID: 460-117594-1 (Continued)

Laboratory: TestAmerica Edison (Continued)

The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount. Refer to the QC report for details.

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

TOTAL CYANIDE

Samples P14T-072516-1320 (460-117594-1), 0908-072516-0001 (460-117594-2), P14-072516-1420 (460-117594-3), P12TR-072516-1545 (460-117594-4) and P15-072516-1640 (460-117594-5) were analyzed for total cyanide in accordance with EPA SW-846 Method 9012B. The samples were prepared and analyzed on 08/05/2016.

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

ANIONS, ION CHROMATOGRAPHY

Samples P14T-072516-1320 (460-117594-1), 0908-072516-0001 (460-117594-2), P14-072516-1420 (460-117594-3), P12TR-072516-1545 (460-117594-4) and P15-072516-1640 (460-117594-5) were analyzed for Anions, Ion Chromatography in accordance with SW-846 Method 9056A_OrgFM. The samples were analyzed on 07/30/2016 and 08/02/2016.

Samples P14T-072516-1320 (460-117594-1)[10X], 0908-072516-0001 (460-117594-2)[10X], P14-072516-1420 (460-117594-3)[10X], P12TR-072516-1545 (460-117594-4)[10X] and P15-072516-1640 (460-117594-5)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

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

Detection Summary

Client: Haley & Aldrich, Inc.
Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117594-1

Client Sample ID: P14T-072516-1320

Lab Sample ID: 460-117594-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride - DL	5.1		1.2	0.30	mg/L	10		9056A	Total/NA
Sulfate - DL	26		6.0	1.1	mg/L	10		9056A	Total/NA
Barium	17	J	200	5.5	ug/L	1		6010C	Total/NA
Calcium	110000		5000	320	ug/L	1		6010C	Total/NA
Iron	100	J	150	65	ug/L	1		6010C	Total/NA
Magnesium	20000		5000	260	ug/L	1		6010C	Total/NA
Manganese	370		15	4.9	ug/L	1		6010C	Total/NA
Sodium	13000		5000	320	ug/L	1		6010C	Total/NA
Potassium	1100	J	5000	120	ug/L	1		6010C	Total/NA

Client Sample ID: 0908-072516-0001

Lab Sample ID: 460-117594-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride - DL	5.6		1.2	0.30	mg/L	10		9056A	Total/NA
Sulfate - DL	26		6.0	1.1	mg/L	10		9056A	Total/NA
Barium	17	J	200	5.5	ug/L	1		6010C	Total/NA
Calcium	110000		5000	320	ug/L	1		6010C	Total/NA
Iron	92	J	150	65	ug/L	1		6010C	Total/NA
Magnesium	20000		5000	260	ug/L	1		6010C	Total/NA
Manganese	370		15	4.9	ug/L	1		6010C	Total/NA
Sodium	13000		5000	320	ug/L	1		6010C	Total/NA
Potassium	1100	J	5000	120	ug/L	1		6010C	Total/NA

Client Sample ID: P14-072516-1420

Lab Sample ID: 460-117594-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride - DL	6.9		1.2	0.30	mg/L	10		9056A	Total/NA
Sulfate - DL	41		6.0	1.1	mg/L	10		9056A	Total/NA
Barium	58	J	200	5.5	ug/L	1		6010C	Dissolved
Calcium	120000		5000	320	ug/L	1		6010C	Dissolved
Iron	1900		150	65	ug/L	1		6010C	Dissolved
Magnesium	25000		5000	260	ug/L	1		6010C	Dissolved
Manganese	140		15	4.9	ug/L	1		6010C	Dissolved
Sodium	8200		5000	320	ug/L	1		6010C	Dissolved
Potassium	1300	J	5000	120	ug/L	1		6010C	Dissolved

Client Sample ID: P12TR-072516-1545

Lab Sample ID: 460-117594-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride - DL	14		1.2	0.30	mg/L	10		9056A	Total/NA
Sulfate - DL	86		6.0	1.1	mg/L	10		9056A	Total/NA
Barium	84	J	200	5.5	ug/L	1		6010C	Dissolved
Calcium	130000		5000	320	ug/L	1		6010C	Dissolved
Iron	320		150	65	ug/L	1		6010C	Dissolved
Magnesium	32000		5000	260	ug/L	1		6010C	Dissolved
Manganese	53		15	4.9	ug/L	1		6010C	Dissolved
Sodium	52000		5000	320	ug/L	1		6010C	Dissolved
Potassium	2500	J	5000	120	ug/L	1		6010C	Dissolved

Client Sample ID: P15-072516-1640

Lab Sample ID: 460-117594-5

This Detection Summary does not include radiochemical test results.

TestAmerica Edison

Detection Summary

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117594-1

Client Sample ID: P15-072516-1640 (Continued)

Lab Sample ID: 460-117594-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride - DL	9.0		1.2	0.30	mg/L	10		9056A	Total/NA
Sulfate - DL	140		6.0	1.1	mg/L	10		9056A	Total/NA
Barium	100	J	200	5.5	ug/L	1		6010C	Total/NA
Calcium	170000		5000	320	ug/L	1		6010C	Total/NA
Iron	2300		150	65	ug/L	1		6010C	Total/NA
Magnesium	32000		5000	260	ug/L	1		6010C	Total/NA
Manganese	1200		15	4.9	ug/L	1		6010C	Total/NA
Sodium	19000		5000	320	ug/L	1		6010C	Total/NA
Potassium	3300	J	5000	120	ug/L	1		6010C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Edison



Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117594-1

Client Sample ID: P14T-072516-1320

Lab Sample ID: 460-117594-1

Date Collected: 07/25/16 13:20

Matrix: Water

Date Received: 07/26/16 09:10

Method: 9056A - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.1		1.2	0.30	mg/L			08/02/16 16:16	10
Sulfate	26		6.0	1.1	mg/L			07/30/16 07:39	10

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	17	J	200	5.5	ug/L		07/28/16 07:13	07/28/16 15:05	1
Calcium	110000		5000	320	ug/L		07/28/16 07:13	07/28/16 15:05	1
Iron	100	J	150	65	ug/L		07/28/16 07:13	07/28/16 15:05	1
Magnesium	20000		5000	260	ug/L		07/28/16 07:13	07/28/16 15:05	1
Manganese	370		15	4.9	ug/L		07/28/16 07:13	07/28/16 15:05	1
Sodium	13000		5000	320	ug/L		07/28/16 07:13	07/28/16 15:05	1
Nickel	40	U	40	5.4	ug/L		07/28/16 07:13	07/28/16 15:05	1
Chromium	10	U	10	4.5	ug/L		07/28/16 07:13	07/28/16 15:05	1
Potassium	1100	J	5000	120	ug/L		07/28/16 07:13	07/28/16 15:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0040	mg/L		08/05/16 07:30	08/05/16 14:04	1

Client Sample ID: 0908-072516-0001

Lab Sample ID: 460-117594-2

Date Collected: 07/25/16 00:00

Matrix: Water

Date Received: 07/26/16 09:10

Method: 9056A - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.6		1.2	0.30	mg/L			08/02/16 16:36	10
Sulfate	26		6.0	1.1	mg/L			07/30/16 08:00	10

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	17	J	200	5.5	ug/L		07/28/16 07:13	07/28/16 15:09	1
Calcium	110000		5000	320	ug/L		07/28/16 07:13	07/28/16 15:09	1
Iron	92	J	150	65	ug/L		07/28/16 07:13	07/28/16 15:09	1
Magnesium	20000		5000	260	ug/L		07/28/16 07:13	07/28/16 15:09	1
Manganese	370		15	4.9	ug/L		07/28/16 07:13	07/28/16 15:09	1
Sodium	13000		5000	320	ug/L		07/28/16 07:13	07/28/16 15:09	1
Nickel	40	U	40	5.4	ug/L		07/28/16 07:13	07/28/16 15:09	1
Chromium	10	U	10	4.5	ug/L		07/28/16 07:13	07/28/16 15:09	1
Potassium	1100	J	5000	120	ug/L		07/28/16 07:13	07/28/16 15:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0040	mg/L		08/05/16 07:30	08/05/16 14:01	1

Client Sample ID: P14-072516-1420

Lab Sample ID: 460-117594-3

Date Collected: 07/25/16 14:20

Matrix: Water

Date Received: 07/26/16 09:10

Method: 9056A - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.9		1.2	0.30	mg/L			08/02/16 16:57	10

TestAmerica Edison

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117594-1

Client Sample ID: P14-072516-1420

Lab Sample ID: 460-117594-3

Date Collected: 07/25/16 14:20

Matrix: Water

Date Received: 07/26/16 09:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	41		6.0	1.1	mg/L			07/30/16 08:20	10

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	58	J	200	5.5	ug/L		07/29/16 19:10	08/02/16 12:19	1
Calcium	120000		5000	320	ug/L		07/29/16 19:10	08/02/16 12:19	1
Iron	1900		150	65	ug/L		07/29/16 19:10	08/02/16 12:19	1
Magnesium	25000		5000	260	ug/L		07/29/16 19:10	08/02/16 12:19	1
Manganese	140		15	4.9	ug/L		07/29/16 19:10	08/02/16 12:19	1
Sodium	8200		5000	320	ug/L		07/29/16 19:10	08/02/16 12:19	1
Nickel	40	U	40	5.4	ug/L		07/29/16 19:10	08/02/16 12:19	1
Chromium	10	U	10	4.5	ug/L		07/29/16 19:10	08/02/16 12:19	1
Potassium	1300	J	5000	120	ug/L		07/29/16 19:10	08/02/16 12:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0040	mg/L		08/05/16 07:30	08/05/16 14:00	1

Client Sample ID: P12TR-072516-1545

Lab Sample ID: 460-117594-4

Date Collected: 07/25/16 15:45

Matrix: Water

Date Received: 07/26/16 09:10

Method: 9056A - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14		1.2	0.30	mg/L			08/02/16 17:17	10
Sulfate	86		6.0	1.1	mg/L			07/30/16 08:40	10

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	84	J	200	5.5	ug/L		08/01/16 07:13	08/01/16 21:19	1
Calcium	130000		5000	320	ug/L		08/01/16 07:13	08/01/16 21:19	1
Iron	320		150	65	ug/L		08/01/16 07:13	08/01/16 21:19	1
Magnesium	32000		5000	260	ug/L		08/01/16 07:13	08/01/16 21:19	1
Manganese	53		15	4.9	ug/L		08/01/16 07:13	08/01/16 21:19	1
Sodium	52000		5000	320	ug/L		08/01/16 07:13	08/01/16 21:19	1
Nickel	40	U	40	5.4	ug/L		08/01/16 07:13	08/01/16 21:19	1
Chromium	10	U	10	4.5	ug/L		08/01/16 07:13	08/01/16 21:19	1
Potassium	2500	J	5000	120	ug/L		08/01/16 07:13	08/01/16 21:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0040	mg/L		08/05/16 07:30	08/05/16 14:00	1

Client Sample ID: P15-072516-1640

Lab Sample ID: 460-117594-5

Date Collected: 07/25/16 16:40

Matrix: Water

Date Received: 07/26/16 09:10

Method: 9056A - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.0		1.2	0.30	mg/L			08/02/16 17:37	10
Sulfate	140		6.0	1.1	mg/L			07/30/16 09:00	10

TestAmerica Edison

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117594-1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	100	J	200	5.5	ug/L		07/28/16 07:13	07/28/16 15:12	1
Calcium	170000		5000	320	ug/L		07/28/16 07:13	07/28/16 15:12	1
Iron	2300		150	65	ug/L		07/28/16 07:13	07/28/16 15:12	1
Magnesium	32000		5000	260	ug/L		07/28/16 07:13	07/28/16 15:12	1
Manganese	1200		15	4.9	ug/L		07/28/16 07:13	07/28/16 15:12	1
Sodium	19000		5000	320	ug/L		07/28/16 07:13	07/28/16 15:12	1
Nickel	40	U	40	5.4	ug/L		07/28/16 07:13	07/28/16 15:12	1
Chromium	10	U	10	4.5	ug/L		07/28/16 07:13	07/28/16 15:12	1
Potassium	3300	J	5000	120	ug/L		07/28/16 07:13	07/28/16 15:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0040	mg/L		08/05/16 07:30	08/05/16 13:57	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117594-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 460-381983/3
Matrix: Water
Analysis Batch: 381983

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.12	U	0.12	0.030	mg/L			07/30/16 04:37	1
Sulfate	0.60	U	0.60	0.11	mg/L			07/30/16 04:37	1

Lab Sample ID: LCS 460-381983/5
Matrix: Water
Analysis Batch: 381983

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1.50	1.47		mg/L		98	90 - 110
Sulfate	7.50	7.22		mg/L		96	90 - 110

Lab Sample ID: LCSD 460-381983/6
Matrix: Water
Analysis Batch: 381983

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1.50	1.42		mg/L		95	90 - 110	3	15
Sulfate	7.50	7.06		mg/L		94	90 - 110	2	15

Lab Sample ID: MB 460-382534/3
Matrix: Water
Analysis Batch: 382534

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.12	U	0.12	0.030	mg/L			08/02/16 13:23	1
Sulfate	0.60	U	0.60	0.11	mg/L			08/02/16 13:23	1

Lab Sample ID: LCS 460-382534/5
Matrix: Water
Analysis Batch: 382534

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1.50	1.52		mg/L		102	90 - 110
Sulfate	7.50	7.52		mg/L		100	90 - 110

Lab Sample ID: LCSD 460-382534/6
Matrix: Water
Analysis Batch: 382534

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1.50	1.52		mg/L		101	90 - 110	0	15
Sulfate	7.50	7.48		mg/L		100	90 - 110	1	15

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117594-1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 460-381578/1-A
Matrix: Water
Analysis Batch: 381756

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 381578

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	200	U	200	5.5	ug/L		07/28/16 07:13	07/28/16 14:22	1
Calcium	5000	U	5000	320	ug/L		07/28/16 07:13	07/28/16 14:22	1
Iron	150	U	150	65	ug/L		07/28/16 07:13	07/28/16 14:22	1
Magnesium	5000	U	5000	260	ug/L		07/28/16 07:13	07/28/16 14:22	1
Manganese	15	U	15	4.9	ug/L		07/28/16 07:13	07/28/16 14:22	1
Sodium	5000	U	5000	320	ug/L		07/28/16 07:13	07/28/16 14:22	1
Nickel	40	U	40	5.4	ug/L		07/28/16 07:13	07/28/16 14:22	1
Chromium	10	U	10	4.5	ug/L		07/28/16 07:13	07/28/16 14:22	1
Potassium	5000	U	5000	120	ug/L		07/28/16 07:13	07/28/16 14:22	1

Lab Sample ID: LCS 460-381578/2-A
Matrix: Water
Analysis Batch: 381756

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 381578

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Barium	2000	2030		ug/L		102	80 - 120
Calcium	20000	19500		ug/L		98	80 - 120
Iron	1000	1020		ug/L		102	80 - 120
Magnesium	20000	19400		ug/L		97	80 - 120
Manganese	500	510		ug/L		102	80 - 120
Sodium	20000	19000		ug/L		95	80 - 120
Nickel	500	517		ug/L		103	80 - 120
Chromium	200	205		ug/L		102	80 - 120
Potassium	20000	18700		ug/L		94	80 - 120

Lab Sample ID: MB 460-382004/1-A
Matrix: Water
Analysis Batch: 382523

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 382004

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	200	U	200	5.5	ug/L		07/29/16 19:10	08/02/16 11:41	1
Calcium	5000	U	5000	320	ug/L		07/29/16 19:10	08/02/16 11:41	1
Iron	150	U	150	65	ug/L		07/29/16 19:10	08/02/16 11:41	1
Magnesium	5000	U	5000	260	ug/L		07/29/16 19:10	08/02/16 11:41	1
Manganese	15	U	15	4.9	ug/L		07/29/16 19:10	08/02/16 11:41	1
Sodium	5000	U	5000	320	ug/L		07/29/16 19:10	08/02/16 11:41	1
Nickel	40	U	40	5.4	ug/L		07/29/16 19:10	08/02/16 11:41	1
Chromium	10	U	10	4.5	ug/L		07/29/16 19:10	08/02/16 11:41	1
Potassium	5000	U	5000	120	ug/L		07/29/16 19:10	08/02/16 11:41	1

Lab Sample ID: LCS 460-382004/2-A
Matrix: Water
Analysis Batch: 382523

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 382004

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Barium	2000	2090		ug/L		104	80 - 120
Calcium	20000	20400		ug/L		102	80 - 120
Iron	1000	1080		ug/L		108	80 - 120
Magnesium	20000	20100		ug/L		100	80 - 120

TestAmerica Edison

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117594-1

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

Lab Sample ID: LCS 460-382004/2-A
Matrix: Water
Analysis Batch: 382523

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 382004
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Manganese	500	529		ug/L		106	80 - 120
Sodium	20000	20000		ug/L		100	80 - 120
Nickel	500	531		ug/L		106	80 - 120
Chromium	200	213		ug/L		107	80 - 120
Potassium	20000	19600		ug/L		98	80 - 120

Lab Sample ID: MB 460-382274/1-A
Matrix: Water
Analysis Batch: 382383

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 382274

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	200	U	200	5.5	ug/L		08/01/16 07:13	08/01/16 20:51	1
Calcium	5000	U	5000	320	ug/L		08/01/16 07:13	08/01/16 20:51	1
Iron	150	U	150	65	ug/L		08/01/16 07:13	08/01/16 20:51	1
Magnesium	5000	U	5000	260	ug/L		08/01/16 07:13	08/01/16 20:51	1
Manganese	15	U	15	4.9	ug/L		08/01/16 07:13	08/01/16 20:51	1
Sodium	5000	U	5000	320	ug/L		08/01/16 07:13	08/01/16 20:51	1
Nickel	40	U	40	5.4	ug/L		08/01/16 07:13	08/01/16 20:51	1
Chromium	10	U	10	4.5	ug/L		08/01/16 07:13	08/01/16 20:51	1
Potassium	5000	U	5000	120	ug/L		08/01/16 07:13	08/01/16 20:51	1

Lab Sample ID: LCS 460-382274/2-A
Matrix: Water
Analysis Batch: 382383

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 382274
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Barium	2000	2060		ug/L		103	80 - 120
Calcium	20000	19800		ug/L		99	80 - 120
Iron	1000	1020		ug/L		102	80 - 120
Magnesium	20000	19000		ug/L		95	80 - 120
Manganese	500	512		ug/L		102	80 - 120
Sodium	20000	19000		ug/L		95	80 - 120
Nickel	500	525		ug/L		105	80 - 120
Chromium	200	202		ug/L		101	80 - 120
Potassium	20000	19000		ug/L		95	80 - 120

Lab Sample ID: 460-117594-4 MS
Matrix: Water
Analysis Batch: 382383

Client Sample ID: P12TR-072516-1545
Prep Type: Dissolved
Prep Batch: 382274
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Barium	84	J	2000	2180		ug/L		105	75 - 125
Calcium	130000		20000	151000	4	ug/L		91	75 - 125
Iron	320		1000	1320		ug/L		100	75 - 125
Magnesium	32000		20000	51000		ug/L		94	75 - 125
Manganese	53		500	565		ug/L		102	75 - 125
Sodium	52000		20000	70600		ug/L		93	75 - 125
Nickel	40	U	500	526		ug/L		105	75 - 125
Chromium	10	U	200	203		ug/L		101	75 - 125

TestAmerica Edison

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117594-1

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

Lab Sample ID: 460-117594-4 MS
Matrix: Water
Analysis Batch: 382383

Client Sample ID: P12TR-072516-1545
Prep Type: Dissolved
Prep Batch: 382274
 %Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Potassium	2500	J	20000	22200		ug/L		99	75 - 125

Lab Sample ID: 460-117594-4 DU
Matrix: Water
Analysis Batch: 382383

Client Sample ID: P12TR-072516-1545
Prep Type: Dissolved
Prep Batch: 382274
 RPD

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Barium	84	J	84.1	J	ug/L		0.4	20
Calcium	130000		134000		ug/L		0.7	20
Iron	320		329		ug/L		2	20
Magnesium	32000		32200		ug/L		0.2	20
Manganese	53		53.4		ug/L		0	20
Sodium	52000		52000		ug/L		0.08	20
Nickel	40	U	40	U	ug/L		NC	20
Chromium	10	U	10	U	ug/L		NC	20
Potassium	2500	J	2450	J	ug/L		0.2	20

Method: 9012B - Cyanide, Total and/or Amenable

Lab Sample ID: MB 460-383172/1-A
Matrix: Water
Analysis Batch: 383261

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 383172

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0040	mg/L		08/05/16 07:30	08/05/16 13:54	1

Lab Sample ID: HLCS 460-383172/3-A
Matrix: Water
Analysis Batch: 383261

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 383172
 %Rec.

Analyte	Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	Limits
Cyanide, Total	0.200	0.206		mg/L		103	90 - 110

Lab Sample ID: LLCS 460-383172/2-A
Matrix: Water
Analysis Batch: 383261

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 383172
 %Rec.

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	Limits
Cyanide, Total	0.100	0.108		mg/L		108	90 - 110

Lab Sample ID: 460-117594-5 MS
Matrix: Water
Analysis Batch: 383261

Client Sample ID: P15-072516-1640
Prep Type: Total/NA
Prep Batch: 383172
 %Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Cyanide, Total	0.010	U	0.200	0.191		mg/L		96	90 - 110

TestAmerica Edison

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117594-1

Method: 9012B - Cyanide, Total andor Amenable (Continued)

Lab Sample ID: 460-117594-5 MSD
 Matrix: Water
 Analysis Batch: 383261

Client Sample ID: P15-072516-1640
 Prep Type: Total/NA
 Prep Batch: 383172

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Cyanide, Total	0.010	U	0.200	0.186		mg/L		93	90 - 110	3	10

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QC Association Summary

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117594-1

HPLC/IC

Analysis Batch: 381983

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-117594-1 - DL	P14T-072516-1320	Total/NA	Water	9056A	
460-117594-2 - DL	0908-072516-0001	Total/NA	Water	9056A	
460-117594-3 - DL	P14-072516-1420	Total/NA	Water	9056A	
460-117594-4 - DL	P12TR-072516-1545	Total/NA	Water	9056A	
460-117594-5 - DL	P15-072516-1640	Total/NA	Water	9056A	
MB 460-381983/3	Method Blank	Total/NA	Water	9056A	
LCS 460-381983/5	Lab Control Sample	Total/NA	Water	9056A	
LCS 460-381983/6	Lab Control Sample Dup	Total/NA	Water	9056A	

Analysis Batch: 382534

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-117594-1 - DL	P14T-072516-1320	Total/NA	Water	9056A	
460-117594-2 - DL	0908-072516-0001	Total/NA	Water	9056A	
460-117594-3 - DL	P14-072516-1420	Total/NA	Water	9056A	
460-117594-4 - DL	P12TR-072516-1545	Total/NA	Water	9056A	
460-117594-5 - DL	P15-072516-1640	Total/NA	Water	9056A	
MB 460-382534/3	Method Blank	Total/NA	Water	9056A	
LCS 460-382534/5	Lab Control Sample	Total/NA	Water	9056A	
LCS 460-382534/6	Lab Control Sample Dup	Total/NA	Water	9056A	

Metals

Prep Batch: 381578

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-117594-1	P14T-072516-1320	Total/NA	Water	3010A	
460-117594-2	0908-072516-0001	Total/NA	Water	3010A	
460-117594-5	P15-072516-1640	Total/NA	Water	3010A	
MB 460-381578/1-A	Method Blank	Total/NA	Water	3010A	
LCS 460-381578/2-A	Lab Control Sample	Total/NA	Water	3010A	

Analysis Batch: 381756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-117594-1	P14T-072516-1320	Total/NA	Water	6010C	381578
460-117594-2	0908-072516-0001	Total/NA	Water	6010C	381578
460-117594-5	P15-072516-1640	Total/NA	Water	6010C	381578
MB 460-381578/1-A	Method Blank	Total/NA	Water	6010C	381578
LCS 460-381578/2-A	Lab Control Sample	Total/NA	Water	6010C	381578

Prep Batch: 382004

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-117594-3	P14-072516-1420	Dissolved	Water	3010A	
MB 460-382004/1-A	Method Blank	Total/NA	Water	3010A	
LCS 460-382004/2-A	Lab Control Sample	Total/NA	Water	3010A	

Prep Batch: 382274

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-117594-4	P12TR-072516-1545	Dissolved	Water	3010A	
MB 460-382274/1-A	Method Blank	Total/NA	Water	3010A	
LCS 460-382274/2-A	Lab Control Sample	Total/NA	Water	3010A	
460-117594-4 MS	P12TR-072516-1545	Dissolved	Water	3010A	

TestAmerica Edison

QC Association Summary

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117594-1

Metals (Continued)

Prep Batch: 382274 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-117594-4 DU	P12TR-072516-1545	Dissolved	Water	3010A	

Analysis Batch: 382383

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-117594-4	P12TR-072516-1545	Dissolved	Water	6010C	382274
MB 460-382274/1-A	Method Blank	Total/NA	Water	6010C	382274
LCS 460-382274/2-A	Lab Control Sample	Total/NA	Water	6010C	382274
460-117594-4 MS	P12TR-072516-1545	Dissolved	Water	6010C	382274
460-117594-4 DU	P12TR-072516-1545	Dissolved	Water	6010C	382274

Analysis Batch: 382523

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-117594-3	P14-072516-1420	Dissolved	Water	6010C	382004
MB 460-382004/1-A	Method Blank	Total/NA	Water	6010C	382004
LCS 460-382004/2-A	Lab Control Sample	Total/NA	Water	6010C	382004

General Chemistry

Prep Batch: 383172

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-117594-1	P14T-072516-1320	Total/NA	Water	9012B	
460-117594-2	0908-072516-0001	Total/NA	Water	9012B	
460-117594-3	P14-072516-1420	Total/NA	Water	9012B	
460-117594-4	P12TR-072516-1545	Total/NA	Water	9012B	
460-117594-5	P15-072516-1640	Total/NA	Water	9012B	
MB 460-383172/1-A	Method Blank	Total/NA	Water	9012B	
HLCS 460-383172/3-A	Lab Control Sample	Total/NA	Water	9012B	
LLCS 460-383172/2-A	Lab Control Sample	Total/NA	Water	9012B	
460-117594-5 MS	P15-072516-1640	Total/NA	Water	9012B	
460-117594-5 MSD	P15-072516-1640	Total/NA	Water	9012B	

Analysis Batch: 383261

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-117594-1	P14T-072516-1320	Total/NA	Water	9012B	383172
460-117594-2	0908-072516-0001	Total/NA	Water	9012B	383172
460-117594-3	P14-072516-1420	Total/NA	Water	9012B	383172
460-117594-4	P12TR-072516-1545	Total/NA	Water	9012B	383172
460-117594-5	P15-072516-1640	Total/NA	Water	9012B	383172
MB 460-383172/1-A	Method Blank	Total/NA	Water	9012B	383172
HLCS 460-383172/3-A	Lab Control Sample	Total/NA	Water	9012B	383172
LLCS 460-383172/2-A	Lab Control Sample	Total/NA	Water	9012B	383172
460-117594-5 MS	P15-072516-1640	Total/NA	Water	9012B	383172
460-117594-5 MSD	P15-072516-1640	Total/NA	Water	9012B	383172

Lab Chronicle

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117594-1

Client Sample ID: P14T-072516-1320

Date Collected: 07/25/16 13:20

Date Received: 07/26/16 09:10

Lab Sample ID: 460-117594-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A	DL	10	381983	07/30/16 07:39	CDC	TAL EDI
Total/NA	Analysis	9056A	DL	10	382534	08/02/16 16:16	MJA	TAL EDI
Total/NA	Prep	3010A			381578	07/28/16 07:13	QZY	TAL EDI
Total/NA	Analysis	6010C		1	381756	07/28/16 15:05	YZH	TAL EDI
Total/NA	Prep	9012B			383172	08/05/16 07:30	SAO	TAL EDI
Total/NA	Analysis	9012B		1	383261	08/05/16 14:04	RAK	TAL EDI

Client Sample ID: 0908-072516-0001

Date Collected: 07/25/16 00:00

Date Received: 07/26/16 09:10

Lab Sample ID: 460-117594-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A	DL	10	381983	07/30/16 08:00	CDC	TAL EDI
Total/NA	Analysis	9056A	DL	10	382534	08/02/16 16:36	MJA	TAL EDI
Total/NA	Prep	3010A			381578	07/28/16 07:13	QZY	TAL EDI
Total/NA	Analysis	6010C		1	381756	07/28/16 15:09	YZH	TAL EDI
Total/NA	Prep	9012B			383172	08/05/16 07:30	SAO	TAL EDI
Total/NA	Analysis	9012B		1	383261	08/05/16 14:01	RAK	TAL EDI

Client Sample ID: P14-072516-1420

Date Collected: 07/25/16 14:20

Date Received: 07/26/16 09:10

Lab Sample ID: 460-117594-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A	DL	10	381983	07/30/16 08:20	CDC	TAL EDI
Total/NA	Analysis	9056A	DL	10	382534	08/02/16 16:57	MJA	TAL EDI
Dissolved	Prep	3010A			382004	07/29/16 19:10	EAE	TAL EDI
Dissolved	Analysis	6010C		1	382523	08/02/16 12:19	YZH	TAL EDI
Total/NA	Prep	9012B			383172	08/05/16 07:30	SAO	TAL EDI
Total/NA	Analysis	9012B		1	383261	08/05/16 14:00	RAK	TAL EDI

Client Sample ID: P12TR-072516-1545

Date Collected: 07/25/16 15:45

Date Received: 07/26/16 09:10

Lab Sample ID: 460-117594-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A	DL	10	381983	07/30/16 08:40	CDC	TAL EDI
Total/NA	Analysis	9056A	DL	10	382534	08/02/16 17:17	MJA	TAL EDI
Dissolved	Prep	3010A			382274	08/01/16 07:13	QZY	TAL EDI
Dissolved	Analysis	6010C		1	382383	08/01/16 21:19	YZH	TAL EDI
Total/NA	Prep	9012B			383172	08/05/16 07:30	SAO	TAL EDI
Total/NA	Analysis	9012B		1	383261	08/05/16 14:00	RAK	TAL EDI

TestAmerica Edison

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117594-1

Client Sample ID: P15-072516-1640

Lab Sample ID: 460-117594-5

Date Collected: 07/25/16 16:40

Matrix: Water

Date Received: 07/26/16 09:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A	DL	10	381983	07/30/16 09:00	CDC	TAL EDI
Total/NA	Analysis	9056A	DL	10	382534	08/02/16 17:37	MJA	TAL EDI
Total/NA	Prep	3010A			381578	07/28/16 07:13	QZY	TAL EDI
Total/NA	Analysis	6010C		1	381756	07/28/16 15:12	YZH	TAL EDI
Total/NA	Prep	9012B			383172	08/05/16 07:30	SAO	TAL EDI
Total/NA	Analysis	9012B		1	383261	08/05/16 13:57	RAK	TAL EDI

Laboratory References:

TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Certification Summary

Client: Haley & Aldrich, Inc.
Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117594-1

Laboratory: TestAmerica Edison

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Connecticut	State Program	1	PH-0200	09-30-18
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	N/A	12-31-17
New Jersey	NELAP	2	12028	06-30-17
New York	NELAP	2	11452	03-31-17
Pennsylvania	NELAP	3	68-00522	02-28-17
Rhode Island	State Program	1	LAO00132	12-30-17
USDA	Federal		NJCA-003-08	04-04-17

Method Summary

Client: Haley & Aldrich, Inc.
Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117594-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	TAL EDI
6010C	Metals (ICP)	SW846	TAL EDI
9012B	Cyanide, Total and/or Amenable	SW846	TAL EDI

Protocol References:

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

Laboratory References:

TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900



Sample Summary

Client: Haley & Aldrich, Inc.
Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117594-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
460-117594-1	P14T-072516-1320	Water	07/25/16 13:20	07/26/16 09:10
460-117594-2	0908-072516-0001	Water	07/25/16 00:00	07/26/16 09:10
460-117594-3	P14-072516-1420	Water	07/25/16 14:20	07/26/16 09:10
460-117594-4	P12TR-072516-1545	Water	07/25/16 15:45	07/26/16 09:10
460-117594-5	P15-072516-1640	Water	07/25/16 16:40	07/26/16 09:10

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TestAmerica Edison
 777 New Durham Road
 Edison, NJ 08817
 Phone (732) 549-3800 Fax (732) 549-3879

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information
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 Phone: **41753-005** *504*
 Email: *BAU* *HALEIGH* *HALEIGH@HALDRICH.COM*
 Project Name: **Racer - Elyria, Ohio**
 Project #: **460203356**
 SOW#: **SSOW#**
 Site: **BIRNICK C&S**

Analysis Requested
 Due Date Requested:
 TAT Requested (days):
 PO #: **41753-005**
 W/O #:
 Job # **17594**
 Page 1 of 3
 COC No: **460-74659-45937.1**

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	MATRIX (Mercury, Seawater, Oil, BT/Passive, Ash)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C - Metals - Ba, Ca, Fe, Mg, Mn, Na	9012B - Cyanide, Total	9056A_ORGFM_28D - Cl & SO4	Preservation Codes:	Special Instructions/Note:
P14T-072516-1320	072516	1320	G	Water	N	X	X	X	X	-1	
09D8-072516-0001	072516	0001	C	Water	N	X	X	X	X	-2	
P14-072516-1420	072516	1420	C	Water	N	X	X	X	X	-3	
P12A-072516-1545	072516	1545	C	Water	N	X	X	X	X	-4	
P15-072516-1640	072516	1640	C	Water	N	X	X	X	X	-5	



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: *C. Spaw* Date/Time: *07/25/16* / *1445* Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____
 Relinquished by: _____ Date/Time: _____ 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/OC Requirements: *DESTROY SAMPLE FOR DISSOLVED METALS ANALYSIS*
 Method of Shipment: _____ Date/Time: _____ Company: _____

Relinquished by: *C. Spaw* Date/Time: *07/25/16* / *1445* Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____

#7 3.5°C CS# 958177

TestAmerica Edison
Receipt Temperature and pH Log

Job Number: 112594

Number of Coolers: 7 IR Gun # 7

Cooler Temperatures	
RAW	CORRECTED
Cooler #1: <u>35</u> °C	<u>35</u> °C
Cooler #2: <u> </u> °C	<u> </u> °C
Cooler #3: <u> </u> °C	<u> </u> °C
Cooler #4: <u> </u> °C	<u> </u> °C
Cooler #5: <u> </u> °C	<u> </u> °C
Cooler #6: <u> </u> °C	<u> </u> °C
Cooler #7: <u> </u> °C	<u> </u> °C
Cooler #8: <u> </u> °C	<u> </u> °C
Cooler #9: <u> </u> °C	<u> </u> °C

TALS Sample Number	Ammonia (pH<2)	COD (pH<2)	Nitrate Nitrite (pH<2)	Metals (pH<2)	Hardness (pH<2)	Pest (pH 5-9)	EPH or OAM (pH<2)	Phenols (pH<2)	Sulfide (pH>9)	TKN (pH<2)	TOC (pH<2)	Total Cyanide (pH-12)	Total Phos (pH<2)	Other	Other
1				<1								>12			
2				<1								>12			
3				<1								>12			
4				<1								>12			
5				<1								>12			

If pH adjustments are required record the information below:

Sample No(s), adjusted: _____
 Preservative Name/Conc.: _____
 Volume of Preservative used (ml): _____

Lot # of Preservative(s): _____
 Expiration Date: _____
 The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.
 Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.

EDS-WI-038, Rev 4, 06/09/2014
 Initials: aa
 Date: 7-26-16

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 460-117594-1

Login Number: 117594

List Source: TestAmerica Edison

List Number: 1

Creator: Wisnewski, Kelly R

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	CS#958177
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	
Cooler Temperature is recorded.	True	3.5°C, IR#7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	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	No analysis requiring residual chlorine check assigned.



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

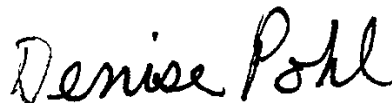
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Edison
777 New Durham Road
Edison, NJ 08817
Tel: (732)549-3900

TestAmerica Job ID: 460-117737-1
Client Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling
Revision: 1

For:
Haley & Aldrich, Inc.
3840 Packard Road
Suite 100
Ann Arbor, Michigan 48108-2280

Attn: Ban Aragona



Authorized for release by:
2/15/2017 5:30:28 PM

Denise Pohl, Project Manager II
(330)966-9789
denise.pohl@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
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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Definitions/Glossary

Client: Haley & Aldrich, Inc.
Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

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)

Case Narrative

Client: Haley & Aldrich, Inc.
Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

Job ID: 460-117737-1

Laboratory: TestAmerica Edison

Narrative

CASE NARRATIVE

Client: Haley & Aldrich, Inc.

Project: Racer-Elyria, Ohio-Biennial GW Sampling

Report Number: 460-117737-1

Revised

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Revision 02/15/2017: Revision to include Chromium, Nickel and Potassium to Total and Dissolved Metals per client request 02/10/2017.

TestAmerica Edison attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 7/28/2016 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.0° C.

Receipt Exceptions

The following Diss metals sample was listed on the Chain of Custody (COC); however, no sample was received: P15T-072616-1015. The following Diss Metal and ORGRM_28D-CI&S04 sample was listed on the Chain of Custody (COC); however, no sample was received: P08R-072716-1410 (sample #14). Missing sample container was received on 7/29/16 via FedEx.

DISSOLVED METALS (ICP)

Samples P18T-072616-1210 (460-117737-2), P3R-072616-1335 (460-117737-3), P3T-072616-1435 (460-117737-4), P02-072616-1600 (460-117737-5), P02T-072616-1640 (460-117737-6), P16-072616-1730 (460-117737-7), P12-072616-0800 (460-117737-8), P18-072716-0800 (460-117737-9), P16T-072716-0900 (460-117737-10), P21-072716-1030 (460-117737-11), P21T-072716-1135

Case Narrative

Client: Haley & Aldrich, Inc.
Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

Job ID: 460-117737-1 (Continued)

Laboratory: TestAmerica Edison (Continued)

(460-117737-12) and P08T-072716-1300 (460-117737-13) were analyzed for dissolved metals (ICP) in accordance with SW-846 Method 6010C. The samples were prepared on 07/29/2016 and analyzed on 08/02/2016.

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

TOTAL METALS (ICP)

Samples P15T-072616-1015 (460-117737-1), P18T-072616-1210 (460-117737-2), P3R-072616-1335 (460-117737-3), P3T-072616-1435 (460-117737-4), P02-072616-1600 (460-117737-5), P02T-072616-1640 (460-117737-6), P16-072616-1730 (460-117737-7), P12-072616-0800 (460-117737-8), P18-072716-0800 (460-117737-9), P16T-072716-0900 (460-117737-10), P21-072716-1030 (460-117737-11), P21T-072716-1135 (460-117737-12), P08T-072716-1300 (460-117737-13), P08R-072716-1410 (460-117737-14) and 0908-072716-0001 (460-117737-15) were analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 08/01/2016 and analyzed on 08/02/2016.

The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount. Refer to the QC report for details.

Samples P3R-072616-1335 (460-117737-3)[5X], P02T-072616-1640 (460-117737-6)[5X], P16-072616-1730 (460-117737-7)[5X] and P18-072716-0800 (460-117737-9)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

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

TOTAL CYANIDE

Samples P15T-072616-1015 (460-117737-1), P18T-072616-1210 (460-117737-2), P3R-072616-1335 (460-117737-3), P3T-072616-1435 (460-117737-4), P02-072616-1600 (460-117737-5), P02T-072616-1640 (460-117737-6), P16-072616-1730 (460-117737-7), P12-072616-0800 (460-117737-8), P18-072716-0800 (460-117737-9), P16T-072716-0900 (460-117737-10), P21-072716-1030 (460-117737-11), P21T-072716-1135 (460-117737-12), P08T-072716-1300 (460-117737-13), P08R-072716-1410 (460-117737-14) and 0908-072716-0001 (460-117737-15) were analyzed for total cyanide in accordance with EPA SW-846 Method 9012B. The samples were prepared on 08/05/2016 and 08/08/2016 and analyzed on 08/06/2016 and 08/09/2016.

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

ANIONS, ION CHROMATOGRAPHY

Samples P15T-072616-1015 (460-117737-1), P18T-072616-1210 (460-117737-2), P3R-072616-1335 (460-117737-3), P3T-072616-1435 (460-117737-4), P02-072616-1600 (460-117737-5), P02T-072616-1640 (460-117737-6), P16-072616-1730 (460-117737-7), P12-072616-0800 (460-117737-8), P18-072716-0800 (460-117737-9), P16T-072716-0900 (460-117737-10), P21-072716-1030 (460-117737-11), P21T-072716-1135 (460-117737-12), P08T-072716-1300 (460-117737-13), P08R-072716-1410 (460-117737-14) and 0908-072716-0001 (460-117737-15) were analyzed for Anions, Ion Chromatography in accordance with SW-846 Method 9056A_OrgFM. The samples were analyzed on 07/30/2016, 08/01/2016, 08/02/2016, 08/03/2016 and 08/04/2016.

Sulfate failed the recovery criteria high for the MS of sample P21-072716-1030MS (460-117737-11) in batch 460-381983. Sulfate failed the recovery criteria high for the MSD of sample P21-072716-1030MSD (460-117737-11) in batch 460-381983. Refer to the QC report for details.

Samples P15T-072616-1015 (460-117737-1)[10X], P18T-072616-1210 (460-117737-2)[10X], P3R-072616-1335 (460-117737-3)[10X], P3T-072616-1435 (460-117737-4)[100X], P02-072616-1600 (460-117737-5)[10X], P02T-072616-1640 (460-117737-6)[100X], P16-072616-1730 (460-117737-7)[100X], P12-072616-0800 (460-117737-8)[10X], P18-072716-0800 (460-117737-9)[10X], P16T-072716-0900 (460-117737-10)[50X], P21-072716-1030 (460-117737-11)[10X], P21-072716-1030 (460-117737-11)[50X], P21T-072716-1135 (460-117737-12)[50X], P08T-072716-1300 (460-117737-13)[10X], P08R-072716-1410 (460-117737-14)[100X], 0908-072716-0001 (460-117737-15)[10X] and 0908-072716-0001 (460-117737-15)[50X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 9056A: The following samples was diluted to bring the concentration of target analytes within the calibration range: P15T-072616-1015 (460-117737-1), P18T-072616-1210 (460-117737-2), P3R-072616-1335 (460-117737-3), P02-072616-1600 (460-117737-5), P12-072616-0800 (460-117737-8), P18-072716-0800 (460-117737-9) and P08T-072716-1300 (460-117737-13) at 10.0, 10.0, 10.0, 10.0, 10.0, 10.0 and 10.0. Elevated reporting limits (RLs) are provided.

Case Narrative

Client: Haley & Aldrich, Inc.
Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

Job ID: 460-117737-1 (Continued)

Laboratory: TestAmerica Edison (Continued)

Method(s) 9056A: The following sample was diluted to bring the concentration of target analytes within the calibration range: 0908-072716-0001 (460-117737-15) at 10.0. Elevated reporting limits (RLs) are provided.

Method(s) 300.0, 9056A: The following sample was diluted to bring the concentration of target analytes within the calibration range: P21-072716-1030 (460-117737-11) at 10.0. Elevated reporting limits (RLs) are provided.

Method(s) 9056A: The following samples was diluted to bring the concentration of target analytes within the calibration range: P15T-072616-1015 (460-117737-1), P18T-072616-1210 (460-117737-2), P3R-072616-1335 (460-117737-3), P02-072616-1600 (460-117737-5), P12-072616-0800 (460-117737-8), P18-072716-0800 (460-117737-9) and P08T-072716-1300 (460-117737-13) at 10.0, 10.0, 10.0, 10.0, 10.0 and 10.0. Elevated reporting limits (RLs) are provided.

Method(s) 9056A: The following samples was diluted to bring the concentration of target analytes within the calibration range: P3T-072616-1435 (460-117737-4), P02T-072616-1640 (460-117737-6) and P16-072616-1730 (460-117737-7) at 100.0, 100.0 and 100.0. Elevated reporting limits (RLs) are provided.

Method(s) 9056A: The following samples was diluted to bring the concentration of target analytes within the calibration range: P16T-072716-0900 (460-117737-10), P21-072716-1030 (460-117737-11), P21T-072716-1135 (460-117737-12), 0908-072716-0001 (460-117737-15) and (460-117737-A-11 DU) at 50.0, 50.0, 50.0, 50.0 and 50.0. Elevated reporting limits (RLs) are provided.

Method(s) 300.0, 9056A: The following samples was diluted to bring the concentration of target analytes within the calibration range: P08R-072716-1410 (460-117737-14), (460-117737-C-14 MS), (460-117737-C-14 MSD), (460-118009-I-3), (460-118009-I-3 DU), (460-118009-I-3 MS) and (460-118009-I-3 MSD) at 100.0, 1.0, 1.0, 10.0, 10.0, 10.0 and 10.0. Elevated reporting limits (RLs) are provided.

Method(s) 300.0, 9056A: The following samples were diluted to bring the concentration of target analytes within the calibration range: (460-118009-I-3 DU), (460-118009-I-3 MS) and (460-118009-I-3 MSD) at 200.0, 200.0 and 200.0. 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.

Detection Summary

Client: Haley & Aldrich, Inc.
Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

Client Sample ID: P15T-072616-1015

Lab Sample ID: 460-117737-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride - DL	11		1.2	0.30	mg/L	10		9056A	Total/NA
Sulfate - DL	230		6.0	1.1	mg/L	10		9056A	Total/NA
Barium	92	J	200	5.5	ug/L	1		6010C	Total/NA
Calcium	200000		5000	320	ug/L	1		6010C	Total/NA
Iron	2000		150	65	ug/L	1		6010C	Total/NA
Magnesium	43000		5000	260	ug/L	1		6010C	Total/NA
Manganese	730		15	4.9	ug/L	1		6010C	Total/NA
Sodium	16000		5000	320	ug/L	1		6010C	Total/NA
Nickel	7.1	J	40	5.4	ug/L	1		6010C	Total/NA
Potassium	2000	J	5000	120	ug/L	1		6010C	Total/NA

Client Sample ID: P18T-072616-1210

Lab Sample ID: 460-117737-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride - DL	31		1.2	0.30	mg/L	10		9056A	Total/NA
Sulfate - DL	95		6.0	1.1	mg/L	10		9056A	Total/NA
Barium	49	J	200	5.5	ug/L	1		6010C	Total/NA
Calcium	64000		5000	320	ug/L	1		6010C	Total/NA
Iron	2400		150	65	ug/L	1		6010C	Total/NA
Magnesium	20000		5000	260	ug/L	1		6010C	Total/NA
Manganese	90		15	4.9	ug/L	1		6010C	Total/NA
Sodium	120000		5000	320	ug/L	1		6010C	Total/NA
Nickel	57		40	5.4	ug/L	1		6010C	Total/NA
Potassium	5100		5000	120	ug/L	1		6010C	Total/NA
Barium	49	J	200	5.5	ug/L	1		6010C	Dissolved
Calcium	68000		5000	320	ug/L	1		6010C	Dissolved
Iron	1100		150	65	ug/L	1		6010C	Dissolved
Magnesium	21000		5000	260	ug/L	1		6010C	Dissolved
Manganese	80		15	4.9	ug/L	1		6010C	Dissolved
Sodium	140000		5000	320	ug/L	1		6010C	Dissolved
Nickel	61		40	5.4	ug/L	1		6010C	Dissolved
Potassium	5300		5000	120	ug/L	1		6010C	Dissolved

Client Sample ID: P3R-072616-1335

Lab Sample ID: 460-117737-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride - DL	36		1.2	0.30	mg/L	10		9056A	Total/NA
Sulfate - DL	110		6.0	1.1	mg/L	10		9056A	Total/NA
Barium	49	J	200	5.5	ug/L	1		6010C	Total/NA
Calcium	28000		5000	320	ug/L	1		6010C	Total/NA
Iron	3000		150	65	ug/L	1		6010C	Total/NA
Magnesium	20000		5000	260	ug/L	1		6010C	Total/NA
Manganese	33		15	4.9	ug/L	1		6010C	Total/NA
Sodium	280000		25000	1600	ug/L	5		6010C	Total/NA
Potassium	4100	J	5000	120	ug/L	1		6010C	Total/NA
Barium	39	J	200	5.5	ug/L	1		6010C	Dissolved
Calcium	29000		5000	320	ug/L	1		6010C	Dissolved
Magnesium	21000		5000	260	ug/L	1		6010C	Dissolved
Manganese	17		15	4.9	ug/L	1		6010C	Dissolved
Sodium	270000		25000	1600	ug/L	5		6010C	Dissolved

This Detection Summary does not include radiochemical test results.

TestAmerica Edison

Detection Summary

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

Client Sample ID: P3R-072616-1335 (Continued)

Lab Sample ID: 460-117737-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Potassium	3900	J	5000	120	ug/L	1		6010C	Dissolved

Client Sample ID: P3T-072616-1435

Lab Sample ID: 460-117737-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride - DL	30		12	3.0	mg/L	100		9056A	Total/NA
Sulfate - DL	610		60	11	mg/L	100		9056A	Total/NA
Barium	32	J	200	5.5	ug/L	1		6010C	Total/NA
Calcium	170000		5000	320	ug/L	1		6010C	Total/NA
Iron	1200		150	65	ug/L	1		6010C	Total/NA
Magnesium	94000		5000	260	ug/L	1		6010C	Total/NA
Manganese	43		15	4.9	ug/L	1		6010C	Total/NA
Sodium	170000		5000	320	ug/L	1		6010C	Total/NA
Potassium	1800	J	5000	120	ug/L	1		6010C	Total/NA
Barium	25	J	200	5.5	ug/L	1		6010C	Dissolved
Calcium	170000		5000	320	ug/L	1		6010C	Dissolved
Magnesium	96000		5000	260	ug/L	1		6010C	Dissolved
Sodium	180000		5000	320	ug/L	1		6010C	Dissolved
Potassium	1700	J	5000	120	ug/L	1		6010C	Dissolved

Client Sample ID: P02-072616-1600

Lab Sample ID: 460-117737-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride - DL	41		1.2	0.30	mg/L	10		9056A	Total/NA
Sulfate - DL	300		6.0	1.1	mg/L	10		9056A	Total/NA
Barium	58	J	200	5.5	ug/L	1		6010C	Total/NA
Calcium	140000		5000	320	ug/L	1		6010C	Total/NA
Iron	820		150	65	ug/L	1		6010C	Total/NA
Magnesium	47000		5000	260	ug/L	1		6010C	Total/NA
Manganese	510		15	4.9	ug/L	1		6010C	Total/NA
Sodium	100000		5000	320	ug/L	1		6010C	Total/NA
Nickel	6.9	J	40	5.4	ug/L	1		6010C	Total/NA
Potassium	3700	J	5000	120	ug/L	1		6010C	Total/NA
Barium	56	J	200	5.5	ug/L	1		6010C	Dissolved
Calcium	140000		5000	320	ug/L	1		6010C	Dissolved
Iron	600		150	65	ug/L	1		6010C	Dissolved
Magnesium	45000		5000	260	ug/L	1		6010C	Dissolved
Manganese	430		15	4.9	ug/L	1		6010C	Dissolved
Sodium	100000		5000	320	ug/L	1		6010C	Dissolved
Nickel	6.2	J	40	5.4	ug/L	1		6010C	Dissolved
Potassium	3600	J	5000	120	ug/L	1		6010C	Dissolved

Client Sample ID: P02T-072616-1640

Lab Sample ID: 460-117737-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride - DL	100		12	3.0	mg/L	100		9056A	Total/NA
Sulfate - DL	720		60	11	mg/L	100		9056A	Total/NA
Barium	32	J	200	5.5	ug/L	1		6010C	Total/NA
Calcium	310000		25000	1600	ug/L	5		6010C	Total/NA
Iron	6100		150	65	ug/L	1		6010C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Edison

Detection Summary

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

Client Sample ID: P02T-072616-1640 (Continued)

Lab Sample ID: 460-117737-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	120000		5000	260	ug/L	1		6010C	Total/NA
Manganese	610		15	4.9	ug/L	1		6010C	Total/NA
Sodium	44000		5000	320	ug/L	1		6010C	Total/NA
Nickel	16	J	40	5.4	ug/L	1		6010C	Total/NA
Potassium	2100	J	5000	120	ug/L	1		6010C	Total/NA
Barium	20	J	200	5.5	ug/L	1		6010C	Dissolved
Calcium	130000		25000	1600	ug/L	5		6010C	Dissolved
Iron	660		150	65	ug/L	1		6010C	Dissolved
Magnesium	130000		5000	260	ug/L	1		6010C	Dissolved
Manganese	570		15	4.9	ug/L	1		6010C	Dissolved
Sodium	46000		5000	320	ug/L	1		6010C	Dissolved
Nickel	12	J	40	5.4	ug/L	1		6010C	Dissolved
Potassium	1500	J	5000	120	ug/L	1		6010C	Dissolved

Client Sample ID: P16-072616-1730

Lab Sample ID: 460-117737-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride - DL	62		12	3.0	mg/L	100		9056A	Total/NA
Sulfate - DL	490		60	11	mg/L	100		9056A	Total/NA
Barium	36	J	200	5.5	ug/L	1		6010C	Total/NA
Calcium	260000		25000	1600	ug/L	5		6010C	Total/NA
Iron	4000		150	65	ug/L	1		6010C	Total/NA
Magnesium	74000		5000	260	ug/L	1		6010C	Total/NA
Manganese	210		15	4.9	ug/L	1		6010C	Total/NA
Sodium	81000		5000	320	ug/L	1		6010C	Total/NA
Nickel	240		40	5.4	ug/L	1		6010C	Total/NA
Potassium	2700	J	5000	120	ug/L	1		6010C	Total/NA
Barium	35	J	200	5.5	ug/L	1		6010C	Dissolved
Calcium	300000		25000	1600	ug/L	5		6010C	Dissolved
Iron	3400		150	65	ug/L	1		6010C	Dissolved
Magnesium	73000		5000	260	ug/L	1		6010C	Dissolved
Manganese	200		15	4.9	ug/L	1		6010C	Dissolved
Sodium	81000		5000	320	ug/L	1		6010C	Dissolved
Nickel	240		40	5.4	ug/L	1		6010C	Dissolved
Potassium	2600	J	5000	120	ug/L	1		6010C	Dissolved

Client Sample ID: P12-072616-0800

Lab Sample ID: 460-117737-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride - DL	22		1.2	0.30	mg/L	10		9056A	Total/NA
Sulfate - DL	74		6.0	1.1	mg/L	10		9056A	Total/NA
Barium	64	J	200	5.5	ug/L	1		6010C	Total/NA
Calcium	92000		5000	320	ug/L	1		6010C	Total/NA
Iron	1800		150	65	ug/L	1		6010C	Total/NA
Magnesium	22000		5000	260	ug/L	1		6010C	Total/NA
Manganese	52		15	4.9	ug/L	1		6010C	Total/NA
Sodium	75000		5000	320	ug/L	1		6010C	Total/NA
Nickel	5.4	J	40	5.4	ug/L	1		6010C	Total/NA
Potassium	4000	J	5000	120	ug/L	1		6010C	Total/NA
Barium	46	J	200	5.5	ug/L	1		6010C	Dissolved

This Detection Summary does not include radiochemical test results.

TestAmerica Edison

Detection Summary

Client: Haley & Aldrich, Inc.
Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

Client Sample ID: P12-072616-0800 (Continued)

Lab Sample ID: 460-117737-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	86000		5000	320	ug/L	1		6010C	Dissolved
Magnesium	21000		5000	260	ug/L	1		6010C	Dissolved
Manganese	24		15	4.9	ug/L	1		6010C	Dissolved
Sodium	91000		5000	320	ug/L	1		6010C	Dissolved
Potassium	4000	J	5000	120	ug/L	1		6010C	Dissolved

Client Sample ID: P18-072716-0800

Lab Sample ID: 460-117737-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride - DL	42		1.2	0.30	mg/L	10		9056A	Total/NA
Sulfate - DL	170		6.0	1.1	mg/L	10		9056A	Total/NA
Barium	13	J	200	5.5	ug/L	1		6010C	Total/NA
Calcium	10000		5000	320	ug/L	1		6010C	Total/NA
Iron	2100		150	65	ug/L	1		6010C	Total/NA
Magnesium	3400	J	5000	260	ug/L	1		6010C	Total/NA
Manganese	22		15	4.9	ug/L	1		6010C	Total/NA
Sodium	300000		25000	1600	ug/L	5		6010C	Total/NA
Nickel	210		40	5.4	ug/L	1		6010C	Total/NA
Potassium	4000	J	5000	120	ug/L	1		6010C	Total/NA
Barium	11	J	200	5.5	ug/L	1		6010C	Dissolved
Calcium	10000		5000	320	ug/L	1		6010C	Dissolved
Magnesium	3100	J	5000	260	ug/L	1		6010C	Dissolved
Manganese	5.9	J	15	4.9	ug/L	1		6010C	Dissolved
Sodium	340000		25000	1600	ug/L	5		6010C	Dissolved
Nickel	220		40	5.4	ug/L	1		6010C	Dissolved
Potassium	3800	J	5000	120	ug/L	1		6010C	Dissolved

Client Sample ID: P16T-072716-0900

Lab Sample ID: 460-117737-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride - DL	16		6.0	1.5	mg/L	50		9056A	Total/NA
Sulfate - DL	390		30	5.3	mg/L	50		9056A	Total/NA
Barium	31	J	200	5.5	ug/L	1		6010C	Total/NA
Calcium	200000		5000	320	ug/L	1		6010C	Total/NA
Iron	1600		150	65	ug/L	1		6010C	Total/NA
Magnesium	57000		5000	260	ug/L	1		6010C	Total/NA
Manganese	46		15	4.9	ug/L	1		6010C	Total/NA
Sodium	52000		5000	320	ug/L	1		6010C	Total/NA
Nickel	22	J	40	5.4	ug/L	1		6010C	Total/NA
Potassium	1600	J	5000	120	ug/L	1		6010C	Total/NA
Barium	20	J	200	5.5	ug/L	1		6010C	Dissolved
Calcium	210000		5000	320	ug/L	1		6010C	Dissolved
Magnesium	59000		5000	260	ug/L	1		6010C	Dissolved
Manganese	9.4	J	15	4.9	ug/L	1		6010C	Dissolved
Sodium	53000		5000	320	ug/L	1		6010C	Dissolved
Nickel	23	J	40	5.4	ug/L	1		6010C	Dissolved
Potassium	1500	J	5000	120	ug/L	1		6010C	Dissolved

Client Sample ID: P21-072716-1030

Lab Sample ID: 460-117737-11

This Detection Summary does not include radiochemical test results.

TestAmerica Edison

Detection Summary

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

Client Sample ID: P21-072716-1030 (Continued)

Lab Sample ID: 460-117737-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride - DL	81		6.0	1.5	mg/L	50		9056A	Total/NA
Sulfate - DL	220	F1	6.0	1.1	mg/L	10		9056A	Total/NA
Barium	54	J	200	5.5	ug/L	1		6010C	Total/NA
Calcium	140000		5000	320	ug/L	1		6010C	Total/NA
Iron	1400		150	65	ug/L	1		6010C	Total/NA
Magnesium	36000		5000	260	ug/L	1		6010C	Total/NA
Manganese	120		15	4.9	ug/L	1		6010C	Total/NA
Sodium	140000		5000	320	ug/L	1		6010C	Total/NA
Nickel	160		40	5.4	ug/L	1		6010C	Total/NA
Potassium	3700	J	5000	120	ug/L	1		6010C	Total/NA
Barium	55	J	200	5.5	ug/L	1		6010C	Dissolved
Calcium	140000		5000	320	ug/L	1		6010C	Dissolved
Iron	1100		150	65	ug/L	1		6010C	Dissolved
Magnesium	37000		5000	260	ug/L	1		6010C	Dissolved
Manganese	120		15	4.9	ug/L	1		6010C	Dissolved
Sodium	140000		5000	320	ug/L	1		6010C	Dissolved
Nickel	160		40	5.4	ug/L	1		6010C	Dissolved
Potassium	3600	J	5000	120	ug/L	1		6010C	Dissolved

Client Sample ID: P21T-072716-1135

Lab Sample ID: 460-117737-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride - DL	68		6.0	1.5	mg/L	50		9056A	Total/NA
Sulfate - DL	400		30	5.3	mg/L	50		9056A	Total/NA
Barium	40	J	200	5.5	ug/L	1		6010C	Total/NA
Calcium	230000		5000	320	ug/L	1		6010C	Total/NA
Iron	1900		150	65	ug/L	1		6010C	Total/NA
Magnesium	57000		5000	260	ug/L	1		6010C	Total/NA
Manganese	600		15	4.9	ug/L	1		6010C	Total/NA
Sodium	120000		5000	320	ug/L	1		6010C	Total/NA
Nickel	340		40	5.4	ug/L	1		6010C	Total/NA
Potassium	2300	J	5000	120	ug/L	1		6010C	Total/NA
Barium	40	J	200	5.5	ug/L	1		6010C	Dissolved
Calcium	230000		5000	320	ug/L	1		6010C	Dissolved
Iron	1700		150	65	ug/L	1		6010C	Dissolved
Magnesium	56000		5000	260	ug/L	1		6010C	Dissolved
Manganese	560		15	4.9	ug/L	1		6010C	Dissolved
Sodium	120000		5000	320	ug/L	1		6010C	Dissolved
Nickel	340		40	5.4	ug/L	1		6010C	Dissolved
Potassium	2300	J	5000	120	ug/L	1		6010C	Dissolved

Client Sample ID: P08T-072716-1300

Lab Sample ID: 460-117737-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride - DL	17		1.2	0.30	mg/L	10		9056A	Total/NA
Sulfate - DL	100		6.0	1.1	mg/L	10		9056A	Total/NA
Barium	67	J	200	5.5	ug/L	1		6010C	Total/NA
Calcium	100000		5000	320	ug/L	1		6010C	Total/NA
Magnesium	40000		5000	260	ug/L	1		6010C	Total/NA
Manganese	490		15	4.9	ug/L	1		6010C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Edison

Detection Summary

Client: Haley & Aldrich, Inc.
Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

Client Sample ID: P08T-072716-1300 (Continued)

Lab Sample ID: 460-117737-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	18000		5000	320	ug/L	1		6010C	Total/NA
Nickel	8.6	J	40	5.4	ug/L	1		6010C	Total/NA
Potassium	8100		5000	120	ug/L	1		6010C	Total/NA
Barium	65	J	200	5.5	ug/L	1		6010C	Dissolved
Calcium	95000		5000	320	ug/L	1		6010C	Dissolved
Magnesium	38000		5000	260	ug/L	1		6010C	Dissolved
Manganese	370		15	4.9	ug/L	1		6010C	Dissolved
Sodium	17000		5000	320	ug/L	1		6010C	Dissolved
Nickel	7.3	J	40	5.4	ug/L	1		6010C	Dissolved
Potassium	7900		5000	120	ug/L	1		6010C	Dissolved

Client Sample ID: P08R-072716-1410

Lab Sample ID: 460-117737-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride - DL	140		12	3.0	mg/L	100		9056A	Total/NA
Sulfate - DL	98		60	11	mg/L	100		9056A	Total/NA
Barium	82	J	200	5.5	ug/L	1		6010C	Total/NA
Calcium	95000		5000	320	ug/L	1		6010C	Total/NA
Iron	120	J	150	65	ug/L	1		6010C	Total/NA
Magnesium	20000		5000	260	ug/L	1		6010C	Total/NA
Manganese	53		15	4.9	ug/L	1		6010C	Total/NA
Sodium	170000		5000	320	ug/L	1		6010C	Total/NA
Nickel	11	J	40	5.4	ug/L	1		6010C	Total/NA
Potassium	3500	J	5000	120	ug/L	1		6010C	Total/NA

Client Sample ID: 0908-072716-0001

Lab Sample ID: 460-117737-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride - DL	140		6.0	1.5	mg/L	50		9056A	Total/NA
Sulfate - DL	39		6.0	1.1	mg/L	10		9056A	Total/NA
Barium	83	J	200	5.5	ug/L	1		6010C	Total/NA
Calcium	96000		5000	320	ug/L	1		6010C	Total/NA
Iron	130	J	150	65	ug/L	1		6010C	Total/NA
Magnesium	20000		5000	260	ug/L	1		6010C	Total/NA
Manganese	53		15	4.9	ug/L	1		6010C	Total/NA
Sodium	180000		5000	320	ug/L	1		6010C	Total/NA
Nickel	11	J	40	5.4	ug/L	1		6010C	Total/NA
Potassium	3500	J	5000	120	ug/L	1		6010C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Edison

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

Client Sample ID: P15T-072616-1015

Lab Sample ID: 460-117737-1

Date Collected: 07/26/16 10:15

Matrix: Water

Date Received: 07/28/16 10:00

Method: 9056A - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11		1.2	0.30	mg/L			08/02/16 17:58	10
Sulfate	230		6.0	1.1	mg/L			07/30/16 09:21	10

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	92	J	200	5.5	ug/L		08/01/16 07:14	08/02/16 14:03	1
Calcium	200000		5000	320	ug/L		08/01/16 07:14	08/02/16 14:03	1
Iron	2000		150	65	ug/L		08/01/16 07:14	08/02/16 14:03	1
Magnesium	43000		5000	260	ug/L		08/01/16 07:14	08/02/16 14:03	1
Manganese	730		15	4.9	ug/L		08/01/16 07:14	08/02/16 14:03	1
Sodium	16000		5000	320	ug/L		08/01/16 07:14	08/02/16 14:03	1
Nickel	7.1	J	40	5.4	ug/L		08/01/16 07:14	08/02/16 14:03	1
Chromium	10	U	10	4.5	ug/L		08/01/16 07:14	08/02/16 14:03	1
Potassium	2000	J	5000	120	ug/L		08/01/16 07:14	08/02/16 14:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0040	mg/L		08/05/16 14:00	08/06/16 12:03	1

Client Sample ID: P18T-072616-1210

Lab Sample ID: 460-117737-2

Date Collected: 07/26/16 12:10

Matrix: Water

Date Received: 07/28/16 10:00

Method: 9056A - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	31		1.2	0.30	mg/L			08/02/16 18:18	10
Sulfate	95		6.0	1.1	mg/L			07/30/16 09:41	10

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	49	J	200	5.5	ug/L		08/01/16 07:14	08/02/16 14:07	1
Calcium	64000		5000	320	ug/L		08/01/16 07:14	08/02/16 14:07	1
Iron	2400		150	65	ug/L		08/01/16 07:14	08/02/16 14:07	1
Magnesium	20000		5000	260	ug/L		08/01/16 07:14	08/02/16 14:07	1
Manganese	90		15	4.9	ug/L		08/01/16 07:14	08/02/16 14:07	1
Sodium	120000		5000	320	ug/L		08/01/16 07:14	08/02/16 14:07	1
Nickel	57		40	5.4	ug/L		08/01/16 07:14	08/02/16 14:07	1
Chromium	10	U	10	4.5	ug/L		08/01/16 07:14	08/02/16 14:07	1
Potassium	5100		5000	120	ug/L		08/01/16 07:14	08/02/16 14:07	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	49	J	200	5.5	ug/L		07/29/16 19:10	08/02/16 12:23	1
Calcium	68000		5000	320	ug/L		07/29/16 19:10	08/02/16 12:23	1
Iron	1100		150	65	ug/L		07/29/16 19:10	08/02/16 12:23	1
Magnesium	21000		5000	260	ug/L		07/29/16 19:10	08/02/16 12:23	1
Manganese	80		15	4.9	ug/L		07/29/16 19:10	08/02/16 12:23	1
Sodium	140000		5000	320	ug/L		07/29/16 19:10	08/02/16 12:23	1
Nickel	61		40	5.4	ug/L		07/29/16 19:10	08/02/16 12:23	1
Chromium	10	U	10	4.5	ug/L		07/29/16 19:10	08/02/16 12:23	1

TestAmerica Edison

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

Client Sample ID: P18T-072616-1210

Date Collected: 07/26/16 12:10

Date Received: 07/28/16 10:00

Lab Sample ID: 460-117737-2

Matrix: Water

Method: 6010C - Metals (ICP) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	5300		5000	120	ug/L		07/29/16 19:10	08/02/16 12:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0040	mg/L		08/05/16 14:00	08/06/16 12:04	1

Client Sample ID: P3R-072616-1335

Date Collected: 07/26/16 13:35

Date Received: 07/28/16 10:00

Lab Sample ID: 460-117737-3

Matrix: Water

Method: 9056A - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	36		1.2	0.30	mg/L			08/02/16 18:38	10
Sulfate	110		6.0	1.1	mg/L			07/30/16 10:01	10

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	49	J	200	5.5	ug/L		08/01/16 07:14	08/02/16 14:11	1
Calcium	28000		5000	320	ug/L		08/01/16 07:14	08/02/16 14:11	1
Iron	3000		150	65	ug/L		08/01/16 07:14	08/02/16 14:11	1
Magnesium	20000		5000	260	ug/L		08/01/16 07:14	08/02/16 14:11	1
Manganese	33		15	4.9	ug/L		08/01/16 07:14	08/02/16 14:11	1
Sodium	280000		25000	1600	ug/L		08/01/16 07:14	08/02/16 15:59	5
Nickel	40	U	40	5.4	ug/L		08/01/16 07:14	08/02/16 14:11	1
Chromium	10	U	10	4.5	ug/L		08/01/16 07:14	08/02/16 14:11	1
Potassium	4100	J	5000	120	ug/L		08/01/16 07:14	08/02/16 14:11	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	39	J	200	5.5	ug/L		07/29/16 19:10	08/02/16 12:27	1
Calcium	29000		5000	320	ug/L		07/29/16 19:10	08/02/16 12:27	1
Iron	150	U	150	65	ug/L		07/29/16 19:10	08/02/16 12:27	1
Magnesium	21000		5000	260	ug/L		07/29/16 19:10	08/02/16 12:27	1
Manganese	17		15	4.9	ug/L		07/29/16 19:10	08/02/16 12:27	1
Sodium	270000		25000	1600	ug/L		07/29/16 19:10	08/02/16 15:35	5
Nickel	40	U	40	5.4	ug/L		07/29/16 19:10	08/02/16 12:27	1
Chromium	10	U	10	4.5	ug/L		07/29/16 19:10	08/02/16 12:27	1
Potassium	3900	J	5000	120	ug/L		07/29/16 19:10	08/02/16 12:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0040	mg/L		08/05/16 14:00	08/06/16 12:04	1

Client Sample ID: P3T-072616-1435

Date Collected: 07/26/16 14:35

Date Received: 07/28/16 10:00

Lab Sample ID: 460-117737-4

Matrix: Water

Method: 9056A - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	30		12	3.0	mg/L			08/02/16 18:58	100
Sulfate	610		60	11	mg/L			08/02/16 18:58	100

TestAmerica Edison

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	32	J	200	5.5	ug/L		08/01/16 07:14	08/02/16 14:15	1
Calcium	170000		5000	320	ug/L		08/01/16 07:14	08/02/16 14:15	1
Iron	1200		150	65	ug/L		08/01/16 07:14	08/02/16 14:15	1
Magnesium	94000		5000	260	ug/L		08/01/16 07:14	08/02/16 14:15	1
Manganese	43		15	4.9	ug/L		08/01/16 07:14	08/02/16 14:15	1
Sodium	170000		5000	320	ug/L		08/01/16 07:14	08/02/16 14:15	1
Nickel	40	U	40	5.4	ug/L		08/01/16 07:14	08/02/16 14:15	1
Chromium	10	U	10	4.5	ug/L		08/01/16 07:14	08/02/16 14:15	1
Potassium	1800	J	5000	120	ug/L		08/01/16 07:14	08/02/16 14:15	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	25	J	200	5.5	ug/L		07/29/16 19:10	08/02/16 12:31	1
Calcium	170000		5000	320	ug/L		07/29/16 19:10	08/02/16 12:31	1
Iron	150	U	150	65	ug/L		07/29/16 19:10	08/02/16 12:31	1
Magnesium	96000		5000	260	ug/L		07/29/16 19:10	08/02/16 12:31	1
Manganese	15	U	15	4.9	ug/L		07/29/16 19:10	08/02/16 12:31	1
Sodium	180000		5000	320	ug/L		07/29/16 19:10	08/02/16 12:31	1
Nickel	40	U	40	5.4	ug/L		07/29/16 19:10	08/02/16 12:31	1
Chromium	10	U	10	4.5	ug/L		07/29/16 19:10	08/02/16 12:31	1
Potassium	1700	J	5000	120	ug/L		07/29/16 19:10	08/02/16 12:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0040	mg/L		08/05/16 14:00	08/06/16 12:05	1

Client Sample ID: P02-072616-1600

Lab Sample ID: 460-117737-5

Date Collected: 07/26/16 16:00

Matrix: Water

Date Received: 07/28/16 10:00

Method: 9056A - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	41		1.2	0.30	mg/L			08/02/16 21:47	10
Sulfate	300		6.0	1.1	mg/L			07/30/16 12:03	10

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	58	J	200	5.5	ug/L		08/01/16 07:14	08/02/16 14:19	1
Calcium	140000		5000	320	ug/L		08/01/16 07:14	08/02/16 14:19	1
Iron	820		150	65	ug/L		08/01/16 07:14	08/02/16 14:19	1
Magnesium	47000		5000	260	ug/L		08/01/16 07:14	08/02/16 14:19	1
Manganese	510		15	4.9	ug/L		08/01/16 07:14	08/02/16 14:19	1
Sodium	100000		5000	320	ug/L		08/01/16 07:14	08/02/16 14:19	1
Nickel	6.9	J	40	5.4	ug/L		08/01/16 07:14	08/02/16 14:19	1
Chromium	10	U	10	4.5	ug/L		08/01/16 07:14	08/02/16 14:19	1
Potassium	3700	J	5000	120	ug/L		08/01/16 07:14	08/02/16 14:19	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	56	J	200	5.5	ug/L		07/29/16 19:10	08/02/16 12:35	1
Calcium	140000		5000	320	ug/L		07/29/16 19:10	08/02/16 12:35	1
Iron	600		150	65	ug/L		07/29/16 19:10	08/02/16 12:35	1
Magnesium	45000		5000	260	ug/L		07/29/16 19:10	08/02/16 12:35	1
Manganese	430		15	4.9	ug/L		07/29/16 19:10	08/02/16 12:35	1

TestAmerica Edison

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

Client Sample ID: P02-072616-1600

Lab Sample ID: 460-117737-5

Date Collected: 07/26/16 16:00

Matrix: Water

Date Received: 07/28/16 10:00

Method: 6010C - Metals (ICP) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	100000		5000	320	ug/L		07/29/16 19:10	08/02/16 12:35	1
Nickel	6.2	J	40	5.4	ug/L		07/29/16 19:10	08/02/16 12:35	1
Chromium	10	U	10	4.5	ug/L		07/29/16 19:10	08/02/16 12:35	1
Potassium	3600	J	5000	120	ug/L		07/29/16 19:10	08/02/16 12:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0040	mg/L		08/05/16 14:00	08/06/16 12:06	1

Client Sample ID: P02T-072616-1640

Lab Sample ID: 460-117737-6

Date Collected: 07/26/16 16:40

Matrix: Water

Date Received: 07/28/16 10:00

Method: 9056A - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	100		12	3.0	mg/L			08/02/16 22:08	100
Sulfate	720		60	11	mg/L			08/02/16 22:08	100

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	32	J	200	5.5	ug/L		08/01/16 07:14	08/02/16 14:23	1
Calcium	310000		25000	1600	ug/L		08/01/16 07:14	08/02/16 16:03	5
Iron	6100		150	65	ug/L		08/01/16 07:14	08/02/16 14:23	1
Magnesium	120000		5000	260	ug/L		08/01/16 07:14	08/02/16 14:23	1
Manganese	610		15	4.9	ug/L		08/01/16 07:14	08/02/16 14:23	1
Sodium	44000		5000	320	ug/L		08/01/16 07:14	08/02/16 14:23	1
Nickel	16	J	40	5.4	ug/L		08/01/16 07:14	08/02/16 14:23	1
Chromium	10	U	10	4.5	ug/L		08/01/16 07:14	08/02/16 14:23	1
Potassium	2100	J	5000	120	ug/L		08/01/16 07:14	08/02/16 14:23	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	20	J	200	5.5	ug/L		07/29/16 19:10	08/02/16 12:39	1
Calcium	130000		25000	1600	ug/L		07/29/16 19:10	08/02/16 15:39	5
Iron	660		150	65	ug/L		07/29/16 19:10	08/02/16 12:39	1
Magnesium	130000		5000	260	ug/L		07/29/16 19:10	08/02/16 12:39	1
Manganese	570		15	4.9	ug/L		07/29/16 19:10	08/02/16 12:39	1
Sodium	46000		5000	320	ug/L		07/29/16 19:10	08/02/16 12:39	1
Nickel	12	J	40	5.4	ug/L		07/29/16 19:10	08/02/16 12:39	1
Chromium	10	U	10	4.5	ug/L		07/29/16 19:10	08/02/16 12:39	1
Potassium	1500	J	5000	120	ug/L		07/29/16 19:10	08/02/16 12:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0040	mg/L		08/05/16 14:00	08/06/16 12:07	1

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

Client Sample ID: P16-072616-1730

Lab Sample ID: 460-117737-7

Date Collected: 07/26/16 17:30

Matrix: Water

Date Received: 07/28/16 10:00

Method: 9056A - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	62		12	3.0	mg/L			08/02/16 22:28	100
Sulfate	490		60	11	mg/L			08/02/16 22:28	100

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	36	J	200	5.5	ug/L		08/01/16 07:14	08/02/16 14:27	1
Calcium	260000		25000	1600	ug/L		08/01/16 07:14	08/02/16 16:07	5
Iron	4000		150	65	ug/L		08/01/16 07:14	08/02/16 14:27	1
Magnesium	74000		5000	260	ug/L		08/01/16 07:14	08/02/16 14:27	1
Manganese	210		15	4.9	ug/L		08/01/16 07:14	08/02/16 14:27	1
Sodium	81000		5000	320	ug/L		08/01/16 07:14	08/02/16 14:27	1
Nickel	240		40	5.4	ug/L		08/01/16 07:14	08/02/16 14:27	1
Chromium	10	U	10	4.5	ug/L		08/01/16 07:14	08/02/16 14:27	1
Potassium	2700	J	5000	120	ug/L		08/01/16 07:14	08/02/16 14:27	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	35	J	200	5.5	ug/L		07/29/16 19:10	08/02/16 12:43	1
Calcium	300000		25000	1600	ug/L		07/29/16 19:10	08/02/16 15:43	5
Iron	3400		150	65	ug/L		07/29/16 19:10	08/02/16 12:43	1
Magnesium	73000		5000	260	ug/L		07/29/16 19:10	08/02/16 12:43	1
Manganese	200		15	4.9	ug/L		07/29/16 19:10	08/02/16 12:43	1
Sodium	81000		5000	320	ug/L		07/29/16 19:10	08/02/16 12:43	1
Nickel	240		40	5.4	ug/L		07/29/16 19:10	08/02/16 12:43	1
Chromium	10	U	10	4.5	ug/L		07/29/16 19:10	08/02/16 12:43	1
Potassium	2600	J	5000	120	ug/L		07/29/16 19:10	08/02/16 12:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0040	mg/L		08/05/16 14:00	08/06/16 12:08	1

Client Sample ID: P12-072616-0800

Lab Sample ID: 460-117737-8

Date Collected: 07/26/16 08:00

Matrix: Water

Date Received: 07/28/16 10:00

Method: 9056A - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22		1.2	0.30	mg/L			08/02/16 22:48	10
Sulfate	74		6.0	1.1	mg/L			07/30/16 13:04	10

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	64	J	200	5.5	ug/L		08/01/16 07:14	08/02/16 14:31	1
Calcium	92000		5000	320	ug/L		08/01/16 07:14	08/02/16 14:31	1
Iron	1800		150	65	ug/L		08/01/16 07:14	08/02/16 14:31	1
Magnesium	22000		5000	260	ug/L		08/01/16 07:14	08/02/16 14:31	1
Manganese	52		15	4.9	ug/L		08/01/16 07:14	08/02/16 14:31	1
Sodium	75000		5000	320	ug/L		08/01/16 07:14	08/02/16 14:31	1
Nickel	5.4	J	40	5.4	ug/L		08/01/16 07:14	08/02/16 14:31	1
Chromium	10	U	10	4.5	ug/L		08/01/16 07:14	08/02/16 14:31	1
Potassium	4000	J	5000	120	ug/L		08/01/16 07:14	08/02/16 14:31	1

TestAmerica Edison

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	46	J	200	5.5	ug/L		07/29/16 19:10	08/02/16 12:47	1
Calcium	86000		5000	320	ug/L		07/29/16 19:10	08/02/16 12:47	1
Iron	150	U	150	65	ug/L		07/29/16 19:10	08/02/16 12:47	1
Magnesium	21000		5000	260	ug/L		07/29/16 19:10	08/02/16 12:47	1
Manganese	24		15	4.9	ug/L		07/29/16 19:10	08/02/16 12:47	1
Sodium	91000		5000	320	ug/L		07/29/16 19:10	08/02/16 12:47	1
Nickel	40	U	40	5.4	ug/L		07/29/16 19:10	08/02/16 12:47	1
Chromium	10	U	10	4.5	ug/L		07/29/16 19:10	08/02/16 12:47	1
Potassium	4000	J	5000	120	ug/L		07/29/16 19:10	08/02/16 12:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0040	mg/L		08/05/16 14:00	08/06/16 12:10	1

Client Sample ID: P18-072716-0800

Lab Sample ID: 460-117737-9

Date Collected: 07/27/16 08:00

Matrix: Water

Date Received: 07/28/16 10:00

Method: 9056A - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	42		1.2	0.30	mg/L			08/02/16 23:09	10
Sulfate	170		6.0	1.1	mg/L			07/30/16 13:24	10

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	13	J	200	5.5	ug/L		08/01/16 07:14	08/02/16 14:35	1
Calcium	10000		5000	320	ug/L		08/01/16 07:14	08/02/16 14:35	1
Iron	2100		150	65	ug/L		08/01/16 07:14	08/02/16 14:35	1
Magnesium	3400	J	5000	260	ug/L		08/01/16 07:14	08/02/16 14:35	1
Manganese	22		15	4.9	ug/L		08/01/16 07:14	08/02/16 14:35	1
Sodium	300000		25000	1600	ug/L		08/01/16 07:14	08/02/16 16:14	5
Nickel	210		40	5.4	ug/L		08/01/16 07:14	08/02/16 14:35	1
Chromium	10	U	10	4.5	ug/L		08/01/16 07:14	08/02/16 14:35	1
Potassium	4000	J	5000	120	ug/L		08/01/16 07:14	08/02/16 14:35	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	11	J	200	5.5	ug/L		07/29/16 19:10	08/02/16 12:51	1
Calcium	10000		5000	320	ug/L		07/29/16 19:10	08/02/16 12:51	1
Iron	150	U	150	65	ug/L		07/29/16 19:10	08/02/16 12:51	1
Magnesium	3100	J	5000	260	ug/L		07/29/16 19:10	08/02/16 12:51	1
Manganese	5.9	J	15	4.9	ug/L		07/29/16 19:10	08/02/16 12:51	1
Sodium	340000		25000	1600	ug/L		07/29/16 19:10	08/02/16 16:11	5
Nickel	220		40	5.4	ug/L		07/29/16 19:10	08/02/16 12:51	1
Chromium	10	U	10	4.5	ug/L		07/29/16 19:10	08/02/16 12:51	1
Potassium	3800	J	5000	120	ug/L		07/29/16 19:10	08/02/16 12:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0040	mg/L		08/08/16 11:40	08/09/16 12:27	1

TestAmerica Edison

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

Client Sample ID: P16T-072716-0900

Lab Sample ID: 460-117737-10

Date Collected: 07/27/16 09:00

Matrix: Water

Date Received: 07/28/16 10:00

Method: 9056A - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	16		6.0	1.5	mg/L			08/02/16 23:29	50
Sulfate	390		30	5.3	mg/L			08/02/16 23:29	50

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	31	J	200	5.5	ug/L		08/01/16 07:14	08/02/16 15:07	1
Calcium	200000		5000	320	ug/L		08/01/16 07:14	08/02/16 15:07	1
Iron	1600		150	65	ug/L		08/01/16 07:14	08/02/16 15:07	1
Magnesium	57000		5000	260	ug/L		08/01/16 07:14	08/02/16 15:07	1
Manganese	46		15	4.9	ug/L		08/01/16 07:14	08/02/16 15:07	1
Sodium	52000		5000	320	ug/L		08/01/16 07:14	08/02/16 15:07	1
Nickel	22	J	40	5.4	ug/L		08/01/16 07:14	08/02/16 15:07	1
Chromium	10	U	10	4.5	ug/L		08/01/16 07:14	08/02/16 15:07	1
Potassium	1600	J	5000	120	ug/L		08/01/16 07:14	08/02/16 15:07	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	20	J	200	5.5	ug/L		07/29/16 19:10	08/02/16 12:55	1
Calcium	210000		5000	320	ug/L		07/29/16 19:10	08/02/16 12:55	1
Iron	150	U	150	65	ug/L		07/29/16 19:10	08/02/16 12:55	1
Magnesium	59000		5000	260	ug/L		07/29/16 19:10	08/02/16 12:55	1
Manganese	9.4	J	15	4.9	ug/L		07/29/16 19:10	08/02/16 12:55	1
Sodium	53000		5000	320	ug/L		07/29/16 19:10	08/02/16 12:55	1
Nickel	23	J	40	5.4	ug/L		07/29/16 19:10	08/02/16 12:55	1
Chromium	10	U	10	4.5	ug/L		07/29/16 19:10	08/02/16 12:55	1
Potassium	1500	J	5000	120	ug/L		07/29/16 19:10	08/02/16 12:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0040	mg/L		08/08/16 11:40	08/09/16 12:27	1

Client Sample ID: P21-072716-1030

Lab Sample ID: 460-117737-11

Date Collected: 07/27/16 10:30

Matrix: Water

Date Received: 07/28/16 10:00

Method: 9056A - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	81		6.0	1.5	mg/L			08/02/16 23:49	50
Sulfate	220	F1	6.0	1.1	mg/L			07/30/16 14:05	10

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	54	J	200	5.5	ug/L		08/01/16 07:14	08/02/16 13:29	1
Calcium	140000		5000	320	ug/L		08/01/16 07:14	08/02/16 13:29	1
Iron	1400		150	65	ug/L		08/01/16 07:14	08/02/16 13:29	1
Magnesium	36000		5000	260	ug/L		08/01/16 07:14	08/02/16 13:29	1
Manganese	120		15	4.9	ug/L		08/01/16 07:14	08/02/16 13:29	1
Sodium	140000		5000	320	ug/L		08/01/16 07:14	08/02/16 13:29	1
Nickel	160		40	5.4	ug/L		08/01/16 07:14	08/02/16 13:29	1
Chromium	10	U	10	4.5	ug/L		08/01/16 07:14	08/02/16 13:29	1
Potassium	3700	J	5000	120	ug/L		08/01/16 07:14	08/02/16 13:29	1

TestAmerica Edison

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	55	J	200	5.5	ug/L		07/29/16 19:10	08/02/16 11:53	1
Calcium	140000		5000	320	ug/L		07/29/16 19:10	08/02/16 11:53	1
Iron	1100		150	65	ug/L		07/29/16 19:10	08/02/16 11:53	1
Magnesium	37000		5000	260	ug/L		07/29/16 19:10	08/02/16 11:53	1
Manganese	120		15	4.9	ug/L		07/29/16 19:10	08/02/16 11:53	1
Sodium	140000		5000	320	ug/L		07/29/16 19:10	08/02/16 11:53	1
Nickel	160		40	5.4	ug/L		07/29/16 19:10	08/02/16 11:53	1
Chromium	10	U	10	4.5	ug/L		07/29/16 19:10	08/02/16 11:53	1
Potassium	3600	J	5000	120	ug/L		07/29/16 19:10	08/02/16 11:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0040	mg/L		08/08/16 11:40	08/09/16 12:24	1

Client Sample ID: P21T-072716-1135

Lab Sample ID: 460-117737-12

Date Collected: 07/27/16 11:35

Matrix: Water

Date Received: 07/28/16 10:00

Method: 9056A - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	68		6.0	1.5	mg/L			08/03/16 00:09	50
Sulfate	400		30	5.3	mg/L			08/03/16 00:09	50

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	40	J	200	5.5	ug/L		08/01/16 07:14	08/02/16 15:11	1
Calcium	230000		5000	320	ug/L		08/01/16 07:14	08/02/16 15:11	1
Iron	1900		150	65	ug/L		08/01/16 07:14	08/02/16 15:11	1
Magnesium	57000		5000	260	ug/L		08/01/16 07:14	08/02/16 15:11	1
Manganese	600		15	4.9	ug/L		08/01/16 07:14	08/02/16 15:11	1
Sodium	120000		5000	320	ug/L		08/01/16 07:14	08/02/16 15:11	1
Nickel	340		40	5.4	ug/L		08/01/16 07:14	08/02/16 15:11	1
Chromium	10	U	10	4.5	ug/L		08/01/16 07:14	08/02/16 15:11	1
Potassium	2300	J	5000	120	ug/L		08/01/16 07:14	08/02/16 15:11	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	40	J	200	5.5	ug/L		07/29/16 19:10	08/02/16 13:10	1
Calcium	230000		5000	320	ug/L		07/29/16 19:10	08/02/16 13:10	1
Iron	1700		150	65	ug/L		07/29/16 19:10	08/02/16 13:10	1
Magnesium	56000		5000	260	ug/L		07/29/16 19:10	08/02/16 13:10	1
Manganese	560		15	4.9	ug/L		07/29/16 19:10	08/02/16 13:10	1
Sodium	120000		5000	320	ug/L		07/29/16 19:10	08/02/16 13:10	1
Nickel	340		40	5.4	ug/L		07/29/16 19:10	08/02/16 13:10	1
Chromium	10	U	10	4.5	ug/L		07/29/16 19:10	08/02/16 13:10	1
Potassium	2300	J	5000	120	ug/L		07/29/16 19:10	08/02/16 13:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0040	mg/L		08/08/16 11:40	08/09/16 12:28	1

TestAmerica Edison

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

Client Sample ID: P08T-072716-1300

Lab Sample ID: 460-117737-13

Date Collected: 07/27/16 13:00

Matrix: Water

Date Received: 07/28/16 10:00

Method: 9056A - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	17		1.2	0.30	mg/L			08/03/16 00:30	10
Sulfate	100		6.0	1.1	mg/L			08/01/16 14:18	10

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	67	J	200	5.5	ug/L		08/01/16 07:14	08/02/16 15:15	1
Calcium	100000		5000	320	ug/L		08/01/16 07:14	08/02/16 15:15	1
Iron	150	U	150	65	ug/L		08/01/16 07:14	08/02/16 15:15	1
Magnesium	40000		5000	260	ug/L		08/01/16 07:14	08/02/16 15:15	1
Manganese	490		15	4.9	ug/L		08/01/16 07:14	08/02/16 15:15	1
Sodium	18000		5000	320	ug/L		08/01/16 07:14	08/02/16 15:15	1
Nickel	8.6	J	40	5.4	ug/L		08/01/16 07:14	08/02/16 15:15	1
Chromium	10	U	10	4.5	ug/L		08/01/16 07:14	08/02/16 15:15	1
Potassium	8100		5000	120	ug/L		08/01/16 07:14	08/02/16 15:15	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	65	J	200	5.5	ug/L		07/29/16 19:10	08/02/16 13:14	1
Calcium	95000		5000	320	ug/L		07/29/16 19:10	08/02/16 13:14	1
Iron	150	U	150	65	ug/L		07/29/16 19:10	08/02/16 13:14	1
Magnesium	38000		5000	260	ug/L		07/29/16 19:10	08/02/16 13:14	1
Manganese	370		15	4.9	ug/L		07/29/16 19:10	08/02/16 13:14	1
Sodium	17000		5000	320	ug/L		07/29/16 19:10	08/02/16 13:14	1
Nickel	7.3	J	40	5.4	ug/L		07/29/16 19:10	08/02/16 13:14	1
Chromium	10	U	10	4.5	ug/L		07/29/16 19:10	08/02/16 13:14	1
Potassium	7900		5000	120	ug/L		07/29/16 19:10	08/02/16 13:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0040	mg/L		08/08/16 11:40	08/09/16 12:29	1

Client Sample ID: P08R-072716-1410

Lab Sample ID: 460-117737-14

Date Collected: 07/27/16 14:10

Matrix: Water

Date Received: 07/28/16 10:00

Method: 9056A - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	140		12	3.0	mg/L			08/04/16 17:21	100
Sulfate	98		60	11	mg/L			08/04/16 17:21	100

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	82	J	200	5.5	ug/L		08/01/16 07:14	08/02/16 15:19	1
Calcium	95000		5000	320	ug/L		08/01/16 07:14	08/02/16 15:19	1
Iron	120	J	150	65	ug/L		08/01/16 07:14	08/02/16 15:19	1
Magnesium	20000		5000	260	ug/L		08/01/16 07:14	08/02/16 15:19	1
Manganese	53		15	4.9	ug/L		08/01/16 07:14	08/02/16 15:19	1
Sodium	170000		5000	320	ug/L		08/01/16 07:14	08/02/16 15:19	1
Nickel	11	J	40	5.4	ug/L		08/01/16 07:14	08/02/16 15:19	1
Chromium	10	U	10	4.5	ug/L		08/01/16 07:14	08/02/16 15:19	1
Potassium	3500	J	5000	120	ug/L		08/01/16 07:14	08/02/16 15:19	1

TestAmerica Edison

Client Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0040	mg/L		08/08/16 11:40	08/09/16 12:30	1

Client Sample ID: 0908-072716-0001

Lab Sample ID: 460-117737-15

Date Collected: 07/27/16 00:00

Matrix: Water

Date Received: 07/28/16 10:00

Method: 9056A - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	140		6.0	1.5	mg/L			08/03/16 00:50	50
Sulfate	39		6.0	1.1	mg/L			08/01/16 14:38	10

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	83	J	200	5.5	ug/L		08/01/16 07:25	08/02/16 15:23	1
Calcium	96000		5000	320	ug/L		08/01/16 07:25	08/02/16 15:23	1
Iron	130	J	150	65	ug/L		08/01/16 07:25	08/02/16 15:23	1
Magnesium	20000		5000	260	ug/L		08/01/16 07:25	08/02/16 15:23	1
Manganese	53		15	4.9	ug/L		08/01/16 07:25	08/02/16 15:23	1
Sodium	180000		5000	320	ug/L		08/01/16 07:25	08/02/16 15:23	1
Nickel	11	J	40	5.4	ug/L		08/01/16 07:25	08/02/16 15:23	1
Chromium	10	U	10	4.5	ug/L		08/01/16 07:25	08/02/16 15:23	1
Potassium	3500	J	5000	120	ug/L		08/01/16 07:25	08/02/16 15:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0040	mg/L		08/08/16 11:40	08/09/16 12:31	1

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 460-381983/3
Matrix: Water
Analysis Batch: 381983

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.12	U	0.12	0.030	mg/L			07/30/16 04:37	1
Sulfate	0.60	U	0.60	0.11	mg/L			07/30/16 04:37	1

Lab Sample ID: LCS 460-381983/5
Matrix: Water
Analysis Batch: 381983

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1.50	1.47		mg/L		98	90 - 110
Sulfate	7.50	7.22		mg/L		96	90 - 110

Lab Sample ID: LCSD 460-381983/6
Matrix: Water
Analysis Batch: 381983

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1.50	1.42		mg/L		95	90 - 110	3	15
Sulfate	7.50	7.06		mg/L		94	90 - 110	2	15

Lab Sample ID: 460-117737-11 MS
Matrix: Water
Analysis Batch: 381983

Client Sample ID: P21-072716-1030
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	220	F1	75.0	304	F1	mg/L		116	90 - 110

Lab Sample ID: 460-117737-11 MSD
Matrix: Water
Analysis Batch: 381983

Client Sample ID: P21-072716-1030
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	220	F1	75.0	309	F1	mg/L		122	90 - 110	1	15

Lab Sample ID: MB 460-382534/3
Matrix: Water
Analysis Batch: 382534

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.12	U	0.12	0.030	mg/L			08/02/16 13:23	1
Sulfate	0.60	U	0.60	0.11	mg/L			08/02/16 13:23	1

Lab Sample ID: LCS 460-382534/5
Matrix: Water
Analysis Batch: 382534

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1.50	1.52		mg/L		102	90 - 110
Sulfate	7.50	7.52		mg/L		100	90 - 110

TestAmerica Edison

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

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

Lab Sample ID: LCSD 460-382534/6
Matrix: Water
Analysis Batch: 382534

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1.50	1.52		mg/L		101	90 - 110	0	15
Sulfate	7.50	7.48		mg/L		100	90 - 110	1	15

Lab Sample ID: 460-117737-11 MS
Matrix: Water
Analysis Batch: 382534

Client Sample ID: P21-072716-1030
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	81		75.0	160		mg/L		106	90 - 110

Lab Sample ID: 460-117737-11 MSD
Matrix: Water
Analysis Batch: 382534

Client Sample ID: P21-072716-1030
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	81		75.0	157		mg/L		102	90 - 110	2	15

Lab Sample ID: MB 460-382940/3
Matrix: Water
Analysis Batch: 382940

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.12	U	0.12	0.030	mg/L			08/04/16 15:40	1
Sulfate	0.60	U	0.60	0.11	mg/L			08/04/16 15:40	1

Lab Sample ID: LCS 460-382940/4
Matrix: Water
Analysis Batch: 382940

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1.50	1.51		mg/L		101	90 - 110
Sulfate	7.50	7.52		mg/L		100	90 - 110

Lab Sample ID: LCSD 460-382940/5
Matrix: Water
Analysis Batch: 382940

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1.50	1.52		mg/L		101	90 - 110	0	15
Sulfate	7.50	7.55		mg/L		101	90 - 110	0	15

Method: 9056A - Anions, Ion Chromatography - DL

Lab Sample ID: 460-117737-11 DU
Matrix: Water
Analysis Batch: 381983

Client Sample ID: P21-072716-1030
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfate - DL	220	F1	223		mg/L		3	15

TestAmerica Edison

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

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

Lab Sample ID: 460-117737-11 DU
Matrix: Water
Analysis Batch: 382534

Client Sample ID: P21-072716-1030
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride - DL	81		82.6		mg/L		2	15
Sulfate - DL	200		207		mg/L		2	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 460-382004/1-A
Matrix: Water
Analysis Batch: 382523

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 382004

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	200	U	200	5.5	ug/L		07/29/16 19:10	08/02/16 11:41	1
Calcium	5000	U	5000	320	ug/L		07/29/16 19:10	08/02/16 11:41	1
Iron	150	U	150	65	ug/L		07/29/16 19:10	08/02/16 11:41	1
Magnesium	5000	U	5000	260	ug/L		07/29/16 19:10	08/02/16 11:41	1
Manganese	15	U	15	4.9	ug/L		07/29/16 19:10	08/02/16 11:41	1
Sodium	5000	U	5000	320	ug/L		07/29/16 19:10	08/02/16 11:41	1
Nickel	40	U	40	5.4	ug/L		07/29/16 19:10	08/02/16 11:41	1
Chromium	10	U	10	4.5	ug/L		07/29/16 19:10	08/02/16 11:41	1
Potassium	5000	U	5000	120	ug/L		07/29/16 19:10	08/02/16 11:41	1

Lab Sample ID: LCS 460-382004/2-A
Matrix: Water
Analysis Batch: 382523

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 382004

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Barium	2000	2090		ug/L		104	80 - 120
Calcium	20000	20400		ug/L		102	80 - 120
Iron	1000	1080		ug/L		108	80 - 120
Magnesium	20000	20100		ug/L		100	80 - 120
Manganese	500	529		ug/L		106	80 - 120
Sodium	20000	20000		ug/L		100	80 - 120
Nickel	500	531		ug/L		106	80 - 120
Chromium	200	213		ug/L		107	80 - 120
Potassium	20000	19600		ug/L		98	80 - 120

Lab Sample ID: MB 460-382275/1-A
Matrix: Water
Analysis Batch: 382523

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 382275

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	200	U	200	5.5	ug/L		08/01/16 07:14	08/02/16 13:18	1
Calcium	5000	U	5000	320	ug/L		08/01/16 07:14	08/02/16 13:18	1
Iron	150	U	150	65	ug/L		08/01/16 07:14	08/02/16 13:18	1
Magnesium	5000	U	5000	260	ug/L		08/01/16 07:14	08/02/16 13:18	1
Manganese	15	U	15	4.9	ug/L		08/01/16 07:14	08/02/16 13:18	1
Sodium	5000	U	5000	320	ug/L		08/01/16 07:14	08/02/16 13:18	1
Nickel	40	U	40	5.4	ug/L		08/01/16 07:14	08/02/16 13:18	1
Chromium	10	U	10	4.5	ug/L		08/01/16 07:14	08/02/16 13:18	1

TestAmerica Edison

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

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

Lab Sample ID: MB 460-382275/1-A
Matrix: Water
Analysis Batch: 382523

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 382275

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	5000	U	5000	120	ug/L		08/01/16 07:14	08/02/16 13:18	1

Lab Sample ID: LCS 460-382275/2-A
Matrix: Water
Analysis Batch: 382523

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 382275

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Barium	2000	1960		ug/L		98	80 - 120
Calcium	20000	19100		ug/L		95	80 - 120
Iron	1000	1010		ug/L		101	80 - 120
Magnesium	20000	18700		ug/L		94	80 - 120
Manganese	500	495		ug/L		99	80 - 120
Sodium	20000	18800		ug/L		94	80 - 120
Nickel	500	499		ug/L		100	80 - 120
Chromium	200	200		ug/L		100	80 - 120
Potassium	20000	18400		ug/L		92	80 - 120

Lab Sample ID: 460-117737-11 MS
Matrix: Water
Analysis Batch: 382523

Client Sample ID: P21-072716-1030
Prep Type: Total/NA
Prep Batch: 382275

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Barium	54	J	2000	2040		ug/L		99	75 - 125
Calcium	140000		20000	160000	4	ug/L		102	75 - 125
Iron	1400		1000	2380		ug/L		95	75 - 125
Magnesium	36000		20000	55700		ug/L		97	75 - 125
Manganese	120		500	614		ug/L		99	75 - 125
Sodium	140000		20000	161000	4	ug/L		104	75 - 125
Nickel	160		500	650		ug/L		99	75 - 125
Chromium	10	U	200	199		ug/L		100	75 - 125
Potassium	3700	J	20000	23000		ug/L		96	75 - 125

Lab Sample ID: 460-117737-11 DU
Matrix: Water
Analysis Batch: 382523

Client Sample ID: P21-072716-1030
Prep Type: Total/NA
Prep Batch: 382275

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Barium	54	J	54.5	J	ug/L		0.3	20
Calcium	140000		139000		ug/L		0.6	20
Iron	1400		1420		ug/L		0.5	20
Magnesium	36000		36000		ug/L		0.5	20
Manganese	120		119		ug/L		0.4	20
Sodium	140000		141000		ug/L		0	20
Nickel	160		156		ug/L		0.2	20
Chromium	10	U	10	U	ug/L		NC	20
Potassium	3700	J	3750	J	ug/L		1	20

TestAmerica Edison

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

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

Lab Sample ID: 460-117737-11 MS

Matrix: Water
Analysis Batch: 382523

Client Sample ID: P21-072716-1030

Prep Type: Dissolved
Prep Batch: 382004

Analyte	Sample	Sample	Spike	MS		Unit	D	%Rec	Limits
	Result	Qualifier		Result	Qualifier				
Barium	55	J	2000	2110		ug/L		103	75 - 125
Calcium	140000		20000	159000	4	ug/L		90	75 - 125
Iron	1100		1000	2160		ug/L		102	75 - 125
Magnesium	37000		20000	56400		ug/L		98	75 - 125
Manganese	120		500	628		ug/L		102	75 - 125
Sodium	140000		20000	160000	4	ug/L		95	75 - 125
Nickel	160		500	668		ug/L		102	75 - 125
Chromium	10	U	200	207		ug/L		103	75 - 125
Potassium	3600	J	20000	23600		ug/L		100	75 - 125

Lab Sample ID: 460-117737-11 DU

Matrix: Water
Analysis Batch: 382523

Client Sample ID: P21-072716-1030

Prep Type: Dissolved
Prep Batch: 382004

Analyte	Sample	Sample	DU		Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Barium	55	J	55.1	J	ug/L		0.8	20
Calcium	140000		141000		ug/L		0.07	20
Iron	1100		1160		ug/L		1	20
Magnesium	37000		36800		ug/L		0.2	20
Manganese	120		119		ug/L		0.5	20
Sodium	140000		141000		ug/L		0	20
Nickel	160		158		ug/L		0.5	20
Chromium	10	U	10	U	ug/L		NC	20
Potassium	3600	J	3640	J	ug/L		0.05	20

Method: 9012B - Cyanide, Total and/or Amenable

Lab Sample ID: MB 460-383239/1-A

Matrix: Water
Analysis Batch: 383380

Client Sample ID: Method Blank

Prep Type: Total/NA
Prep Batch: 383239

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Cyanide, Total	0.010	U	0.010	0.0040	mg/L		08/05/16 14:00	08/06/16 11:54	1

Lab Sample ID: HLCS 460-383239/3-A

Matrix: Water
Analysis Batch: 383380

Client Sample ID: Lab Control Sample

Prep Type: Total/NA
Prep Batch: 383239

Analyte	Spike	HLCS		Unit	D	%Rec	Limits
		Added	Result				
Cyanide, Total	0.200	0.210		mg/L		105	90 - 110

Lab Sample ID: LLCS 460-383239/2-A

Matrix: Water
Analysis Batch: 383380

Client Sample ID: Lab Control Sample

Prep Type: Total/NA
Prep Batch: 383239

Analyte	Spike	LLCS		Unit	D	%Rec	Limits
		Added	Result				
Cyanide, Total	0.100	0.108		mg/L		108	90 - 110

TestAmerica Edison

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

Method: 9012B - Cyanide, Total and/or Amenable (Continued)

Lab Sample ID: 460-117737-8 MS
Matrix: Water
Analysis Batch: 383380

Client Sample ID: P12-072616-0800
Prep Type: Total/NA
Prep Batch: 383239

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Cyanide, Total	0.010	U	0.200	0.206		mg/L		103	90 - 110

Lab Sample ID: 460-117737-8 MSD
Matrix: Water
Analysis Batch: 383380

Client Sample ID: P12-072616-0800
Prep Type: Total/NA
Prep Batch: 383239

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Cyanide, Total	0.010	U	0.200	0.199		mg/L		100	90 - 110	3	10

Lab Sample ID: MB 460-383629/1-A
Matrix: Water
Analysis Batch: 384010

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 383629

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0040	mg/L		08/08/16 11:40	08/09/16 12:20	1

Lab Sample ID: HLCS 460-383629/3-A
Matrix: Water
Analysis Batch: 384010

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 383629

Analyte	Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	Limits
Cyanide, Total	0.200	0.214		mg/L		107	90 - 110

Lab Sample ID: LLCS 460-383629/2-A
Matrix: Water
Analysis Batch: 384010

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 383629

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	Limits
Cyanide, Total	0.100	0.105		mg/L		105	90 - 110

Lab Sample ID: 460-117737-11 MS
Matrix: Water
Analysis Batch: 384010

Client Sample ID: P21-072716-1030
Prep Type: Total/NA
Prep Batch: 383629

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Cyanide, Total	0.010	U	0.200	0.216		mg/L		108	90 - 110

Lab Sample ID: 460-117737-11 MSD
Matrix: Water
Analysis Batch: 384010

Client Sample ID: P21-072716-1030
Prep Type: Total/NA
Prep Batch: 383629

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Cyanide, Total	0.010	U	0.200	0.215		mg/L		108	90 - 110	0	10

QC Association Summary

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

HPLC/IC

Analysis Batch: 381983

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-117737-1 - DL	P15T-072616-1015	Total/NA	Water	9056A	
460-117737-2 - DL	P18T-072616-1210	Total/NA	Water	9056A	
460-117737-3 - DL	P3R-072616-1335	Total/NA	Water	9056A	
460-117737-5 - DL	P02-072616-1600	Total/NA	Water	9056A	
460-117737-8 - DL	P12-072616-0800	Total/NA	Water	9056A	
460-117737-9 - DL	P18-072716-0800	Total/NA	Water	9056A	
460-117737-11 - DL	P21-072716-1030	Total/NA	Water	9056A	
460-117737-13 - DL	P08T-072716-1300	Total/NA	Water	9056A	
460-117737-15 - DL	0908-072716-0001	Total/NA	Water	9056A	
MB 460-381983/3	Method Blank	Total/NA	Water	9056A	
LCS 460-381983/5	Lab Control Sample	Total/NA	Water	9056A	
LCSD 460-381983/6	Lab Control Sample Dup	Total/NA	Water	9056A	
460-117737-11 MS	P21-072716-1030	Total/NA	Water	9056A	
460-117737-11 MSD	P21-072716-1030	Total/NA	Water	9056A	
460-117737-11 DU - DL	P21-072716-1030	Total/NA	Water	9056A	

Analysis Batch: 382534

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-117737-1 - DL	P15T-072616-1015	Total/NA	Water	9056A	
460-117737-2 - DL	P18T-072616-1210	Total/NA	Water	9056A	
460-117737-3 - DL	P3R-072616-1335	Total/NA	Water	9056A	
460-117737-4 - DL	P3T-072616-1435	Total/NA	Water	9056A	
460-117737-5 - DL	P02-072616-1600	Total/NA	Water	9056A	
460-117737-6 - DL	P02T-072616-1640	Total/NA	Water	9056A	
460-117737-7 - DL	P16-072616-1730	Total/NA	Water	9056A	
460-117737-8 - DL	P12-072616-0800	Total/NA	Water	9056A	
460-117737-9 - DL	P18-072716-0800	Total/NA	Water	9056A	
460-117737-10 - DL	P16T-072716-0900	Total/NA	Water	9056A	
460-117737-11 - DL	P21-072716-1030	Total/NA	Water	9056A	
460-117737-12 - DL	P21T-072716-1135	Total/NA	Water	9056A	
460-117737-13 - DL	P08T-072716-1300	Total/NA	Water	9056A	
460-117737-15 - DL	0908-072716-0001	Total/NA	Water	9056A	
MB 460-382534/3	Method Blank	Total/NA	Water	9056A	
LCS 460-382534/5	Lab Control Sample	Total/NA	Water	9056A	
LCSD 460-382534/6	Lab Control Sample Dup	Total/NA	Water	9056A	
460-117737-11 MS	P21-072716-1030	Total/NA	Water	9056A	
460-117737-11 MSD	P21-072716-1030	Total/NA	Water	9056A	
460-117737-11 DU - DL	P21-072716-1030	Total/NA	Water	9056A	

Analysis Batch: 382940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-117737-14 - DL	P08R-072716-1410	Total/NA	Water	9056A	
MB 460-382940/3	Method Blank	Total/NA	Water	9056A	
LCS 460-382940/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 460-382940/5	Lab Control Sample Dup	Total/NA	Water	9056A	
460-117737-14 MS - DL	P08R-072716-1410	Total/NA	Water	9056A	
460-117737-14 MSD - DL	P08R-072716-1410	Total/NA	Water	9056A	

QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

Metals

Prep Batch: 382004

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-117737-2	P18T-072616-1210	Dissolved	Water	3010A	
460-117737-3	P3R-072616-1335	Dissolved	Water	3010A	
460-117737-4	P3T-072616-1435	Dissolved	Water	3010A	
460-117737-5	P02-072616-1600	Dissolved	Water	3010A	
460-117737-6	P02T-072616-1640	Dissolved	Water	3010A	
460-117737-7	P16-072616-1730	Dissolved	Water	3010A	
460-117737-8	P12-072616-0800	Dissolved	Water	3010A	
460-117737-9	P18-072716-0800	Dissolved	Water	3010A	
460-117737-10	P16T-072716-0900	Dissolved	Water	3010A	
460-117737-11	P21-072716-1030	Dissolved	Water	3010A	
460-117737-12	P21T-072716-1135	Dissolved	Water	3010A	
460-117737-13	P08T-072716-1300	Dissolved	Water	3010A	
MB 460-382004/1-A	Method Blank	Total/NA	Water	3010A	
LCS 460-382004/2-A	Lab Control Sample	Total/NA	Water	3010A	
460-117737-11 MS	P21-072716-1030	Dissolved	Water	3010A	
460-117737-11 DU	P21-072716-1030	Dissolved	Water	3010A	

Prep Batch: 382275

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-117737-1	P15T-072616-1015	Total/NA	Water	3010A	
460-117737-2	P18T-072616-1210	Total/NA	Water	3010A	
460-117737-3	P3R-072616-1335	Total/NA	Water	3010A	
460-117737-4	P3T-072616-1435	Total/NA	Water	3010A	
460-117737-5	P02-072616-1600	Total/NA	Water	3010A	
460-117737-6	P02T-072616-1640	Total/NA	Water	3010A	
460-117737-7	P16-072616-1730	Total/NA	Water	3010A	
460-117737-8	P12-072616-0800	Total/NA	Water	3010A	
460-117737-9	P18-072716-0800	Total/NA	Water	3010A	
460-117737-10	P16T-072716-0900	Total/NA	Water	3010A	
460-117737-11	P21-072716-1030	Total/NA	Water	3010A	
460-117737-12	P21T-072716-1135	Total/NA	Water	3010A	
460-117737-13	P08T-072716-1300	Total/NA	Water	3010A	
460-117737-14	P08R-072716-1410	Total/NA	Water	3010A	
460-117737-15	0908-072716-0001	Total/NA	Water	3010A	
MB 460-382275/1-A	Method Blank	Total/NA	Water	3010A	
LCS 460-382275/2-A	Lab Control Sample	Total/NA	Water	3010A	
460-117737-11 MS	P21-072716-1030	Total/NA	Water	3010A	
460-117737-11 DU	P21-072716-1030	Total/NA	Water	3010A	

Analysis Batch: 382523

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-117737-1	P15T-072616-1015	Total/NA	Water	6010C	382275
460-117737-2	P18T-072616-1210	Dissolved	Water	6010C	382004
460-117737-2	P18T-072616-1210	Total/NA	Water	6010C	382275
460-117737-3	P3R-072616-1335	Dissolved	Water	6010C	382004
460-117737-3	P3R-072616-1335	Dissolved	Water	6010C	382004
460-117737-3	P3R-072616-1335	Total/NA	Water	6010C	382275
460-117737-3	P3R-072616-1335	Total/NA	Water	6010C	382275
460-117737-4	P3T-072616-1435	Dissolved	Water	6010C	382004
460-117737-4	P3T-072616-1435	Total/NA	Water	6010C	382275
460-117737-5	P02-072616-1600	Dissolved	Water	6010C	382004

TestAmerica Edison

QC Association Summary

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

Metals (Continued)

Analysis Batch: 382523 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-117737-5	P02-072616-1600	Total/NA	Water	6010C	382275
460-117737-6	P02T-072616-1640	Dissolved	Water	6010C	382004
460-117737-6	P02T-072616-1640	Dissolved	Water	6010C	382004
460-117737-6	P02T-072616-1640	Total/NA	Water	6010C	382275
460-117737-6	P02T-072616-1640	Total/NA	Water	6010C	382275
460-117737-7	P16-072616-1730	Dissolved	Water	6010C	382004
460-117737-7	P16-072616-1730	Dissolved	Water	6010C	382004
460-117737-7	P16-072616-1730	Total/NA	Water	6010C	382275
460-117737-7	P16-072616-1730	Total/NA	Water	6010C	382275
460-117737-8	P12-072616-0800	Dissolved	Water	6010C	382004
460-117737-8	P12-072616-0800	Total/NA	Water	6010C	382275
460-117737-9	P18-072716-0800	Dissolved	Water	6010C	382004
460-117737-9	P18-072716-0800	Dissolved	Water	6010C	382004
460-117737-9	P18-072716-0800	Total/NA	Water	6010C	382275
460-117737-9	P18-072716-0800	Total/NA	Water	6010C	382275
460-117737-10	P16T-072716-0900	Dissolved	Water	6010C	382004
460-117737-10	P16T-072716-0900	Total/NA	Water	6010C	382275
460-117737-11	P21-072716-1030	Dissolved	Water	6010C	382004
460-117737-11	P21-072716-1030	Total/NA	Water	6010C	382275
460-117737-12	P21T-072716-1135	Dissolved	Water	6010C	382004
460-117737-12	P21T-072716-1135	Total/NA	Water	6010C	382275
460-117737-13	P08T-072716-1300	Dissolved	Water	6010C	382004
460-117737-13	P08T-072716-1300	Total/NA	Water	6010C	382275
460-117737-14	P08R-072716-1410	Total/NA	Water	6010C	382275
460-117737-15	0908-072716-0001	Total/NA	Water	6010C	382275
MB 460-382004/1-A	Method Blank	Total/NA	Water	6010C	382004
MB 460-382275/1-A	Method Blank	Total/NA	Water	6010C	382275
LCS 460-382004/2-A	Lab Control Sample	Total/NA	Water	6010C	382004
LCS 460-382275/2-A	Lab Control Sample	Total/NA	Water	6010C	382275
460-117737-11 MS	P21-072716-1030	Dissolved	Water	6010C	382004
460-117737-11 MS	P21-072716-1030	Total/NA	Water	6010C	382275
460-117737-11 DU	P21-072716-1030	Dissolved	Water	6010C	382004
460-117737-11 DU	P21-072716-1030	Total/NA	Water	6010C	382275

General Chemistry

Prep Batch: 383239

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-117737-1	P15T-072616-1015	Total/NA	Water	9012B	
460-117737-2	P18T-072616-1210	Total/NA	Water	9012B	
460-117737-3	P3R-072616-1335	Total/NA	Water	9012B	
460-117737-4	P3T-072616-1435	Total/NA	Water	9012B	
460-117737-5	P02-072616-1600	Total/NA	Water	9012B	
460-117737-6	P02T-072616-1640	Total/NA	Water	9012B	
460-117737-7	P16-072616-1730	Total/NA	Water	9012B	
460-117737-8	P12-072616-0800	Total/NA	Water	9012B	
MB 460-383239/1-A	Method Blank	Total/NA	Water	9012B	
HLCS 460-383239/3-A	Lab Control Sample	Total/NA	Water	9012B	
LLCS 460-383239/2-A	Lab Control Sample	Total/NA	Water	9012B	
460-117737-8 MS	P12-072616-0800	Total/NA	Water	9012B	

TestAmerica Edison

QC Association Summary

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

General Chemistry (Continued)

Prep Batch: 383239 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-117737-8 MSD	P12-072616-0800	Total/NA	Water	9012B	

Analysis Batch: 383380

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-117737-1	P15T-072616-1015	Total/NA	Water	9012B	383239
460-117737-2	P18T-072616-1210	Total/NA	Water	9012B	383239
460-117737-3	P3R-072616-1335	Total/NA	Water	9012B	383239
460-117737-4	P3T-072616-1435	Total/NA	Water	9012B	383239
460-117737-5	P02-072616-1600	Total/NA	Water	9012B	383239
460-117737-6	P02T-072616-1640	Total/NA	Water	9012B	383239
460-117737-7	P16-072616-1730	Total/NA	Water	9012B	383239
460-117737-8	P12-072616-0800	Total/NA	Water	9012B	383239
MB 460-383239/1-A	Method Blank	Total/NA	Water	9012B	383239
HLCS 460-383239/3-A	Lab Control Sample	Total/NA	Water	9012B	383239
LLCS 460-383239/2-A	Lab Control Sample	Total/NA	Water	9012B	383239
460-117737-8 MS	P12-072616-0800	Total/NA	Water	9012B	383239
460-117737-8 MSD	P12-072616-0800	Total/NA	Water	9012B	383239

Prep Batch: 383629

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-117737-9	P18-072716-0800	Total/NA	Water	9012B	
460-117737-10	P16T-072716-0900	Total/NA	Water	9012B	
460-117737-11	P21-072716-1030	Total/NA	Water	9012B	
460-117737-12	P21T-072716-1135	Total/NA	Water	9012B	
460-117737-13	P08T-072716-1300	Total/NA	Water	9012B	
460-117737-14	P08R-072716-1410	Total/NA	Water	9012B	
460-117737-15	0908-072716-0001	Total/NA	Water	9012B	
MB 460-383629/1-A	Method Blank	Total/NA	Water	9012B	
HLCS 460-383629/3-A	Lab Control Sample	Total/NA	Water	9012B	
LLCS 460-383629/2-A	Lab Control Sample	Total/NA	Water	9012B	
460-117737-11 MS	P21-072716-1030	Total/NA	Water	9012B	
460-117737-11 MSD	P21-072716-1030	Total/NA	Water	9012B	

Analysis Batch: 384010

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-117737-9	P18-072716-0800	Total/NA	Water	9012B	383629
460-117737-10	P16T-072716-0900	Total/NA	Water	9012B	383629
460-117737-11	P21-072716-1030	Total/NA	Water	9012B	383629
460-117737-12	P21T-072716-1135	Total/NA	Water	9012B	383629
460-117737-13	P08T-072716-1300	Total/NA	Water	9012B	383629
460-117737-14	P08R-072716-1410	Total/NA	Water	9012B	383629
460-117737-15	0908-072716-0001	Total/NA	Water	9012B	383629
MB 460-383629/1-A	Method Blank	Total/NA	Water	9012B	383629
HLCS 460-383629/3-A	Lab Control Sample	Total/NA	Water	9012B	383629
LLCS 460-383629/2-A	Lab Control Sample	Total/NA	Water	9012B	383629
460-117737-11 MS	P21-072716-1030	Total/NA	Water	9012B	383629
460-117737-11 MSD	P21-072716-1030	Total/NA	Water	9012B	383629

Lab Chronicle

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

Client Sample ID: P15T-072616-1015

Lab Sample ID: 460-117737-1

Date Collected: 07/26/16 10:15

Matrix: Water

Date Received: 07/28/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A	DL	10	381983	07/30/16 09:21	CDC	TAL EDI
Total/NA	Analysis	9056A	DL	10	382534	08/02/16 17:58	MJA	TAL EDI
Total/NA	Prep	3010A			382275	08/01/16 07:14	QZY	TAL EDI
Total/NA	Analysis	6010C		1	382523	08/02/16 14:03	YZH	TAL EDI
Total/NA	Prep	9012B			383239	08/05/16 14:00	SAO	TAL EDI
Total/NA	Analysis	9012B		1	383380	08/06/16 12:03	MAL	TAL EDI

Client Sample ID: P18T-072616-1210

Lab Sample ID: 460-117737-2

Date Collected: 07/26/16 12:10

Matrix: Water

Date Received: 07/28/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A	DL	10	381983	07/30/16 09:41	CDC	TAL EDI
Total/NA	Analysis	9056A	DL	10	382534	08/02/16 18:18	MJA	TAL EDI
Dissolved	Prep	3010A			382004	07/29/16 19:10	EAE	TAL EDI
Dissolved	Analysis	6010C		1	382523	08/02/16 12:23	YZH	TAL EDI
Total/NA	Prep	3010A			382275	08/01/16 07:14	QZY	TAL EDI
Total/NA	Analysis	6010C		1	382523	08/02/16 14:07	YZH	TAL EDI
Total/NA	Prep	9012B			383239	08/05/16 14:00	SAO	TAL EDI
Total/NA	Analysis	9012B		1	383380	08/06/16 12:04	MAL	TAL EDI

Client Sample ID: P3R-072616-1335

Lab Sample ID: 460-117737-3

Date Collected: 07/26/16 13:35

Matrix: Water

Date Received: 07/28/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A	DL	10	381983	07/30/16 10:01	CDC	TAL EDI
Total/NA	Analysis	9056A	DL	10	382534	08/02/16 18:38	MJA	TAL EDI
Dissolved	Prep	3010A			382004	07/29/16 19:10	EAE	TAL EDI
Dissolved	Analysis	6010C		1	382523	08/02/16 12:27	YZH	TAL EDI
Dissolved	Prep	3010A			382004	07/29/16 19:10	EAE	TAL EDI
Dissolved	Analysis	6010C		5	382523	08/02/16 15:35	YZH	TAL EDI
Total/NA	Prep	3010A			382275	08/01/16 07:14	QZY	TAL EDI
Total/NA	Analysis	6010C		1	382523	08/02/16 14:11	YZH	TAL EDI
Total/NA	Prep	3010A			382275	08/01/16 07:14	QZY	TAL EDI
Total/NA	Analysis	6010C		5	382523	08/02/16 15:59	YZH	TAL EDI
Total/NA	Prep	9012B			383239	08/05/16 14:00	SAO	TAL EDI
Total/NA	Analysis	9012B		1	383380	08/06/16 12:04	MAL	TAL EDI

Lab Chronicle

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

Client Sample ID: P3T-072616-1435

Lab Sample ID: 460-117737-4

Date Collected: 07/26/16 14:35

Matrix: Water

Date Received: 07/28/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A	DL	100	382534	08/02/16 18:58	MJA	TAL EDI
Dissolved	Prep	3010A			382004	07/29/16 19:10	EAE	TAL EDI
Dissolved	Analysis	6010C		1	382523	08/02/16 12:31	YZH	TAL EDI
Total/NA	Prep	3010A			382275	08/01/16 07:14	QZY	TAL EDI
Total/NA	Analysis	6010C		1	382523	08/02/16 14:15	YZH	TAL EDI
Total/NA	Prep	9012B			383239	08/05/16 14:00	SAO	TAL EDI
Total/NA	Analysis	9012B		1	383380	08/06/16 12:05	MAL	TAL EDI

Client Sample ID: P02-072616-1600

Lab Sample ID: 460-117737-5

Date Collected: 07/26/16 16:00

Matrix: Water

Date Received: 07/28/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A	DL	10	381983	07/30/16 12:03	CDC	TAL EDI
Total/NA	Analysis	9056A	DL	10	382534	08/02/16 21:47	MJA	TAL EDI
Dissolved	Prep	3010A			382004	07/29/16 19:10	EAE	TAL EDI
Dissolved	Analysis	6010C		1	382523	08/02/16 12:35	YZH	TAL EDI
Total/NA	Prep	3010A			382275	08/01/16 07:14	QZY	TAL EDI
Total/NA	Analysis	6010C		1	382523	08/02/16 14:19	YZH	TAL EDI
Total/NA	Prep	9012B			383239	08/05/16 14:00	SAO	TAL EDI
Total/NA	Analysis	9012B		1	383380	08/06/16 12:06	MAL	TAL EDI

Client Sample ID: P02T-072616-1640

Lab Sample ID: 460-117737-6

Date Collected: 07/26/16 16:40

Matrix: Water

Date Received: 07/28/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A	DL	100	382534	08/02/16 22:08	MJA	TAL EDI
Dissolved	Prep	3010A			382004	07/29/16 19:10	EAE	TAL EDI
Dissolved	Analysis	6010C		1	382523	08/02/16 12:39	YZH	TAL EDI
Dissolved	Prep	3010A			382004	07/29/16 19:10	EAE	TAL EDI
Dissolved	Analysis	6010C		5	382523	08/02/16 15:39	YZH	TAL EDI
Total/NA	Prep	3010A			382275	08/01/16 07:14	QZY	TAL EDI
Total/NA	Analysis	6010C		1	382523	08/02/16 14:23	YZH	TAL EDI
Total/NA	Prep	3010A			382275	08/01/16 07:14	QZY	TAL EDI
Total/NA	Analysis	6010C		5	382523	08/02/16 16:03	YZH	TAL EDI
Total/NA	Prep	9012B			383239	08/05/16 14:00	SAO	TAL EDI
Total/NA	Analysis	9012B		1	383380	08/06/16 12:07	MAL	TAL EDI

Lab Chronicle

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

Client Sample ID: P16-072616-1730

Lab Sample ID: 460-117737-7

Date Collected: 07/26/16 17:30

Matrix: Water

Date Received: 07/28/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A	DL	100	382534	08/02/16 22:28	MJA	TAL EDI
Dissolved	Prep	3010A			382004	07/29/16 19:10	EAE	TAL EDI
Dissolved	Analysis	6010C		1	382523	08/02/16 12:43	YZH	TAL EDI
Dissolved	Prep	3010A			382004	07/29/16 19:10	EAE	TAL EDI
Dissolved	Analysis	6010C		5	382523	08/02/16 15:43	YZH	TAL EDI
Total/NA	Prep	3010A			382275	08/01/16 07:14	QZY	TAL EDI
Total/NA	Analysis	6010C		1	382523	08/02/16 14:27	YZH	TAL EDI
Total/NA	Prep	3010A			382275	08/01/16 07:14	QZY	TAL EDI
Total/NA	Analysis	6010C		5	382523	08/02/16 16:07	YZH	TAL EDI
Total/NA	Prep	9012B			383239	08/05/16 14:00	SAO	TAL EDI
Total/NA	Analysis	9012B		1	383380	08/06/16 12:08	MAL	TAL EDI

Client Sample ID: P12-072616-0800

Lab Sample ID: 460-117737-8

Date Collected: 07/26/16 08:00

Matrix: Water

Date Received: 07/28/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A	DL	10	381983	07/30/16 13:04	CDC	TAL EDI
Total/NA	Analysis	9056A	DL	10	382534	08/02/16 22:48	MJA	TAL EDI
Dissolved	Prep	3010A			382004	07/29/16 19:10	EAE	TAL EDI
Dissolved	Analysis	6010C		1	382523	08/02/16 12:47	YZH	TAL EDI
Total/NA	Prep	3010A			382275	08/01/16 07:14	QZY	TAL EDI
Total/NA	Analysis	6010C		1	382523	08/02/16 14:31	YZH	TAL EDI
Total/NA	Prep	9012B			383239	08/05/16 14:00	SAO	TAL EDI
Total/NA	Analysis	9012B		1	383380	08/06/16 12:10	MAL	TAL EDI

Client Sample ID: P18-072716-0800

Lab Sample ID: 460-117737-9

Date Collected: 07/27/16 08:00

Matrix: Water

Date Received: 07/28/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A	DL	10	381983	07/30/16 13:24	CDC	TAL EDI
Total/NA	Analysis	9056A	DL	10	382534	08/02/16 23:09	MJA	TAL EDI
Dissolved	Prep	3010A			382004	07/29/16 19:10	EAE	TAL EDI
Dissolved	Analysis	6010C		1	382523	08/02/16 12:51	YZH	TAL EDI
Dissolved	Prep	3010A			382004	07/29/16 19:10	EAE	TAL EDI
Dissolved	Analysis	6010C		5	382523	08/02/16 16:11	YZH	TAL EDI
Total/NA	Prep	3010A			382275	08/01/16 07:14	QZY	TAL EDI
Total/NA	Analysis	6010C		1	382523	08/02/16 14:35	YZH	TAL EDI
Total/NA	Prep	3010A			382275	08/01/16 07:14	QZY	TAL EDI
Total/NA	Analysis	6010C		5	382523	08/02/16 16:14	YZH	TAL EDI
Total/NA	Prep	9012B			383629	08/08/16 11:40	MBE	TAL EDI
Total/NA	Analysis	9012B		1	384010	08/09/16 12:27	MAL	TAL EDI

TestAmerica Edison

Lab Chronicle

Client: Haley & Aldrich, Inc.
 Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

Client Sample ID: P16T-072716-0900

Lab Sample ID: 460-117737-10

Date Collected: 07/27/16 09:00

Matrix: Water

Date Received: 07/28/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A	DL	50	382534	08/02/16 23:29	MJA	TAL EDI
Dissolved	Prep	3010A			382004	07/29/16 19:10	EAE	TAL EDI
Dissolved	Analysis	6010C		1	382523	08/02/16 12:55	YZH	TAL EDI
Total/NA	Prep	3010A			382275	08/01/16 07:14	QZY	TAL EDI
Total/NA	Analysis	6010C		1	382523	08/02/16 15:07	YZH	TAL EDI
Total/NA	Prep	9012B			383629	08/08/16 11:40	MBE	TAL EDI
Total/NA	Analysis	9012B		1	384010	08/09/16 12:27	MAL	TAL EDI

Client Sample ID: P21-072716-1030

Lab Sample ID: 460-117737-11

Date Collected: 07/27/16 10:30

Matrix: Water

Date Received: 07/28/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A	DL	10	381983	07/30/16 14:05	CDC	TAL EDI
Total/NA	Analysis	9056A	DL	50	382534	08/02/16 23:49	MJA	TAL EDI
Dissolved	Prep	3010A			382004	07/29/16 19:10	EAE	TAL EDI
Dissolved	Analysis	6010C		1	382523	08/02/16 11:53	YZH	TAL EDI
Total/NA	Prep	3010A			382275	08/01/16 07:14	QZY	TAL EDI
Total/NA	Analysis	6010C		1	382523	08/02/16 13:29	YZH	TAL EDI
Total/NA	Prep	9012B			383629	08/08/16 11:40	MBE	TAL EDI
Total/NA	Analysis	9012B		1	384010	08/09/16 12:24	MAL	TAL EDI

Client Sample ID: P21T-072716-1135

Lab Sample ID: 460-117737-12

Date Collected: 07/27/16 11:35

Matrix: Water

Date Received: 07/28/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A	DL	50	382534	08/03/16 00:09	MJA	TAL EDI
Dissolved	Prep	3010A			382004	07/29/16 19:10	EAE	TAL EDI
Dissolved	Analysis	6010C		1	382523	08/02/16 13:10	YZH	TAL EDI
Total/NA	Prep	3010A			382275	08/01/16 07:14	QZY	TAL EDI
Total/NA	Analysis	6010C		1	382523	08/02/16 15:11	YZH	TAL EDI
Total/NA	Prep	9012B			383629	08/08/16 11:40	MBE	TAL EDI
Total/NA	Analysis	9012B		1	384010	08/09/16 12:28	MAL	TAL EDI

Client Sample ID: P08T-072716-1300

Lab Sample ID: 460-117737-13

Date Collected: 07/27/16 13:00

Matrix: Water

Date Received: 07/28/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A	DL	10	381983	08/01/16 14:18	CDC	TAL EDI
Total/NA	Analysis	9056A	DL	10	382534	08/03/16 00:30	MJA	TAL EDI

TestAmerica Edison

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

Client Sample ID: P08T-072716-1300

Lab Sample ID: 460-117737-13

Date Collected: 07/27/16 13:00

Matrix: Water

Date Received: 07/28/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3010A			382004	07/29/16 19:10	EAE	TAL EDI
Dissolved	Analysis	6010C		1	382523	08/02/16 13:14	YZH	TAL EDI
Total/NA	Prep	3010A			382275	08/01/16 07:14	QZY	TAL EDI
Total/NA	Analysis	6010C		1	382523	08/02/16 15:15	YZH	TAL EDI
Total/NA	Prep	9012B			383629	08/08/16 11:40	MBE	TAL EDI
Total/NA	Analysis	9012B		1	384010	08/09/16 12:29	MAL	TAL EDI

Client Sample ID: P08R-072716-1410

Lab Sample ID: 460-117737-14

Date Collected: 07/27/16 14:10

Matrix: Water

Date Received: 07/28/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A	DL	100	382940	08/04/16 17:21	FPO	TAL EDI
Total/NA	Prep	3010A			382275	08/01/16 07:14	QZY	TAL EDI
Total/NA	Analysis	6010C		1	382523	08/02/16 15:19	YZH	TAL EDI
Total/NA	Prep	9012B			383629	08/08/16 11:40	MBE	TAL EDI
Total/NA	Analysis	9012B		1	384010	08/09/16 12:30	MAL	TAL EDI

Client Sample ID: 0908-072716-0001

Lab Sample ID: 460-117737-15

Date Collected: 07/27/16 00:00

Matrix: Water

Date Received: 07/28/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A	DL	10	381983	08/01/16 14:38	CDC	TAL EDI
Total/NA	Analysis	9056A	DL	50	382534	08/03/16 00:50	MJA	TAL EDI
Total/NA	Prep	3010A			382275	08/01/16 07:25	QZY	TAL EDI
Total/NA	Analysis	6010C		1	382523	08/02/16 15:23	YZH	TAL EDI
Total/NA	Prep	9012B			383629	08/08/16 11:40	MBE	TAL EDI
Total/NA	Analysis	9012B		1	384010	08/09/16 12:31	MAL	TAL EDI

Laboratory References:

TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Certification Summary

Client: Haley & Aldrich, Inc.
Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

Laboratory: TestAmerica Edison

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Connecticut	State Program	1	PH-0200	09-30-18
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	N/A	12-31-17
New Jersey	NELAP	2	12028	06-30-17
New York	NELAP	2	11452	03-31-17
Pennsylvania	NELAP	3	68-00522	02-28-17
Rhode Island	State Program	1	LAO00132	12-30-17
USDA	Federal		NJCA-003-08	04-04-17

Method Summary

Client: Haley & Aldrich, Inc.
Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	TAL EDI
6010C	Metals (ICP)	SW846	TAL EDI
9012B	Cyanide, Total and/or Amenable	SW846	TAL EDI

Protocol References:

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

Laboratory References:

TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900



Sample Summary

Client: Haley & Aldrich, Inc.
Project/Site: Racer-Elyria, Ohio-Biennial GW Sampling

TestAmerica Job ID: 460-117737-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
460-117737-1	P15T-072616-1015	Water	07/26/16 10:15	07/28/16 10:00
460-117737-2	P18T-072616-1210	Water	07/26/16 12:10	07/28/16 10:00
460-117737-3	P3R-072616-1335	Water	07/26/16 13:35	07/28/16 10:00
460-117737-4	P3T-072616-1435	Water	07/26/16 14:35	07/28/16 10:00
460-117737-5	P02-072616-1600	Water	07/26/16 16:00	07/28/16 10:00
460-117737-6	P02T-072616-1640	Water	07/26/16 16:40	07/28/16 10:00
460-117737-7	P16-072616-1730	Water	07/26/16 17:30	07/28/16 10:00
460-117737-8	P12-072616-0800	Water	07/26/16 08:00	07/28/16 10:00
460-117737-9	P18-072716-0800	Water	07/27/16 08:00	07/28/16 10:00
460-117737-10	P16T-072716-0900	Water	07/27/16 09:00	07/28/16 10:00
460-117737-11	P21-072716-1030	Water	07/27/16 10:30	07/28/16 10:00
460-117737-12	P21T-072716-1135	Water	07/27/16 11:35	07/28/16 10:00
460-117737-13	P08T-072716-1300	Water	07/27/16 13:00	07/28/16 10:00
460-117737-14	P08R-072716-1410	Water	07/27/16 14:10	07/28/16 10:00
460-117737-15	0908-072716-0001	Water	07/27/16 00:00	07/28/16 10:00

Chain of Custody Record



460-117737 Chain of Custody

COG No: 460-74659-45937.3
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Client Information

Client Contact: **Ray Wagoner** Phone: 957.620.5524 Lab P/N: **POH: Denise**

Company: **Halley & Aldrich, Inc.** E-Mail: **denise.poh@testamericainc.com**

Address: **6500 Rockside Road Suite 200** Due Date Requested: **5/5/16**

City: **Cleveland** TAT Requested (days): **5**

State, Zip: **OH, 44131** PO #: **41753-005 004**

Phone: **41753-005 004**

Email: **Ray.Wagoner@halleyaldrich.com** W/O #: **46020356**

Project Name: **Racer - Elyra, Ohio** Project #: **46020356**

Site: **SSOW#:**

Analysis Requested

Field Filtered Sample (Yes or No): **u/FF**

Perform MS/MSD (Yes or No):

6010C - Metals- Ba, Ca, Fe, Mg, Mn, Na

9012B - Cyanide, Total

9056A_ORGFM_28D - Cl & SO4

Preservation Codes:
A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Anticlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsN2O2
P - Na2CO3
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4.5
Z - other (specify)

Sample Identification	Sample Date	Sample Time	Sample Type (G=Comp, G=grab)	Matrix (Wet/dry, Small, Composite)	Preservation Code	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of containers:	Special Instructions/Note:
P15T - 072616-105	072616	1015	G	Water		X	N	4	
P18T - 072616-1210		1210		Water		X	N	2	
P38P - 072616-1335		1335				X	N	3	
P37 - 072616-1435		1435				X	N	4	
P02T - 072616-1600		1600				X	N	5	
P16 - 072616-1730		1640				X	N	6	
P12 - 072616-0800		0800				X	N	7	
P18 - 072616-0800	072616	0800	G	Water		X	N	8	
P16T - 072616-0400		0400				X	N	9	
P21 - 072616-1030		1030				X	N	10	
								12	

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: _____

Reinquired by: **P. Brown** Date/Time: **5/18/16 / 1:45:00** Company: **N/A**

Reinquired by: **Jeffrey** Date/Time: **07/27/16 / 16:00** Company: **N/A**

Reinquired by: **Jeffrey** Date/Time: **7/28/16 10:00** Company: **N/A**

Custody Seals Intact: Yes No Custody Seal No.: **05# 958162/958161**

Received by: **Andrew** Date/Time: **7/28/16 10:00** Company: **TX Edison**

Cooler Temperature(s) °C and Other: **3.2°C @ 2.00c IRT#7**

Special Instructions/OC Requirements: **Filtered Samples For DISPOSED METALS**

Method of Shipment: _____

Return To Client Disposal By Lab Archive For _____ Months

Chain of Custody Record

Client Information

Client Contact: BAN KALANOK
Company: HALEY & ALDRICH, INC.
Address: 6500 Rockside Road Suite 200
City: Cleveland
State, Zip: OH, 44131
Phone: 41753-896-0041
Email: IClauser@haleyaldrich.com
Project Name: Racer - Elyria, Ohio
Site: SSOVR#

Sample ID: 3 ARSEN
Phone: 937-620-8524

Lab PM: Denise
E-Mail: denise.pohl@testamerica.com

Center Tracking No(s): FED EX

COC No: 450-74650-45938.1
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Due Date Requested:

TAT Requested (days): 5 TD

PO #: 41753-896-0041
WO #: 200

Project #: 46020356
SSOVR#:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Composite, etc.)	Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested	Total Number of containers	Special Instructions/Note:
P21T-072716-1135	07/27/16	1135	G	Water		X	D		9	
P05T-072716-1300	07/27/16	1300	G	Water		X	D		9	
P05R-072716-1410	07/27/16	1410	G	Water		X	D		3	
P908-072716-0001	07/27/16	0001	G	Water		X	D		3	

Analysis Requested	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested
	X	D	6010C - Metals-Ba,Ca,Fe,Mg,Mn,Na,FF
	X	D	90128 - Cyanide, Total
	X	D	9056A - DRGFM-28D-CL:SD

Preservation Codes:	Other:
A - HCL	M - Hexano
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecylhydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4.5
L - EDA	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:

Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
<u>[Signature]</u>	<u>07/27/16</u>	<u>HALEY & ALDRICH</u>	<u>[Signature]</u>	<u>07/28/16</u>	<u>TEST AMERICA</u>
<u>[Signature]</u>	<u>07/28/16</u>	<u>TEST AMERICA</u>	<u>[Signature]</u>	<u>07/28/16</u>	<u>TEST AMERICA</u>

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

Relinquished by: _____ Date/Time: _____ Company: _____

Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seal Intact: Custody Seal No.: 057# 958102/958101

Cooler Temperature(s) °C and Other Remarks: 2.5°C 2.0°C

TestAmerica Edison
Receipt Temperature and pH Log

Job Number: 112237

Number of Coolers: 9 IR Gun # 7

RAW		CORRECTED		RAW		CORRECTED		RAW		CORRECTED	
Cooler #	°C	Cooler #	°C	Cooler #	°C	Cooler #	°C	Cooler #	°C	Cooler #	°C
Cooler #1	2.0	Cooler #2	2.0	Cooler #4		Cooler #7		Cooler #8		Cooler #9	
Cooler #2	3.1	Cooler #3	3.1	Cooler #5		Cooler #8					
Cooler #3				Cooler #6							

TALS Sample Number	Ammonia (pH<2)	COD (pH<2)	Nitrate Nitrite (pH<2)	Metals* (pH<2)	Hardness (pH<2)	Pest (pH 5-9)	EPH or QAM (pH<2)	Phenols (pH<2)	Sulfide (pH>9)	TKN (pH<2)	TOC (pH<2)	Total Cyanide (pH>12)	Total Phos (pH<2)	Other	Other
1				L2											
2				L2											
3				L2											
4				L2											
5				L2											
6				L2											
7				L2											
8				L2											
9				L2											
10				L2											
11				L2											
12				L2											
13				L2											

If pH adjustments are required record the information below:

Sample No(s) adjusted: _____
 Preservative Name/Conc.: _____
 Volume of Preservative used (ml): _____

Lot # of Preservative(s): _____
 Expiration Date: _____
 The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.
 Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.

EDS-MM-038, Rev 4, 06/09/2014
 Initials: SL
 Date: 7/28/16

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 460-117737-1

Login Number: 117737

List Source: TestAmerica Edison

List Number: 1

Creator: Hall, Alonzo

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	958162,958161
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	2.0,3.1° C IR#7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	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.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	



APPENDIX E

Data Quality Assessment and Validation Report

Data Usability Summary Report (DUSR)
Racer-Elyria - Ohio Biennial Groundwater Event
Analytical Laboratory: TestAmerica, Inc. - Edison, NJ
Sample Delivery Group # 460-117594-1 & 460-117737-1

Analytical results for the project samples were reviewed to evaluate the data usability. Data was assessed in accordance with guidance from the following Federal and/or State guidance documents:

- USEPA National Functional Guidelines for Inorganic Data Review (EPA 540-R-013-001)

and method protocol criteria where applicable as prescribed by “Test Methods for Evaluating Solid Waste”, SW846, Update III, 1996, or Standard Methods for the Examination of Water and Wastewater, Eds 18-20.

This DUSR pertains to the following samples:

Sample ID	Sample ID	Sample ID
P02-072616-1600	P12TR-072516-1545	P18-072716-0800
P02T-072616-1640	P14-072516-1420	P18T-072616-1210
P3R-072616-1335	P14T-072516-1320	P21-072716-1030
P3T-072616-1435	P15-072516-1640	P21T-072716-1135
P08R-072716-1410	P15T-072616-1015	0908-072516-0001
P08T-072716-1300	P16-072616-1730	0908-072716-0001
P12-072616-0800	P16T-072716-0900	

Project Samples were analyzed according to the following analytical methods:

	Parameter	Analytical Method	Holding Time Criteria
1.	ICP Metals - Ba, Ca, Fe, Mg, Mn, Na	EPA 6010C	180 days
2.	Cyanide, Total	EPA 9012B	14 days
3.	Chloride & Sulfate	SW9056A	28 days

The following items/criteria applicable to the analysis of project samples and associated QA/QC procedures were reviewed.

- Holding Times
- Project-specific Reporting Limits
- Blank Sample Analysis
- Laboratory Control Samples, Matrix Spike/Matrix Spike Duplicate Recoveries
- Duplicate Sample Analysis
- Field Duplicate Sample Analysis
- Sample Data Reporting Format
- Data Qualifiers
- Summary

Preservation and Holding Times

Maximum allowable holding times, measured from the time of sample collection to the time of sample preparation or analysis, were met for each project sample analyzed as part of this sample delivery group. No qualification of the data is recommended.

Project-specific Reporting Limits

The reporting limits for the samples within this Sample Delivery Group (SDG) met or exceeded the minimum reporting limit requirements specified by the Project-specific Quality Assurance Project Plan (QAPP). No qualification of the data is recommended.

Blank Sample Analysis

In accordance with cited USEPA guidelines, positive sample results should be reported unless the concentration of the compound in the project sample is less than or equal to 10 times (10X) the amount in any blank for metals and the common organic laboratory contaminants (methylene chloride, acetone, 2-butanone, cyclohexane, and phthalate esters), or 5 times (5X) the amount for other target compounds. Target analytes were not detected in associated blank samples (trip, equipment, method) prepared and analyzed concurrently with the project samples. No qualification of the data is recommended.

Laboratory Control Samples, Matrix Spike/Matrix Spike Duplicate Recoveries

Analytical precision and accuracy was evaluated based on the laboratory control and matrix spike sample analyses performed concurrently with the project samples. For matrix spike samples, after the addition of a known amount of each target analyte to the sample matrix, the sample was analyzed to confirm the ability to identify these compounds within the sample matrix. For LCS analyses, after the addition of a known amount of each target analyte into laboratory reagent water, the sample was analyzed to confirm the ability of the analytical system to accurately quantify the compounds. The reported recovery of MS/MSD and LCS analyses fell within the laboratory QA acceptance criteria, with the following exception(s):

LCS ID / Project Sample MS	Type	Target Analyte(s)	%R	Affected Sample(s)	Positive Results	Non Detect (ND)
P12TR-072516-1545	MS	All 6010 Metals	Within	None, within limits.		
P21-072716-1030	MS	All 6010 Metals - Total	Within	None, within limits.		
	MS	All 6010 Metals - Diss	Within	None, within limits.		

LCS ID / Project Sample MS	Type	Target Analyte(s)	%R	Affected Sample(s)	Positive Results	Non Detect (ND)
P15-072516-1640	MS/MSD	Cyanide, Total	Within	None, within limits.		
P21-072716-1030 381983	MS	Sulfate	116	None, recoveries are within NFG limits.		
	MSD	Sulfate	122			
P12-072616-0800	MS/MSD	Cyanide, Total	Within	None, within limits.		
P21-072716-1030	MS/MSD	Cyanide, Total	Within	None, within limits.		

Duplicate Sample Analysis

The replicate percent difference (RPD) was evaluated for each duplicate sample pair to monitor the reproducibility of the data. The RPD for each sample pair was within the QA/QC limit of 30% for aqueous samples and 50% for solid matrices, for those target analytes with sample concentrations >5X the MDL, with the following exception(s):

Sample ID	Matrix	Target Analyte(s)	RPD	Affected Sample(s)
P12TR-072516-1545	WG	All 6010 Metals	Within	None, within limits.
P21-072716-1030	WG	All 6010 Metals - Total	Within	None, within limits.
		All 6010 Metals - Dissolved	Within	None, within limits.

Sample ID	Matrix	Target Analyte(s)	RPD	Affected Sample(s)
P21-072716-1030	WG	Sulfate	3	None, within limits.
		Chloride	2	None, within limits.
		Sulfate	2	None, within limits.

Action:

Analytes with RPDs greater than 20% should be qualified "J" and non-detects qualified "UJ".

Field Duplicate Sample Analysis

The overall variability attributable to the sampling procedure, sample matrix, and laboratory procedures, was evaluated by assessing the relative percent difference (RPD) data from field duplicate samples. All calculated RPD values were within matrix specific data quality objectives, with the exception of results qualified "J" as shown in the table(s) below:

Target Analyte(s)	Original Sample ID.	FD Sample ID.	%RPD	Flag Original and FD sample results with:
	P14T-072516-1320	0908-072516-0001		
Barium	17 J ug/L	17 J ug/L	NA	None, Abs. Diff < RL
Calcium	110000 ug/L	110000 ug/L	0%	None, RPD < 35%
Iron	100 J ug/L	92 J ug/L	NA	None, Abs. Diff < RL
Magnesium	20000 ug/L	20000 ug/L	NA	None, Abs. Diff < RL
Manganese	370 ug/L	370 ug/L	0%	None, RPD < 35%
Sodium	13000 ug/L	13000 ug/L	NA	None, Abs. Diff < RL

Target Analyte(s)	Original Sample ID.	FD Sample ID.	%RPD	Flag Original and FD sample results with:
	P08R-072716-1410	0908-072716-0001		
Barium	82 J ug/L	83 J ug/L	NA	None, Abs. Diff < RL
Calcium	95000 ug/L	96000 ug/L	1%	None, RPD < 35%
Iron	120 J ug/L	130 J ug/L	NA	None, Abs. Diff < RL
Magnesium	20000 ug/L	20000 ug/L	NA	None, Abs. Diff < RL
Manganese	53 ug/L	53 ug/L	NA	None, Abs. Diff < RL
Sodium	170000 ug/L	180000 ug/L	6%	None, RPD < 35%

Action:

If the sample matrix is solid and the %RPD is greater than 50%, the original sample results are qualified "J". If the sample matrix is water or air and the %RPD is greater than 35%, the original sample results are qualified "J".

Target Analyte(s)	Original Sample ID.	FD Sample ID.	%RPD	Flag Original and FD sample results with:
	P14T-072516-1320	0908-072516-0001		
Sulfate	26 mg/L	26 mg/L	NA	None, Abs. Diff < RL
Chloride	5.1 mg/L	5.6 mg/L	NA	None, Abs. Diff < RL
Cyanide, Total	0.01 U mg/L	0.01 U mg/L	NA	None, Both ND.

Target Analyte(s)	Original Sample ID.	FD Sample ID.	%RPD	Flag Original and FD sample results with:
	P08R-072716-1410	0908-072716-0001		
Sulfate	98 mg/L	39 mg/L	NA	None, Abs. Diff < RL
Chloride	140 mg/L	140 mg/L	0%	None, RPD < 35%
Cyanide, Total	0.01 U mg/L	0.01 U mg/L	NA	None, Both ND.

Action:

If the sample matrix is solid and the %RPD is greater than 50%, the original sample results are qualified "J". If the sample matrix is water or air and the %RPD is greater than 35%, the original sample results are qualified "J".

Sample Data Reporting Format

The sample data are presented using USEPA Contract Laboratory Protocol (CLP) format or equivalent. The data package has been reviewed for completeness and found to contain each required sample result and associated QA/QC report form. The reporting format is complete and compliant with the objectives of the project. No qualification of the data is recommended.

Data Qualifiers

Samples that contain results between the MDL and RL were flagged as estimated, "J", by the laboratory. The data user should be aware that there is a possibility of false positive or mis-identification at the quantitation levels. The laboratory also qualified results when target analytes were detected in the associated method/preparation blank sample. Based on a spot check of the data qualifiers used, these flags appeared to be applied to the reported results in accordance with EPA guidance.

Summary

The results presented in each report were found to be compliant with the data quality objectives for the project and usable. Based on our review, the usability of the data is 100%, with the few exceptions noted above.

Date: 9/12/2016