



Heartland Environmental Associates, Inc.

**QUARTERLY GROUNDWATER
MONITORING REPORT**

**Sample Street Business Complex
3702 West Sample Street
South Bend, Saint Joseph County, Indiana 46619**

VRP ID # 6120801

**3rd Quarter 2014
July 1 – September 30, 2014**

November 6, 2014

This report is prepared by:

Heartland Environmental Associates, Inc.
3410 Mishawaka Avenue, South Bend, IN 46615
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Prepared for:

Urban Enterprise Association of South Bend, Inc.
227 West Jefferson Boulevard
South Bend, Indiana 46601

For the Site:

Sample Street Business Complex
3702 West Sample Street
South Bend, Saint Joseph County, Indiana 46619
VRP ID # 6120801

Report prepared by:



John R. Barnhart
Heartland Environmental Associates, Inc.

11/6/2014
Date

Heartland Environmental Associates, Inc.

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EXECUTIVE SUMMARY

Heartland Environmental Associates, Inc., (Heartland) has prepared this Quarterly Progress Report for the subject facility, known as the Sample Street Business Complex, located at 3702 West Sample Street, South Bend, St. Joseph County, Indiana. The Voluntary Remediation Program Identification (VRP ID) number is #6120801.

The facility is being evaluated in accordance with the Indiana Department of Environmental Management (IDEM) Remediation Program on the behalf of the Urban Enterprise Association of South Bend, Inc. (UEA). Heartland has previously submitted a Remediation Work Plan (RWP) for the facility.

Twenty monitoring wells are sampled each quarter commencing in September 2013. Contaminants of Concern include benzene, toluene, ethylbenzene, total xylenes, tetrachloroethylene, trichloroethene, cis 1,2-dichloroethylene, trans 1,2-dichloroethylene, 1,1,1-trichloroethane, 1,1-dichloroethane, 1,1-dichloroethylene, vinyl chloride, and lead.

Each quarter, sample analysis results are evaluated using the Remediation Closure Guide (RCG) Appendix A Screening Levels.

Groundwater samples for the current quarter were collected on September 24-26, 2014. Samples were analyzed for Volatile Organic Compounds (VOCs) using U.S. EPA Method 8260 and for lead using U.S. EPA Method 6010.

Monitoring well water levels were measured during the current quarter sampling event and show that shallow groundwater flow is toward the north and deep groundwater flow is to the northwest.

No 3rd Quarter 2014 monitoring well samples exhibited any concentration of VOCs or lead that exceeded the RCG Screening Levels.

1.0 SITE HISTORY

The Sample Street Business Complex was developed in 1928 as the Bantam Ball Bearing Corporation and was engaged in the manufacture of bearings. In 1935, the facility was acquired by the Torrington Company, who continued the manufacture of bearings. Torrington expanded the facility several times, last expanding in 1967. The site historically operated an approximately 333,000 square foot manufacturing facility on 15 acres of property. The site operated two underground storage tank (UST) areas and five storm water and cooling water ponds located at the south end of the property. The site ceased manufacturing operations in September 1983 and began site closure activities in preparation for sale of the property.

In June 1991, the Torrington Company transferred ownership of the site to the UEA of South Bend, Inc. The UEA currently owns and operates the facility as the Sample Street Business Complex, a small business, multi-tenant, manufacturing, warehousing, and office facility.

The site consists of four parcels with a total acreage of 15.02 acres. Two small parcels are located north of Sample Street and are used as parking lots. The main facility is located on two parcels, 9.0 and 4.25 acres in size, and is south of Sample Street.

The site is currently occupied by one large building with a covered loading dock and a small shed.

No hazardous materials are currently used or stored on-site.

2.0 SITE WORK COMPLETED TO DATE

Environmental investigations completed by Canonie Engineers, Harza Environmental, Best Environmental, Capsule Environmental, Law Engineering, and Heartland have documented the presence of chemical impacts to soil and groundwater at the Sample Street Business Complex.

In 1984, in preparation for site closure, the Torrington Company had an environmental assessment conducted at the facility. Preliminary screening showed there were three areas of concern. Further investigations were conducted in the areas of the storm drainage ponds, the former UST areas, and an area of trichloroethane (TCA) impacted soil on the southwest corner of the building.

As part of closure activities, water and sediment samples were collected from the storm water drainage ponds. No evidence of impacts was found at that time. Subsequently, storm water drainage Ponds #2, #3, #4, and #5 were filled in. The #1 Pond was retained to accept roof drainage from the facility building.

According to the IDEM records, five USTs, in two separate areas, were formerly present onsite. According to the UST Notification form filed in 1986, UST#1 had a capacity of 8,000-gallons and contained Stoddard Solvent, UST #2 had a capacity of 8,000-gallons and contained cutting oil, UST #3 had a capacity of 12,000-gallons and contained cutting oil, USTs #4 and #5 had capacities of 20,000-gallons each and contained fuel oil. USTs #1 and #2 were located near the southeast corner of the main building. USTs #3, #4, and #5 were located under an earthen mound near the southwest corner of the main building.

All USTs were removed in 1986. The UST removal notification form states that the date of installation of the five USTs was unknown. Two Stoddard Fluid and cutting oil USTs were located under a concrete pad on the southeast corner of the building. No evidence of impacts was noted during the removal of those USTs. Three cutting oil and heating oil USTs were located under an earthen mound at the southwest corner of the building. Evidence of soil impacts was noted in the soils around a UST under the earthen mound. Impacted soils were excavated and removed from the site. Further soil impacts were found in soils around the cutting oil and heating oil USTs. Approximately 1700 cubic yards of soils were excavated from the area of the product lines and removed from the site.

According to subsequent ESA reports (Best, 1990, 1991 and Capsule, 1991), during UST removal, petroleum impacted soils were found around the fuel oil tanks and along product line piping runs. Impacted soils were excavated and removed. Tank pits were backfilled with clean fill.

According to the ESA reports, no spills or chemical releases, other than the UST release, have been documented. It is likely that impacts originating from operation of the storm water drainage ponds or from other sources were accumulative impacts resulting from small releases over the operational life of the facility (1928 through 1983).

In 1994, Capsule Environmental recommended an Air Sparge/Soil Vapor Extraction (AS/SVE) remediation system to remediate VOC impacts in soil and groundwater at the Torrington Facility. A pilot test was conducted and in January 1995, Capsule prepared a system design and contract bid specification package. Capsule also prepared a Corrective Action Plan (CAP) for the site. Two separate AS/SVE systems were installed in 1995-1996 and began operation in 1996. The systems included 24 vapor extraction vents and 6 air-sparging points. The vents and sparge points were installed in three areas, Area A, Area B, and Area S3.

Area A included the northeast portion of the main building. Nine extraction vents and two air sparge points were installed in Area A.

Area B included the northwest portion of the main building. Four extraction vents and one air sparge point were installed in Area B.

Area S3 included the southwest portion of the main building and the area around monitoring well S-3 on the southwest corner of the building. Eleven extraction vents and three sparge points were installed in Area S3.

The system was designed for unattended operation with automatic controls and an auto dialer system to alert the operators in case of system malfunction. A regular schedule of operations and maintenance was specified to ensure the continuous operation of the system. A regular schedule of air and groundwater sampling was also specified to determine the system efficacy.

The system was in operation from 1996 through 1998. The 1998 annual system effectiveness report indicated that the system was running efficiently with a 90% run time. However, free product petroleum was still present in the groundwater monitoring wells at the loading dock and both TCE and PCE were still present at elevated concentrations throughout the site. No additional documentation was available after 1998 regarding system operation or system closure.

In 2011, Heartland conducted a limited Phase II ESA to evaluate the presence/absence of chemical contaminants at the facility and to evaluate the effectiveness of the remediation system that had been installed in 1995 and operated through 1998.

In 2012, the Urban Enterprise Association of South Bend, Inc. (UEA) applied to enroll the site in the Indiana Voluntary Remediation Program (VRP).

In 2013, A Remediation Work Plan was submitted to the IDEM, additional off-site monitoring wells were installed, and quarterly monitoring of groundwater commenced.

3.0 QUARTERLY RESULTS

3.1 Groundwater Elevation and Flow Direction

Static water levels at the subject site were measured September 24-26, 2014. The static water level data were used to calculate groundwater surface elevations based on the measured depth to groundwater from the top of each well casing surveyed to a relative arbitrary site benchmark elevation of 100.00 feet. The static water level data and calculated groundwater elevations are shown in Table 1. Maps showing the potentiometric surface of the groundwater and the groundwater flow direction based on the static water level data are provided in Figures 2 and 3 in Appendix A. Historical groundwater elevation data are tabulated in Appendix B.

Well	Date	Relative Casing Elevation	Well Depth	Depth to Groundwater	Relative Groundwater Elevation
S-3	9/25/2014	710.12	50.1	6.21	703.91
S-3A	9/25/2014	710.07	18.6	6.21	703.86
W-1	9/25/2014	713.09	62.9	9.06	704.03
W-100A	9/25/2014	713.62	33.98	8.78	704.84
W-100B	9/25/2014	713.7	50.9	8.85	704.85
W-101A	9/25/2014	714.12	34.64	9.56	704.56
W-101B	9/25/2014	714.09	46.35	9.53	704.56
W-10A	9/26/2014	714.53	62.1	11.16	703.37
W-10B	9/26/2014	714.59	31.31	11.22	703.37
W-12	9/24/2014	712.83	29.26	8.91	703.92
W-13	9/24/2014	713.95	35.48	9.9	704.05
W-14A	9/26/2014	715.5	60.95	11.63	703.87
W-14B	9/26/2014	714.94	44.13	12.17	702.77
W-15A	9/26/2014	714.5	35.3	11.09	703.41
W-15B	9/26/2014	713.84	11.58	11.47	702.37
W-16	9/25/2014	715.3	60.55	11.95	703.35
W-3	9/25/2014	712.59	58.03	7.79	704.8
W-5	9/24/2014	713.32	36.37	6.18	707.14
W-7	9/24/2014	714.02	31.9	9.68	704.34
W-8	9/24/2014	713.71	59.92	9.91	703.8
W-9	9/24/2014	714.71	52.94	10.26	704.45

Water levels in shallow wells with screen bottom elevations greater than 675.5 feet are shown in Figure 2. Groundwater flow in the shallow wells is south to north. Water levels in deep wells with

screen top elevations less than 673 feet are shown in Figure 3. Groundwater flow in the deeper wells is from southeast to northwest.

3.2 Groundwater Sampling Results

On September 24-26, 2014, groundwater samples were collected from twenty on-site monitoring wells. All monitoring wells were sampled using low-flow sampling technology. VOC samples were collected and decanted into clean, new 40-ml VOA vials with HCl preservative. Metals samples were decanted into 250-ml plastic bottles with HNO₃ preservative. All samples were immediately labeled and placed in a secure cooler (at <6 degrees Celsius) for transport.

The groundwater samples were submitted to Envision Laboratories, Inc. in Indianapolis, Indiana, via overnight courier, where they were analyzed for VOCs using U.S. EPA Method 8260 and total lead using U.S. EPA Method 6010. All analyses were completed within their standard holding times. The analytical data are summarized in Table 2 and Figure 4, Appendix A. The historic groundwater analytic data are tabulated in Appendix C. The laboratory certificates of analysis and chains of custody are included in Appendix D.

Well covers and compression caps for all monitoring wells were inspected for damage and/or deterioration during the current sampling event. Compression caps were cleaned and checked for fit. No repairs or replacements were necessary at that time.

Table 2. Quarterly Summary of Groundwater Chemistry

Sample Location	Date Sampled	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylene (Total) µg/L	cis-1,2-Dichloroethene µg/L	trans-1,2-Dichloroethene µg/L	Tetrachloroethene µg/L	Trichloroethene µg/L	Vinyl Chloride µg/L	1,1,1-Trichloroethane µg/L	1,1-Dichloroethane µg/L	1,1-Dichloroethene µg/L	Lead µg/L
RCG Residential Groundwater Ingestion		5	1,000	700	10,000	70	100	5	5	2.00	200	24	7	15
W-5	9/24/14	<5	<5	<5	<10	<5	<5	<5	<5	<2	<5	<5	<5	< 10
W-9	9/24/14	<5	<5	<5	<10	<5	<5	<5	<5	<2	<5	<5	<5	< 10
W-7	9/24/14	<5	<5	<5	<10	<5	<5	<5	<5	<2	<5	<5	<5	< 10
W-8	9/24/14	<5	<5	<5	<10	<5	<5	<5	<5	<2	<5	<5	<5	< 10
W-13	9/24/14	<5	<5	<5	<10	<5	<5	<5	<5	<2	<5	<5	<5	< 10
W-12	9/24/14	<5	<5	<5	<10	<5	<5	<5	<5	<2	<5	<5	<5	< 10
S-3A	9/25/14	<5	<5	<5	<10	<5	<5	<5	<5	<2	<5	<5	<5	< 10
S-3	9/25/14	<5	<5	<5	<10	<5	<5	<5	<5	<2	<5	<5	<5	< 10
W-1	9/25/14	<5	<5	<5	<10	<5	<5	<5	<5	<2	<5	<5	<5	< 10
W-3	9/25/14	<5	<5	<5	<10	<5	<5	<5	<5	<2	<5	<5	<5	< 10
W-100A	9/25/14	<5	<5	<5	<10	<5	<5	<5	<5	<2	<5	<5	<5	< 10
W-100B	9/25/14	<5	<5	<5	<10	<5	<5	<5	<5	<2	<5	<5	<5	< 10
W-101A	9/25/14	<5	<5	<5	<10	<5	<5	<5	<5	<2	<5	<5	5.57	< 10
W-101B	9/25/14	<5	<5	<5	<10	<5	<5	<5	<5	<2	<5	<5	<5	< 10
W-16	9/25/14	<5	<5	<5	<10	<5	<5	<5	<5	<2	<5	<5	<5	< 10
W-15B	9/26/14	<5	<5	<5	<10	<5	<5	<5	<5	<2	<5	<5	<5	< 10
W-15A	9/26/14	<5	<5	<5	<10	12.8	<5	<5	<5	<2	<5	<5	<5	< 10
W-14A	9/26/14	<5	<5	<5	<10	<5	<5	<5	<5	<2	<5	<5	<5	< 10
W-14B	9/26/14	<5	<5	<5	<10	<5	<5	<5	<5	<2	<5	<5	<5	< 10
W-10B	9/26/14	<5	<5	<5	<10	<5	<5	<5	<5	<2	12.0	<5	<5	< 10
W-10A	9/26/14	<5	<5	<5	<10	<5	<5	<5	<5	<2	<5	<5	<5	< 10
TRIP BLANK	9/24/14	<5	<5	<5	<10	<5	<5	<5	<5	<2	<5	<5	<5	NA

Notes:
 µg/L - micrograms per Liter mg/L - milligrams per Liter
 ppb - parts per billion, ppm - parts per million
 VOCs - volatile organic compounds
 ND - Not Detected, NA - Not Analyzed, BPQL - Below Practical Quantification Limit
 Concentrations exceeding the Residential Ingestion Screening Level are shown in **bold**

4.0 DISCUSSION

Groundwater levels were measured September 24-26, 2014. Groundwater flow in the shallow wells (screen bottom elevations greater than 675.5 feet) is northerly. Groundwater flow in deep wells (screen top elevations less than 673 feet) is from southeast to northwest. Water level contours are shown on Figures 2 and 3, Appendix A. Water levels have increased an average of 0.9 feet since the previous quarterly measurement.

Low-flow sampling was performed to reduce turbidity of groundwater samples and to minimize the volume of purge water. Low-flow data sheets are included in Appendix E.

All monitoring wells samples were analyzed for VOCs and lead and evaluated using the RCG Appendix A Screening Levels.

No 3rd Quarter 2014 monitoring well samples exhibited any concentration of VOCs or lead that exceeded the RCG Screening Levels.

5.0 REFERENCES

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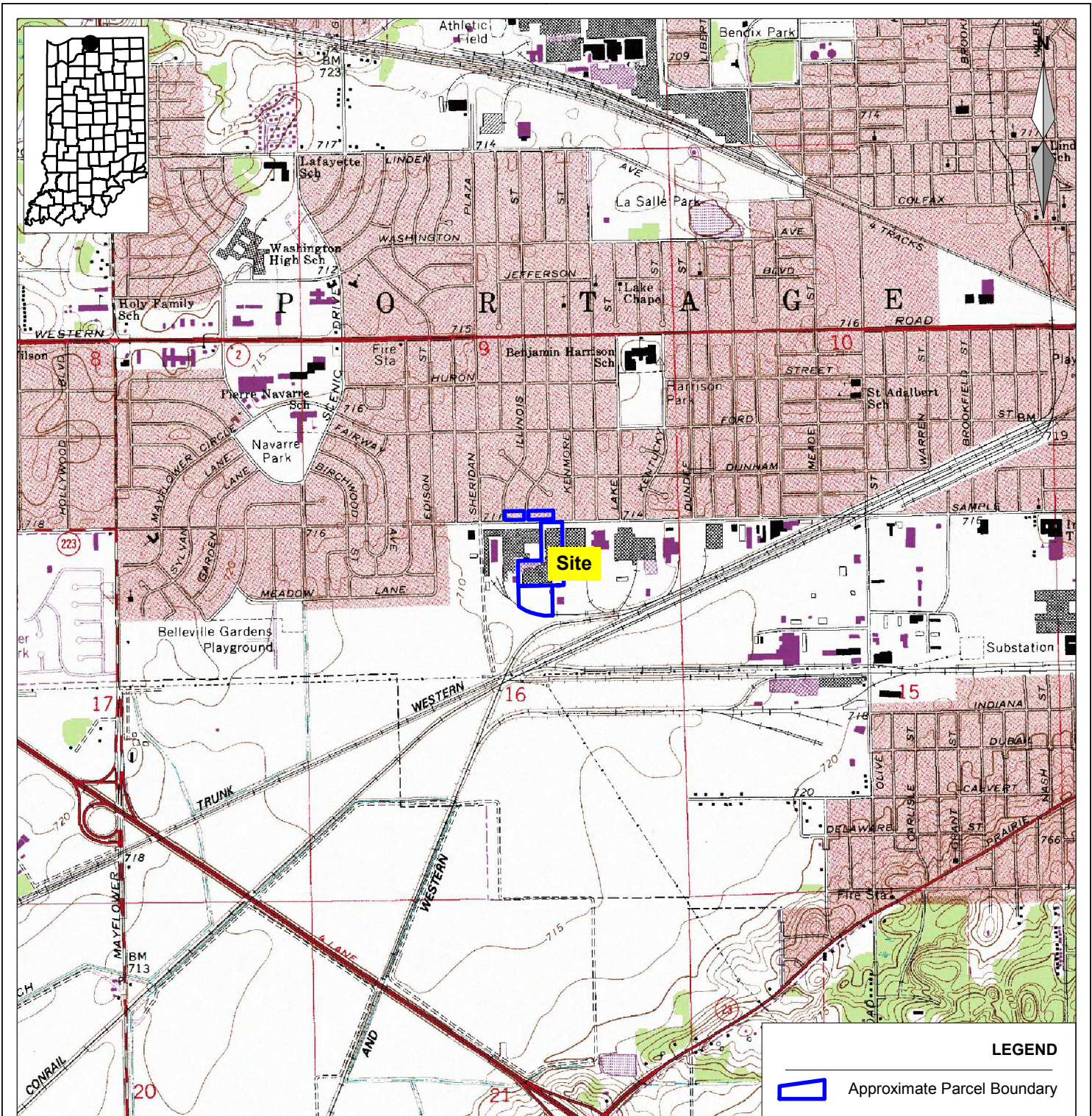
3702 West Sample Street, South Bend, Saint Joseph County, Indiana 46619, VRP ID # 6120801,
August 19, 2013, Heartland Environmental Assoc., Inc., 3410 Mishawaka Avenue, South Bend, IN
46615

6.0 LIMITATIONS

In preparing this report, Heartland Environmental Associates, Inc., has applied generally accepted professional practices and standards and has exercised its professional judgment, skills, and care in a manner consistent with that of other professionals performing similar work under similar conditions. All information, conclusions, and recommendations contained in this report are necessarily governed by site conditions and the scope of the work. However, due to the nature of the work, Heartland Environmental Associates, Inc. does not assume and specifically disclaims any and all responsibility and/or liability for damages of any kind suffered by any individual or entity and is not responsible for the independent conclusions, opinions, or recommendations made by others regarding this report. No warranties, expressed or implied are given or made.

APPENDIX A

Figures



Location
 Saint Joseph County, Portage Township
 SOUTH BEND WEST Quadrangle
 Section 16 T 37N R 2E

Parcel boundaries, as shown, are approximate and are not suitable for conveyance or property boundary descriptions. This data should not be used as a substitute for a professional land survey.

Base map: U.S. Geological Survey Digital Raster Graphic



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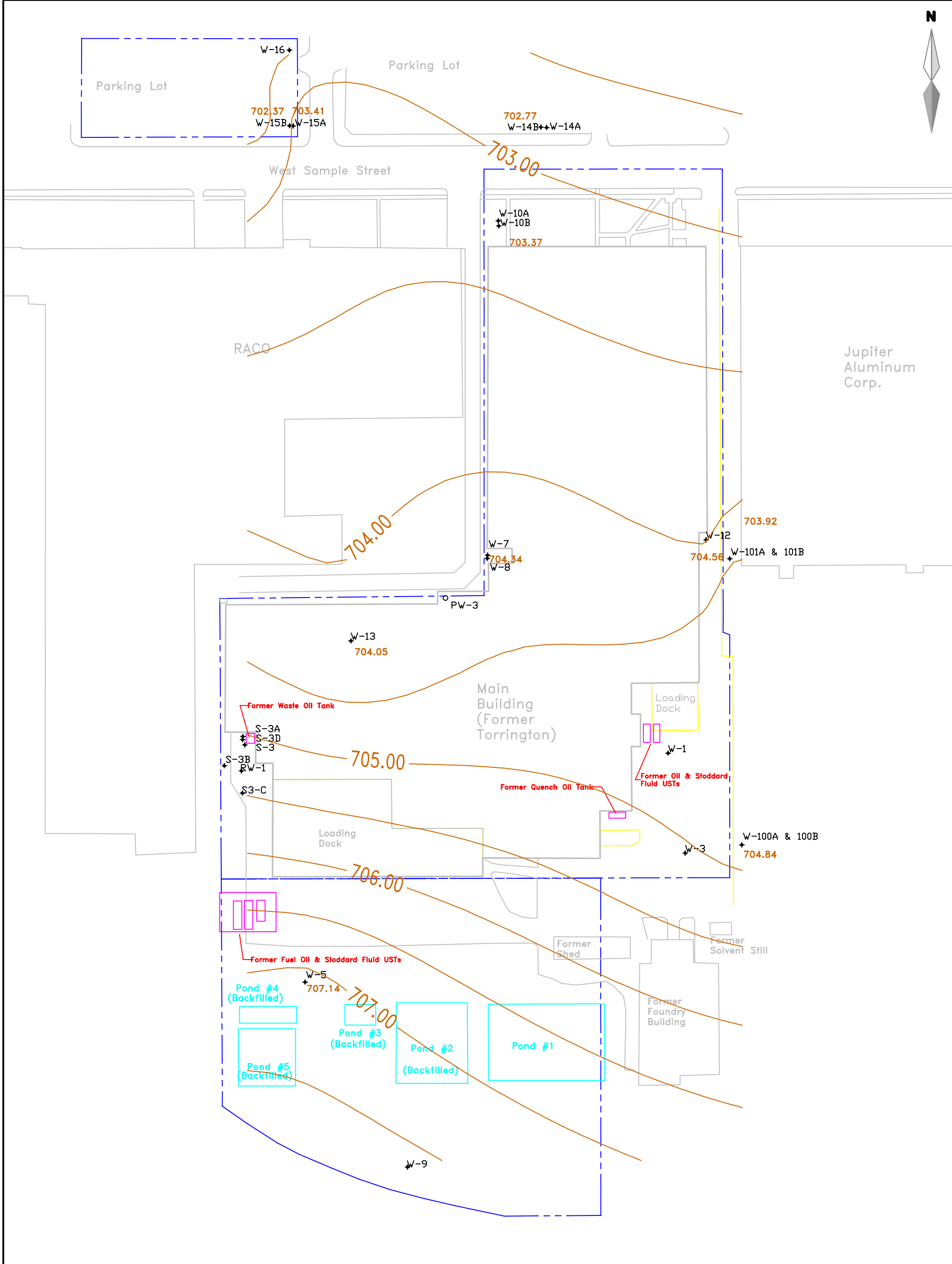
Figure 1
 Project Site Location
 Sample Street Business Complex
 3702 West Sample Street
 South Bend, Indiana 46619

Client:
 Urban Enterprise Assoc.,
 of South Bend, Inc.

Date:
 8/5/2014

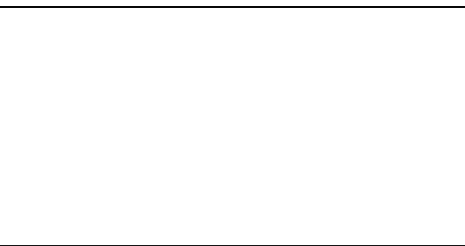
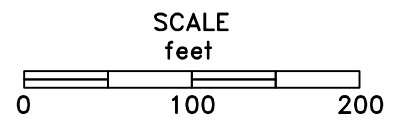
Drawn by:
 JRB

Scale:
 1 in : 2000.00 ft



LEGEND	
+	Monitoring Well
- - - -	Parcel Boundary
□	Former UST

Groundwater Surface in wells with screen bottom elevations above 675.5



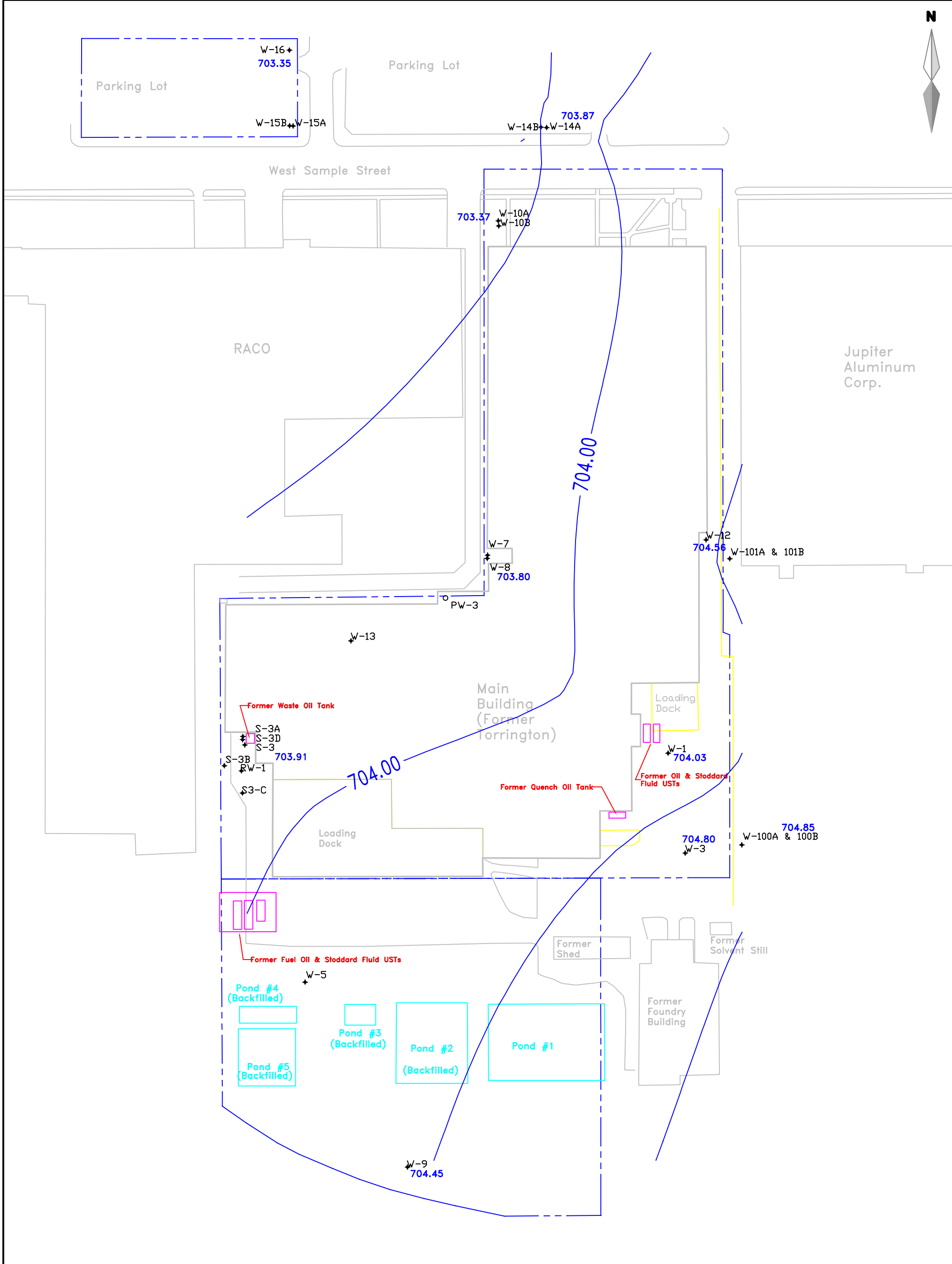
Heartland Environmental Associates, Inc.
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Figure 2
Potentiometric Surface
Shallow Wells
Measured 9/24 - 9/26/2014
Sample Street Business Complex
3702 West Sample Street
South Bend, Indiana

Client:
Urban Enterprise
Association
of South Bend, Inc.

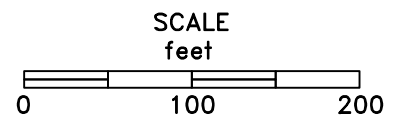
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Drawn by: JRB



LEGEND	
+	Monitoring Well
- - - -	Parcel Boundary
□	Former UST

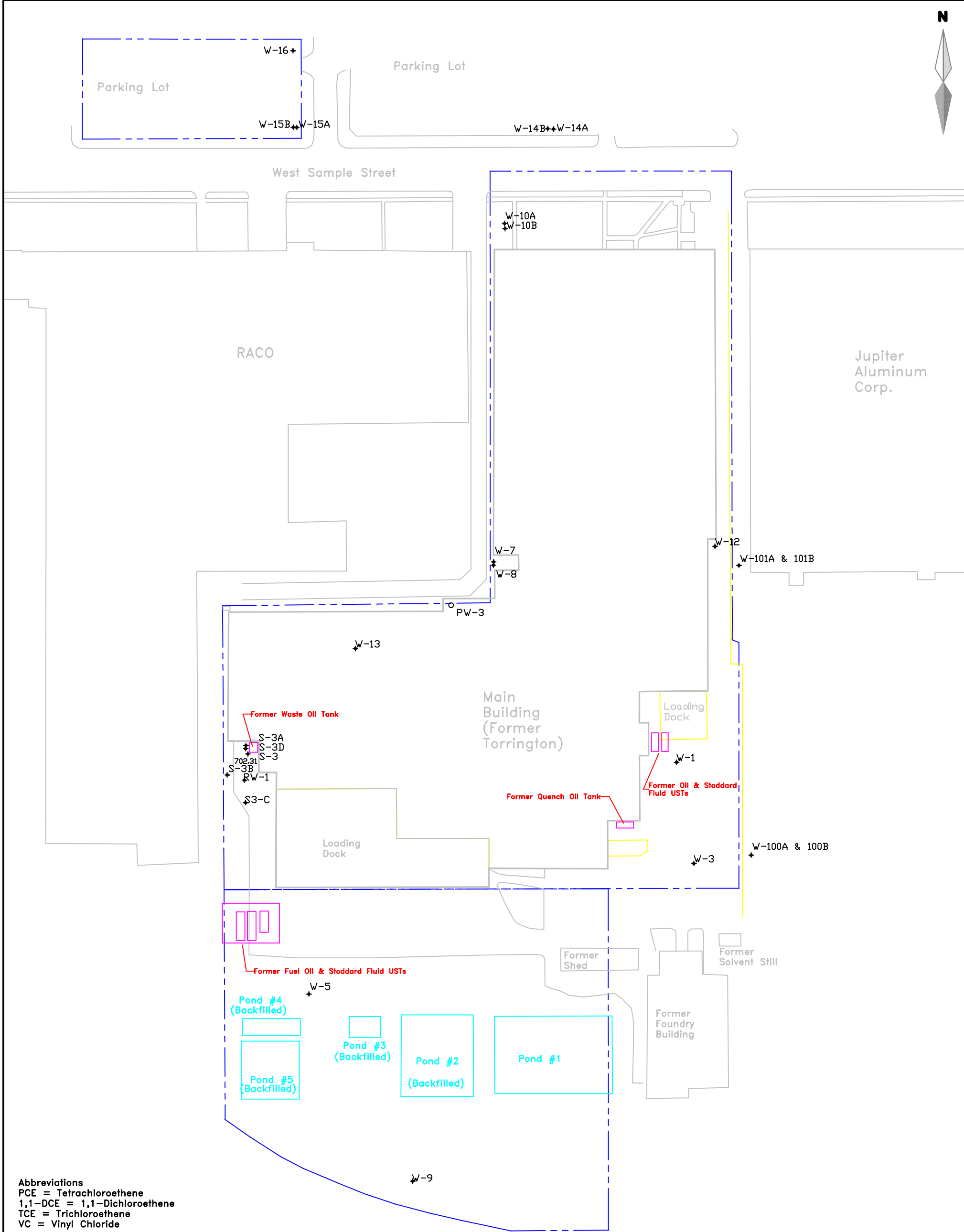
Groundwater Surface in wells with screen top elevations less than 673 feet



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Figure 3
Potentiometric Surface
Deep Wells
Measured 9/24 - 9/26/2014
Sample Street Business Complex
3702 West Sample Street
South Bend, Indiana

Client: Urban Enterprise Association of South Bend, Inc.
Date: 11/3/2014
Drawn by: JRB

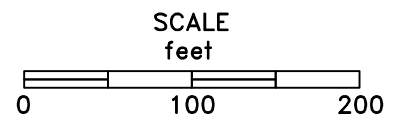


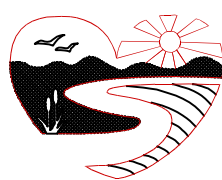
Abbreviations
PCE = Tetrachloroethene
1,1-DCE = 1,1-Dichloroethene
TCE = Trichloroethene
VC = Vinyl Chloride

Concentration Units = $\mu\text{g/L}$ (ppb)

LEGEND	
+	Monitoring Well
---	Parcel Boundary
□	Former UST

Only monitoring well analytic results with detected concentrations of COCs that exceed the RCG Screening Levels are shown. No detected concentration of VOCs exceeded the RCG Screening Levels



 <p>Heartland Environmental Associates, Inc. 3410 Mishawaka Avenue South Bend, Indiana 46615 888.289.1191</p>	<p>Figure 4 Groundwater Analytical Results Collected 9/24 - 9/26/2014</p>	<p>Client: Urban Enterprise Association of South Bend, Inc.</p>
	<p>Sample Street Business Complex 3702 West Sample Street South Bend, Indiana</p>	<p>Date: 11/3/2014</p>
		<p>Drawn by: JRB</p>

APPENDIX B

Historic Groundwater Elevation Data Tables

Historical Water Level Measurements					
Well	Date	Relative Casing Elevation	Well Depth	Depth to Groundwater	Relative Groundwater Elevation
S-3	4/1/2013	710.12	50.10	8.90	701.22
W-1	4/1/2013	713.09	62.90	8.71	704.38
W-100A	4/1/2013	713.62	33.98	8.47	705.15
W-100B	4/1/2013	713.70	50.90	8.54	705.16
W-101A	4/1/2013	714.12	34.64	9.19	704.93
W-101B	4/1/2013	714.09	46.35	9.18	704.91
W-10A	4/1/2013	714.53	62.10	10.78	703.75
W-10B	4/1/2013	714.59	31.31	10.85	703.74
W-12	4/1/2013	712.83	29.26	8.66	704.17
W-13	4/1/2013	713.95	35.48	9.70	704.25
W-14A	4/1/2013	715.50	60.95	11.34	704.16
W-14B	4/1/2013	714.94	44.13	11.88	703.06
W-15A	4/1/2013	714.50	35.30	10.76	703.74
W-15B	4/1/2013	713.84	11.18	10.13	703.71
W-16	4/1/2013	715.30	60.55	11.64	703.66
W-3	4/1/2013	712.59	58.03	7.48	705.11
W-5	4/1/2013	713.32	36.32	8.98	704.34
W-7	4/1/2013	714.02	31.90	9.38	704.64
W-8	4/1/2013	713.71	59.92	9.62	704.09
W-9	4/1/2013	714.71	53.28	10.13	704.58
S-3	9/25/2013	710.12	50.10	7.81	702.31
W-1	9/26/2013	713.09	62.90	10.82	702.27
W-100A	9/26/2013	713.62	33.98	10.64	702.98
W-100B	9/26/2013	713.70	50.90	10.71	702.99
W-101A	9/26/2013	714.12	34.64	11.20	702.92
W-101B	9/26/2013	714.09	46.35	11.19	702.90
W-10A	9/27/2013	714.53	62.10	12.54	701.99
W-10B	9/27/2013	714.59	31.31	12.61	701.98
W-12	9/26/2013	712.83	29.26	10.57	702.26
W-13	9/27/2013	713.95	35.48	11.57	702.38
W-14A	9/26/2013	715.50	60.95	12.94	702.56
W-14B	9/27/2013	714.94	44.13	13.51	701.43
W-15A	9/26/2013	714.50	35.30	12.41	702.09
W-15B	9/26/2013	713.84	11.18	Dry	
W-16	9/26/2013	715.30	60.55	13.25	702.05
W-3	9/26/2013	712.59	58.03	9.61	702.98
W-5	9/25/2013	713.32	36.32	10.97	702.35
W-7	9/25/2013	714.02	31.90	11.24	702.78
W-8	9/25/2013	713.71	59.92	11.47	702.24
W-9	9/25/2013	714.71	53.28	12.25	702.46
S-3	11/25/2013	710.12	50.1	7.42	702.7
W-1	11/25/2013	713.09	62.9	10.36	702.73
W-100A	11/25/2013	713.62	33.98	10.15	703.47
W-100B	11/25/2013	713.7	50.9	10.22	703.48
W-101A	11/25/2013	714.12	34.64	10.75	703.37
W-101B	11/25/2013	714.09	46.35	10.73	703.36
W-10A	11/25/2013	714.53	62.1	13.09	701.44
W-10B	11/25/2013	714.59	31.31	12.17	702.42

Historical Water Level Measurements					
Well	Date	Relative Casing Elevation	Well Depth	Depth to Groundwater	Relative Groundwater Elevation
W-12	11/25/2013	712.83	29.26	10.12	702.71
W-13	11/25/2013	713.95	35.48	11.11	702.84
W-14A	11/25/2013	715.5	60.95	12.52	702.98
W-14B	11/25/2013	714.94	44.13	13.08	701.86
W-15A	11/25/2013	714.5	35.3	12.01	702.49
W-15B	11/25/2013	713.84	11.58	Dry	
W-16	11/25/2013	715.3	60.55	12.84	702.46
W-3	11/25/2013	712.59	58.03	9.15	703.44
W-5	11/25/2013	713.32	36.32	10.59	702.73
W-7	11/25/2013	714.02	31.9	10.86	703.16
W-8	11/25/2013	713.71	59.92	11.1	702.61
W-9	11/25/2013	714.71	53.28	11.85	702.86
S-3	3/24/2014	710.12	50.1	6.24	703.88
W-1	3/25/2014	713.09	62.9	9.13	703.96
W-100A	3/25/2014	713.62	33.98	8.86	704.76
W-100B	3/25/2014	713.7	50.9	8.94	704.76
W-101A	3/25/2014	714.12	34.64	9.57	704.55
W-101B	3/25/2014	714.09	46.35	9.56	704.53
W-10A	3/26/2014	714.53	62.1	11.12	703.41
W-10B	3/26/2014	714.59	31.31	11.19	703.4
W-12	3/25/2014	712.83	29.26	8.96	703.87
W-13	3/26/2014	713.95	35.48	10	703.95
W-14A	3/26/2014	715.5	60.95	11.58	703.92
W-14B	3/26/2014	714.94	44.13	12.12	702.82
W-15A	3/26/2014	714.5	35.3	11.05	703.45
W-15B	3/26/2014	713.84	11.58	10.43	703.41
W-16	3/25/2014	715.3	60.55	11.88	703.42
W-3	3/25/2014	712.59	58.03	7.89	704.7
W-5	3/24/2014	713.32	36.37	9.31	704.01
W-7	3/24/2014	714.02	31.9	6.71	707.31
W-8	3/24/2014	713.71	59.92	9.94	703.77
W-9	3/24/2014	714.71	52.94	10.48	704.23
S-3	6/24/2014	710.12	50.1	6.26	703.86
S-3A	6/24/2014	710.07	18.6	6.16	703.91
W-1	6/25/2014	713.09	62.9	9.08	704.01
W-100A	6/25/2014	713.62	33.98	8.81	704.81
W-100B	6/25/2014	713.7	50.9	8.88	704.82
W-101A	6/25/2014	714.12	34.64	9.53	704.59
W-101B	6/25/2014	714.09	46.35	9.51	704.58
W-10A	6/26/2014	714.53	62.1	11.05	703.48
W-10B	6/26/2014	714.59	31.31	11.11	703.48
W-12	6/24/2014	712.83	29.26	9.01	703.82
W-13	6/26/2014	713.95	35.48	9.87	704.08
W-14A	6/26/2014	715.5	60.95	11.53	703.97
W-14B	6/26/2014	714.94	44.13	12.05	702.89
W-15A	6/26/2014	714.5	35.3	10.98	703.52
W-15B	6/26/2014	713.84	11.58	10.35	703.49
W-16	6/25/2014	715.3	60.55	11.86	703.44

Historical Water Level Measurements					
Well	Date	Relative Casing Elevation	Well Depth	Depth to Groundwater	Relative Groundwater Elevation
W-3	6/25/2014	712.59	58.03	7.81	704.78
W-5	6/24/2014	713.32	36.37	9.18	704.14
W-7	6/24/2014	714.02	31.9	9.77	704.25
W-8	6/24/2014	713.71	59.92	10.01	703.7
W-9	6/24/2014	714.71	52.94	10.43	704.28
S-3	9/25/2014	710.12	50.1	6.21	703.91
S-3A	9/25/2014	710.07	18.6	6.21	703.86
W-1	9/25/2014	713.09	62.9	9.06	704.03
W-100A	9/25/2014	713.62	33.98	8.78	704.84
W-100B	9/25/2014	713.7	50.9	8.85	704.85
W-101A	9/25/2014	714.12	34.64	9.56	704.56
W-101B	9/25/2014	714.09	46.35	9.53	704.56
W-10A	9/26/2014	714.53	62.1	11.16	703.37
W-10B	9/26/2014	714.59	31.31	11.22	703.37
W-12	9/24/2014	712.83	29.26	8.91	703.92
W-13	9/24/2014	713.95	35.48	9.9	704.05
W-14A	9/26/2014	715.5	60.95	11.63	703.87
W-14B	9/26/2014	714.94	44.13	12.17	702.77
W-15A	9/26/2014	714.5	35.3	11.09	703.41
W-15B	9/26/2014	713.84	11.58	11.47	702.37
W-16	9/25/2014	715.3	60.55	11.95	703.35
W-3	9/25/2014	712.59	58.03	7.79	704.8
W-5	9/24/2014	713.32	36.37	6.18	707.14
W-7	9/24/2014	714.02	31.9	9.68	704.34
W-8	9/24/2014	713.71	59.92	9.91	703.8
W-9	9/24/2014	714.71	52.94	10.26	704.45

APPENDIX C

Historic Analytical Data Summary Tables

Historical Summary of Groundwater Chemistry - Metals																
Sample Location	Date Sampled	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium, Total	Copper	Lead	Mercury	Nickel (Soluble Salts)	Selenium	Silver	Thallium (Soluble Salts)	Zinc	Cyanide (CN-)
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
RCG Ingestion		6	10	2000	4	5	100	1300	15	2	300	50	71	2	4700	200
W-1	1/29/1991	NA	2.0	NA	NA	NA	1.0	NA	1	NA	NA	NA	NA	NA	NA	NA
W-2	1/29/1991	NA	2.0	NA	NA	NA	1.0	NA	1.0	NA	NA	NA	NA	NA	NA	NA
W-3	1/29/1991	NA	2.0	NA	NA	NA	1.0	NA	1.0	NA	NA	NA	NA	NA	NA	NA
W-4	1/29/1991	NA	2.0	NA	NA	NA	1.0	NA	1.0	NA	NA	NA	NA	NA	NA	NA
W-5	1/29/1991	NA	2.0	NA	NA	NA	1.0	NA	1.0	NA	NA	NA	NA	NA	NA	NA
W-7	1/30/1991	NA	2.0	NA	NA	NA	1.0	NA	1.0	NA	NA	NA	NA	NA	NA	NA
W-8	1/30/1991	NA	11.0	NA	NA	NA	1.0	NA	1.0	NA	NA	NA	NA	NA	NA	NA
W-9	2/7/1991	NA	3.0	NA	NA	NA	1.0	NA	1.0	NA	NA	NA	NA	NA	NA	NA
W-10A	2/7/1991	NA	7.0	NA	NA	NA	1.0	NA	1.0	NA	NA	NA	NA	NA	NA	NA
W-10B	2/7/1991	NA	2.0	NA	NA	NA	1.0	NA	1.0	NA	NA	NA	NA	NA	NA	NA
W-11A	2/7/1991	NA	3.0	NA	NA	NA	1.0	NA	1.0	NA	NA	NA	NA	NA	NA	NA
W-11B	2/7/1991	NA	15.0	NA	NA	NA	32.0	NA	10.0	NA	NA	NA	NA	NA	NA	NA
W-12	2/7/1991	NA	2.0	NA	NA	NA	1.0	NA	1.0	NA	NA	NA	NA	NA	NA	NA
W-13	2/7/1991	NA	2.0	NA	NA	NA	1.0	NA	1.0	NA	NA	NA	NA	NA	NA	NA
S-3	1/30/1991	NA	2.0	NA	NA	NA	1.0	NA	1.0	NA	NA	NA	NA	NA	NA	NA
S-3	1/30/1991	NA	<5	NA	NA	NA	<1	NA	<5	NA	NA	NA	NA	NA	NA	NA
W-5	3/24/2014	NA	NA	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA	NA
W-9	3/24/2014	NA	NA	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA	NA
W-7	3/24/2014	NA	NA	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA	NA
W-8	3/24/2014	NA	NA	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA	NA
S-3A	3/24/2014	NA	NA	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA	NA
S-3	3/24/2014	NA	NA	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA	NA
W-12	3/25/2014	NA	NA	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA	NA
W-1	3/25/2014	NA	NA	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA	NA
W-3	3/25/2014	NA	NA	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA	NA
W-100A	3/25/2014	NA	NA	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA	NA
W-100B	3/25/2014	NA	NA	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA	NA
W-101A	3/25/2014	NA	NA	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA	NA
W-101B	3/25/2014	NA	NA	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA	NA
W-16	3/25/2014	NA	NA	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA	NA
W-15B	3/26/2014	NA	NA	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA	NA
W-15A	3/26/2014	NA	NA	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA	NA
W-14A	3/26/2014	NA	NA	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA	NA

Historical Summary of Groundwater Chemistry - Metals																
Sample Location	Date Sampled	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium, Total	Copper	Lead	Mercury	Nickel (Soluble Salts)	Selenium	Silver	Thallium (Soluble Salts)	Zinc	Cyanide (CN-)
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
RCG Ingestion		6	10	2000	4	5	100	1300	15	2	300	50	71	2	4700	200
W-14B	3/26/2014	NA	NA	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA	NA
W-10B	3/26/2014	NA	NA	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA	NA
W-10A	3/26/2014	NA	NA	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA	NA
W-13	3/26/2014	NA	NA	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA	NA
W-5	6/24/2014	NA	NA	NA	NA	NA	NA	NA	<0.20	NA	NA	NA	NA	NA	NA	NA
W-9	6/24/2014	NA	NA	NA	NA	NA	NA	NA	<0.20	NA	NA	NA	NA	NA	NA	NA
W-8	6/24/2014	NA	NA	NA	NA	NA	NA	NA	<0.20	NA	NA	NA	NA	NA	NA	NA
W-7	6/24/2014	NA	NA	NA	NA	NA	NA	NA	<0.20	NA	NA	NA	NA	NA	NA	NA
S-3A	6/24/2014	NA	NA	NA	NA	NA	NA	NA	0.3	NA	NA	NA	NA	NA	NA	NA
S-3	6/24/2014	NA	NA	NA	NA	NA	NA	NA	0.7	NA	NA	NA	NA	NA	NA	NA
W-12	6/24/2014	NA	NA	NA	NA	NA	NA	NA	0.2	NA	NA	NA	NA	NA	NA	NA
W-1	6/25/2014	NA	NA	NA	NA	NA	NA	NA	1.0	NA	NA	NA	NA	NA	NA	NA
W-3	6/25/2014	NA	NA	NA	NA	NA	NA	NA	0.3	NA	NA	NA	NA	NA	NA	NA
W-100A	6/25/2014	NA	NA	NA	NA	NA	NA	NA	<0.20	NA	NA	NA	NA	NA	NA	NA
W-100B	6/25/2014	NA	NA	NA	NA	NA	NA	NA	0.3	NA	NA	NA	NA	NA	NA	NA
W-101A	6/25/2014	NA	NA	NA	NA	NA	NA	NA	<0.20	NA	NA	NA	NA	NA	NA	NA
W-101B	6/25/2014	NA	NA	NA	NA	NA	NA	NA	0.9	NA	NA	NA	NA	NA	NA	NA
W-16	6/25/2014	NA	NA	NA	NA	NA	NA	NA	<0.20	NA	NA	NA	NA	NA	NA	NA
W-15B	6/26/2014	NA	NA	NA	NA	NA	NA	NA	<0.20	NA	NA	NA	NA	NA	NA	NA
W-15A	6/26/2014	NA	NA	NA	NA	NA	NA	NA	<0.20	NA	NA	NA	NA	NA	NA	NA
W-14A	6/26/2014	NA	NA	NA	NA	NA	NA	NA	<0.20	NA	NA	NA	NA	NA	NA	NA
W-14B	6/26/2014	NA	NA	NA	NA	NA	NA	NA	<0.20	NA	NA	NA	NA	NA	NA	NA
W-10B	6/26/2014	NA	NA	NA	NA	NA	NA	NA	<0.20	NA	NA	NA	NA	NA	NA	NA
W-10A	6/26/2014	NA	NA	NA	NA	NA	NA	NA	<0.20	NA	NA	NA	NA	NA	NA	NA
W-13	6/26/2014	NA	NA	NA	NA	NA	NA	NA	<0.20	NA	NA	NA	NA	NA	NA	NA
W-5	9/24/14	NA	NA	NA	NA	NA	NA	NA	< 10	NA	NA	NA	NA	NA	NA	NA
W-9	9/24/14	NA	NA	NA	NA	NA	NA	NA	< 10	NA	NA	NA	NA	NA	NA	NA
W-7	9/24/14	NA	NA	NA	NA	NA	NA	NA	< 10	NA	NA	NA	NA	NA	NA	NA
W-8	9/24/14	NA	NA	NA	NA	NA	NA	NA	< 10	NA	NA	NA	NA	NA	NA	NA
W-13	9/24/14	NA	NA	NA	NA	NA	NA	NA	< 10	NA	NA	NA	NA	NA	NA	NA
W-12	9/24/14	NA	NA	NA	NA	NA	NA	NA	< 10	NA	NA	NA	NA	NA	NA	NA
S-3A	9/25/14	NA	NA	NA	NA	NA	NA	NA	< 10	NA	NA	NA	NA	NA	NA	NA
S-3	9/25/14	NA	NA	NA	NA	NA	NA	NA	< 10	NA	NA	NA	NA	NA	NA	NA

Historical Summary of Groundwater Chemistry - Metals																
Sample Location	Date Sampled	Antimony µg/L	Arsenic µg/L	Barium µg/L	Beryllium µg/L	Cadmium µg/L	Chromium, Total µg/L	Copper µg/L	Lead µg/L	Mercury µg/L	Nickel (Soluble Salts) µg/L	Selenium µg/L	Silver µg/L	Thallium (Soluble Salts) µg/L	Zinc µg/L	Cyanide (CN-) µg/L
RCG Ingestion		6	10	2000	4	5	100	1300	15	2	300	50	71	2	4700	200
W-1	9/25/14	NA	NA	NA	NA	NA	NA	NA	< 10	NA	NA	NA	NA	NA	NA	NA
W-3	9/25/14	NA	NA	NA	NA	NA	NA	NA	< 10	NA	NA	NA	NA	NA	NA	NA
W-100A	9/25/14	NA	NA	NA	NA	NA	NA	NA	< 10	NA	NA	NA	NA	NA	NA	NA
W-100B	9/25/14	NA	NA	NA	NA	NA	NA	NA	< 10	NA	NA	NA	NA	NA	NA	NA
W-101A	9/25/14	NA	NA	NA	NA	NA	NA	NA	< 10	NA	NA	NA	NA	NA	NA	NA
W-101B	9/25/14	NA	NA	NA	NA	NA	NA	NA	< 10	NA	NA	NA	NA	NA	NA	NA
W-16	9/25/14	NA	NA	NA	NA	NA	NA	NA	< 10	NA	NA	NA	NA	NA	NA	NA
W-15B	9/26/14	NA	NA	NA	NA	NA	NA	NA	< 10	NA	NA	NA	NA	NA	NA	NA
W-15A	9/26/14	NA	NA	NA	NA	NA	NA	NA	< 10	NA	NA	NA	NA	NA	NA	NA
W-14A	9/26/14	NA	NA	NA	NA	NA	NA	NA	< 10	NA	NA	NA	NA	NA	NA	NA
W-14B	9/26/14	NA	NA	NA	NA	NA	NA	NA	< 10	NA	NA	NA	NA	NA	NA	NA
W-10B	9/26/14	NA	NA	NA	NA	NA	NA	NA	< 10	NA	NA	NA	NA	NA	NA	NA
W-10A	9/26/14	NA	NA	NA	NA	NA	NA	NA	< 10	NA	NA	NA	NA	NA	NA	NA

Notes:
 µg/kg - micrograms per kilogram, mg/kg - milligrams per kilogram
 ppb - parts per billion, ppm - parts per million
 ND - Not Detected, NA - Not Analyzed, BPQL - Below Practical Quantification Limit, N/A - Not Applicable
 Concentrations exceeding the Residential Ingestion Screening Level are shown in **bold**
 Concentrations exceeding the Residential Migration to Groundwater Screening Level are shown in **bold**
 Concentrations exceeding the Residential Direct Contact Screening Level are shaded

Historical Summary of Groundwater Chemistry - VOCs																																			
Sample Location	Date Sampled	1,1,1-Trichloroethane	1,1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1,1-Dichloroethane	1,1-Dichloroethene	1,2,4-Trimethylbenzene	1,2-Dibromoethane (EDB)	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,4-Dichlorobenzene	2-Butanone (MEK)	Acetone	Benzene	Bromodichloromethane	Carbon Tetrachloride	Chloroethane (Ethyl Chloride)	cis-1,2-Dichloroethene	Ethylbenzene	Isopropylbenzene (Cumene)	Methylene Chloride	Mineral Spirits (Stoddard Solvent)	Naphthalene	n-Butylbenzene	n-Propylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Trichlorofluoromethane	Vinyl Chloride	Xylene (Total)	
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
RCG Residential Groundwater Ingestion		200	0.66	5.0	24	7.0	15	0.05	600	5.0	5.0	87	75	4,900	12,000	5.0	80	5.0	21,000	70	700	390	5.0	NA	1.4	780	530	5.0	1,000	100	5.0	1,100	2.0	10,000	
T-3	Aug-84	ND	ND	NA	ND	ND				ND					NA		ND		ND	NA			ND	ND				ND	ND	ND	ND		ND		
S-3	Sep-84	4900	ND	NA	3230	150				ND					NA		<10		<10	NA			ND	175				ND	ND	ND	<10		<10		
W-1	Sep-84	ND	ND	NA	ND	ND				ND					NA		ND		ND	NA			ND	<100				ND	ND	ND	ND		ND		
W-2	Sep-84	30	ND	NA	30	ND				ND					NA		ND		ND	NA			ND	<100				ND	ND	ND	ND		ND		
W-3	Sep-84	ND	ND	NA	ND	ND				ND					NA		ND		ND	NA			ND	<100				ND	ND	ND	ND		ND		
W-4	Sep-84	285	ND	NA	65	20				ND					NA		ND		ND	NA			ND	<100				ND	ND	ND	ND		ND		
W-5	Sep-84	55	ND	NA	14	ND				ND					NA		ND		ND	NA			ND	<100				ND	ND	ND	ND		ND		
T-3	1984	ND	ND	NA	ND	ND				ND					NA		ND		ND	NA			ND	NA				2.6	ND	ND	ND		ND		
W-8	Sep-84	ND	ND	NA	ND	ND				ND					NA		ND		ND	NA			ND	ND				ND	ND	ND	ND		ND		
S-3	Oct-84	6000	ND	NA	3100	170				ND					NA		220		<10	NA			ND	12				ND	ND	ND	<10		<10		
S-3	Oct-84	1300	ND	NA	740	29				ND					NA		<10		180	NA			ND	22				ND	ND	ND	<10			ND	
W-7	Oct-84	72	<10	NA	97	28				ND					NA		ND		ND	NA			ND	510				ND	<10	<10	<10			ND	
S-3	Nov-84	1300	ND	NA	940	25				ND					NA		<1		75	NA			ND	NA				ND	ND	ND	2		3		
W-7	Nov-84	12	<1	NA	12	2				ND					NA		ND		ND	NA			ND	NA				ND	10	3	1		ND		
W-7	Dec-84	83	20	NA	65	55				ND					NA		ND		ND	NA			ND	265				ND	<10	<10	<10			ND	
W-7	Dec-84	<0.5	<0.5	NA	16	1.3				ND					NA		ND		ND	NA			ND	NA				ND	<0.5	<0.5	<0.5			ND	
S-3	Apr-86	510	NA	NA	ND	<50				1000					ND		NA		<100	NA			ND	NA				ND	ND	220	ND		ND		
S-3	Apr-86	580	NA	NA	ND	<50				1200					ND		NA		<100	NA			ND	NA				ND	ND	260	ND		ND		
W-2	Apr-86	<5	NA	NA	<5	ND				ND					ND		NA		ND	NA			ND	NA				ND	ND	ND	ND		ND		
W-4	Apr-86	470	NA	NA	ND	10				94					ND		NA		11	NA			ND	NA				ND	ND	ND	ND		ND		
W-5	Apr-86	<5	NA	NA	<5	ND				ND					ND		NA		ND	NA			ND	NA				ND	ND	ND	ND		ND		
W-7	Apr-86	33	NA	NA	ND	ND				5					92		NA		ND	NA			ND	NA				ND	<5	<5	ND		ND		
W-7 DUP	Apr-86	26	NA	NA	ND	ND				<5					62		NA		ND	NA			ND	NA				ND	<5	ND	ND		ND		
S-3	Aug-90	5600	ND	NA	1600	58				ND					ND		NA		110	3400			ND	NA				ND	38	17	190		ND		
W-1	Aug-90	18	ND	NA	6	ND				ND					ND		NA		ND	ND			ND	NA				ND	ND	ND	ND		ND		
W-4	Aug-90	190	ND	NA	160	6				ND					ND		NA		15	ND			ND	NA				ND	ND	ND	ND		ND		
S-3	Sep-90	3600	ND	NA	1200	29				ND					ND		NA		140	5500			ND	NA				ND	39	16	580		ND		
W-1	Sep-90	ND	ND	NA	ND	ND				ND					ND		NA		ND	ND			ND	NA				ND	ND	ND	ND		ND		
W-4	Sep-90	81	ND	NA	26	ND				ND					ND		NA		ND	ND			ND	NA				ND	ND	ND	ND		ND		
W-8	Oct-90	ND	ND	NA	ND	ND				ND					ND		NA		ND	ND			ND	NA				ND	ND	ND	ND		ND		
W-1	1/29/1991	ND			ND	ND									ND	NA	ND	ND	ND	ND			ND	NA				ND	ND	ND	ND		ND		
W-2	1/29/1991	ND			ND	ND									ND	NA	ND	ND	ND	ND			ND	NA				ND	ND	ND	ND		ND		
W-3	1/29/1991	ND			ND	ND									ND	NA	ND	ND	ND	ND			ND	NA				ND	ND	ND	ND		ND		
W-4	1/29/1991	110			87	ND									ND	NA	ND	ND	ND	ND			ND	NA				ND	ND	ND	ND		ND		
W-5	1/29/1991	ND			ND	ND									ND	NA	ND	ND	ND	ND			ND	NA				ND	ND	ND	ND		ND		
W-7	1/30/1991	7			10	10									ND	NA	ND	ND	62				ND	NA				ND	ND	ND	ND		ND		
W-8	1/30/1991	ND			ND	ND									ND	NA	ND	ND	ND	ND			ND	NA				ND	ND	ND	ND		ND		
W-9	2/7/1991	ND			ND	ND									ND	NA	ND	ND	ND	ND			ND	NA				ND	ND	ND	ND		ND		
W-10A	2/7/1991	ND			ND	ND									ND	NA	ND	ND	14				ND	NA				ND	ND	ND	ND		ND		
W-10B	2/7/1991	130			29	12									ND	NA	ND	ND	7				ND	NA				ND	ND	ND	19		ND		
W-11A	2/7/1991	ND			ND	ND									ND	NA	ND	ND	38				ND	NA				ND	ND	ND	ND		ND		
W-11B	2/7/1991	ND			ND	ND									ND	NA	ND	ND	28				ND	NA				ND	ND	ND	ND		ND		
W-12	2/7/1991	ND			5	32									ND	NA	ND	ND	ND				ND	NA				ND	ND	ND	ND		ND		
W-13	2/7/1991	ND			33	ND									ND	NA	ND	36	ND				ND	NA				ND	ND	ND	ND		ND		
S-3	1/30/1991	1700	ND	ND	860	33								ND	ND	ND	NA	ND	210	770			ND	NA				ND	ND	5	100	ND	26	ND	
S-3	1/30/1991	1500	<5	<5	690	6.2			<5	<5	<5		<5	<50		<5	<5	166	210	620	<5		<25					<5	<5	<5	66	<5	<50	<5	
W-14A	9/23/1991	31	<5	<5	45	38			<5	<5	<5		<5	<100	<100	<5	<5																		

Historical Summary of Groundwater Chemistry - VOCs																																		
Sample Location	Date Sampled	1,1,1-Trichloroethane µg/L	1,1,2,2-Tetrachloroethane µg/L	1,1,2-Trichloroethane µg/L	1,1-Dichloroethane µg/L	1,1-Dichloroethane µg/L	1,2,4-Trimethylbenzene µg/L	1,2-Dibromoethane (EDB) µg/L	1,2-Dichlorobenzene µg/L	1,2-Dichloroethane µg/L	1,2-Dichloropropane µg/L	1,3,5-Trimethylbenzene µg/L	1,4-Dichlorobenzene µg/L	2-Butanone (MEK) µg/L	Acetone µg/L	Benzene µg/L	Bromodichloromethane µg/L	Carbon Tetrachloride µg/L	Chloroethane (Ethyl Chloride) µg/L	cis-1,2-Dichloroethene µg/L	Ethylbenzene µg/L	Isopropylbenzene (Cumene) µg/L	Methylene Chloride µg/L	Mineral Spirits (Stoddard Solvent) µg/L	Naphthalene µg/L	n-Butylbenzene µg/L	n-Propylbenzene µg/L	Tetrachloroethene µg/L	Toluene µg/L	trans-1,2-Dichloroethene µg/L	Trichloroethene µg/L	Trichlorofluoromethane µg/L	Vinyl Chloride µg/L	Xylene (Total) µg/L
W-15A	9/23/1991	<5	<5	<5	<5	<5			<5	<5	<5		<5	<100	<100	<5	<5	<5	<10		<5		<5					<5	<5	<5	<5	<10	<10	<5
W-15B	9/23/1991	<5	<5	<5	<5	<5			<5	<5	<5		<5	<100	<100	<5	<5	<5	<10		<5		5.7					<5	<5	<5	<5	<10	<10	<5
W-1	3/4/1992	BEQL			ND	ND											NA		ND					NA				ND	ND	ND	ND		ND	
W-2	3/4/1992	ND			ND	ND											NA		ND					NA				ND	ND	ND	ND		ND	
W-3	3/4/1992	ND			ND	ND											NA		ND					NA				ND	ND	BEQL	ND		ND	
W-4	3/4/1992	81			82	7											NA		7					NA				ND	ND	ND	ND		ND	
W-5	3/4/1992	ND			BEQL	ND											NA		ND					NA				ND	ND	ND	ND		ND	
S-3	2/1/1992	390			450	50											NA		110					NA				BEQL	BEQL	73		43		
W-7	3/4/1992	35			24	BEQL											NA		BEQL					NA				ND	ND	ND	ND		ND	
W-8	3/4/1992	ND			BEQL	ND											NA		ND					NA				ND	ND	ND	ND		ND	
W-9	3/4/1992	ND			ND	ND											NA		ND					NA				ND	ND	ND	ND		ND	
W-10A	3/4/1992	ND			ND	ND											NA		ND					NA				ND	ND	ND	ND		ND	
W-10B	3/4/1992	110			25	19											NA		ND					NA				ND	ND	16		ND		
W-11A	3/4/1992	ND			ND	ND											NA		ND					NA				ND	ND	ND	ND		ND	
W-11B	3/4/1992	ND			ND	5											NA		ND					NA				ND	ND	ND	ND		5	
W-12	3/4/1992	ND			ND	14											NA		ND					NA				ND	ND	ND	ND			
W-13	3/4/1992	ND			21	BEQL											NA		150					NA				ND	ND	BEQL		ND		
W-14A	3/4/1992	ND			BEQL	ND											NA		ND					NA				ND	ND	ND	ND		ND	
W-14A DUP	3/4/1992	ND			BEQL	ND											NA		ND					NA				ND	ND	ND	ND		ND	
W-14B	3/4/1992	BEQL			18	33											NA		18					NA				ND	ND	BEQL		ND		
W-15A	3/4/1992	ND			BEQL	ND											NA		ND					NA				ND	6	BEQL		ND		
W-15B	3/4/1992	ND			ND	ND											NA		ND					NA				ND	ND	BEQL		ND		
W-16	3/4/1992	ND			BEQL	ND											NA		ND					NA				ND	ND	ND	ND		ND	
S-3	May-94	1000	ND	ND	1200	ND				ND					ND		ND		120	BEQL			ND	NA			ND	ND	ND	ND		ND		
S3-A	May-94	17000	ND	ND	13000	610				ND					ND		ND		1200	<125			ND	NA			ND	ND	<125	ND		ND		
S3-D	May-94	130	ND	ND	48	6.1				ND					ND		ND		2.6	BEQL			ND	NA			ND	ND	ND	BEQL		ND		
W-1	Jun-94	ND	ND	ND	ND	ND				ND					ND		ND		ND	ND			ND	NA			ND	ND	ND	ND		ND		
W-2	Jun-94	ND	ND	ND	ND	ND				3.3					ND		NA		ND	ND			ND	NA			ND	ND	ND	ND		ND		
W-3	Jun-94	29	ND	9	2.2	ND				43					ND		ND		ND	BEQL			ND	NA			ND	BEQL	ND	BEQL		ND		
W-4	Jun-94	140	ND	ND	290	86				2.3					ND		ND		15	ND			ND	NA			ND	ND	ND	ND		BEQL		
W-5	Jun-94	ND	ND	ND	BEQL	ND				BEQL					ND		ND		ND	ND			ND	NA			ND	ND	ND	BEQL		ND		
S-3	Jun-94	110	ND	ND	45	2.4				ND					ND		ND		28	34			ND	NA			ND	BEQL	ND	7.5		BEQL		
S3-D	Jun-94	190	ND	11	21	5.3				54					3.9		ND		BEQL	BEQL			ND	NA			ND	BEQL	ND	ND		ND		
W-7	Jun-94	5.1	ND	BEQL	9.7	BEQL				6.3					ND		ND		ND	2.9			ND	NA			ND	ND	ND	ND		ND		
W-8	Jun-94	2.7	ND	4.6	2.5	ND				20					ND		ND		ND	BEQL			ND	NA			ND	BEQL	ND	ND		ND		
W-9	Jun-94	<5	ND	ND	ND	ND				ND					<10		ND		ND	ND			ND	NA			ND	ND	ND	ND		ND		
W-10A	Jun-94	130	ND	ND	BEQL	ND				ND					<10		ND		ND	4.1			ND	NA			ND	ND	ND	ND		ND		
W-10B	Jun-94	69	ND	ND	18	14				ND					ND		ND		3.4	2.8			ND	NA			ND	ND	ND	14		ND		
W-11A	Jun-94	ND	ND	ND	BEQL	ND				ND					ND		NA		ND	BEQL			ND	NA			ND	ND	ND	ND		ND		
W-11B	Jun-94	ND	ND	ND	BEQL	3.6				ND					ND		ND		ND	BEQL			ND	NA			ND	ND	ND	ND		ND		
W-12	Jun-94	18	ND	52	29	46				310					ND		ND		16	16			ND	NA			ND	ND	ND	ND		ND		
W-13	Jun-94	28	ND	7.4	BEQL	BEQL				98					ND		ND		ND	BEQL			ND	NA			ND	BEQL	ND	BEQL		ND		
W-14A	Jun-94	ND	ND	ND	BEQL	ND				ND					ND		ND		ND	4.1			ND	NA			ND	ND	ND	ND		ND		
W-14A DUP	Jun-94	29	ND	ND	52	40				ND					ND		ND		6.3	3.8			ND	NA			ND	ND	BEQL	BEQL		ND		
W-15A	Jun-94	ND	ND	ND	ND	ND				ND					ND		ND		ND	ND			ND	NA			ND	ND	ND	ND		ND		
W-15B	Jun-94	ND	ND	ND	ND	ND				ND					ND		ND		ND	ND			ND	NA			ND	ND	ND	ND		ND		
W-16	Jun-94	ND	ND	ND	BEQL	ND				ND					ND		ND		ND	ND			ND	NA			ND	ND	ND	BEQL		ND		
S3-B	Jan-95	ND	ND	ND	490	ND				ND					ND		ND		830	2000			ND	NA			ND	ND	<125	ND		ND		
W-1	Dec-96	<5	<5	<5	<5	<5				<5					<10		<5		<5	<5			<5	NA			<5	<5	<5	<5		<5		
W-2	Dec-96	<5	<5	<5	<5	<5				<5					<10		<5		<5	<5			<5	NA			<5	<5	<5	<5		<5		

Historical Summary of Groundwater Chemistry - VOCs																																				
Sample Location	Date Sampled	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2,4-Trimethylbenzene	1,2-Dibromoethane (EDB)	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,4-Dichlorobenzene	2-Butanone (MEK)	Acetone	Benzene	Bromodichloromethane	Carbon Tetrachloride	Chloroethane (Ethyl Chloride)	cis-1,2-Dichloroethene	Ethylbenzene	Isopropylbenzene (Cumene)	Methylene Chloride	Mineral Spirits (Stoddard Solvent)	Naphthalene	n-Butylbenzene	n-Propylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Trichlorofluoromethane	Vinyl Chloride	Xylene (Total)		
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
W-3	Dec-96	<5	<5	<5	<5	<5				<5					<10		<5		<5	<5			<5	NA				<5	<5	<5	<5	<5		<5		<5
W-5	Dec-96	<5	<5	<5	<5	<5				<5					<10		<5		<5	<5			<5	NA				<5	<5	<5	<5	<5		<5		<5
S-3	Dec-96	960	<125	<125	1500	<125				<125					<250		<125		400	<125			<125	NA				<125	<125	<125	<125	<125		<125		<125
S-3(DUP)	Dec-96	970	<125	<125	1500	<125				<125					<250		<125		420	<125			<125	NA				<125	<125	<125	<125	<125		<125		<125
S3-A	Dec-96	970	<125	<125	1300	<125				<125					<250		<125		470	2200			<125	NA				<125	<125	ND	<125		<125		<125	
S3-B	Dec-96	<125	<125	<125	1000	<125				<125					<250		<125		320	6			<125	NA				<125	<125	<5	<125		<125		<125	
S3-C	Dec-96	14	<5	<5	230	<5				<5					61		<5		81				<5	NA				<5	<5		<5		<5		<5	
S3-D	Dec-96	420	<50	<50	66	<50				<50					<100		<50		<50	<50			<50	NA				<50	<50	<50	<50		<50		<50	
W-7	Dec-96	36	<5	<5	30	<5				<5					<10		<5		<5	<5			<5	NA				<5	<5	<5	<5		<5		<5	
W-8	Dec-96	<5	<5	<5	<5	<5				<5					<10		<5		<5	<5			<5	NA				<5	<5	<5	<5		<5		<5	
W-9	Dec-96	ND	<5	<5	<5	<5				<5					ND		<5		<5	<5			<5	NA				<5	<5	<5	<5		<5		<5	
W-10A	Dec-96	110	<5	<5	<5	<5				<5					ND		<5		<5	<5			<5	NA				<5	<5	<5	<5		<5		<5	
W-10B	Dec-96	170	<5	<5	23	23				<5					<10		<5		6	<5			<5	NA				<5	<5	<5	11		<5		<5	
W-11A	Dec-96	<5	<5	<5	<5	<5				<5					<10		<5		<5	<5			<5	NA				<5	<5	<5	<5		<5		<5	
W-11B	Dec-96	<5	<5	<5	<5	<5				<5					<10		<5		<5	<5			<5	NA				<5	<5	<5	<5		<5		<5	
W-12	Dec-96	<5	<5	<5	<5	74				<5					<10		<5		<5	<5			7	NA				<5	<5	<5	<5		<5		<5	
W-13	Dec-96	17	<5	<5	<5	<5				<5					<10		<5		<5	<5			<5	NA				<5	<5	<5	<5		<5		<5	
W-14A	Dec-96	<5	<5	<5	<5	<5				<5					<10		<5		<5	<5			<5	NA				<5	<5	<5	<5		<5		<5	
W-14A	Dec-96	<5	<5	<5	<5	16				<5					<10		<5		<5	<5			<5	NA				<5	<5	<5	<5		<5		<5	
W-15A	Dec-96	<5	<5	<5	<5	<5				<5					<10		<5		<5	18			<5	NA				<5	<5	<5	<5		<5		<5	
W-15B	Dec-96	<5	<5	<5	<5	<5				<5					<10		<5		<5	<5			<5	<5				<5	<5	<5	<5		<5		<5	
W-16	Dec-96	<5	<5	<5	<5	<5				<5					<10		<5		<5	<5			<5	NA				<5	<5	<5	<5		<5		<5	
EV-7	Dec-96	9	<5	<5	<5	<5				<5					<10		<5		<5	<5			<5	NA				<5	<5	<5	<5		<5		<5	
EV-8	Dec-96	10	<5	<5	180	<5				<5				<10	<10		<5		39	<5			<5	NA				<5	<5	<5	<5		<5		<5	
EV-9	Dec-96	180	<5	<5	170	7				<5					<10		<5		<5	<5			<5	NA				<5	<5	<5	<5		<5		<5	
EV-10	Dec-96	<5	<5	<5	9	<5				<5					<10		<5		<5	<5			<5	NA				<5	<5	<5	<5		<5		<5	
EV-13	Dec-96	15	<5	<5	7	<5				<5					<10		<5		<5	28			<5	NA				21	<5	<5	<5	13		<5		<5
S-3	Mar-97	8900	<5	<5	3700	49				<5				14	<10		<5		210	7			<5	NA				<5	<5	<5	8		<5		<5	
S-3(DL)	Mar-97	12000	<50	<50	4600	<50				<50				<100	<100		<50		290	<50			<50	NA				<50	<50	<50	<50		<50		<50	
W-7	Mar-97	36	<5	<5	29	<5				<5					<10		<5		<5	6			<5	NA				<5	<5	<5	<5		<5		<5	
EV-8	Mar-97	<5	<5	<5	34	6				<5				<10	<10		<5		11	<5			<5	NA				<5	<5	<5	<5		<5		<5	
W-10B	Mar-97	250	<5	<5	29	18				<5					<10		<5		6	<5			<5	NA				<5	<5	<5	12		<5		<5	
W-13	Mar-97	<5	<5	<5	7	<5				<5					<10		<5		<5	<5			<5	NA				<5	<5	<5	<5		<5		<5	
W-15A	Mar-97	<5	<5	<5	<5	<5				<5					<10		<5		<5	30			<5	NA				<5	<5	<5	<5		<5		<5	
EV-13	Mar-97	12	<5	<5	6	<5				<5					<10		<5		<5	21			<5	NA				27	<5	<5	18		<5		<5	
S-3	Jun-97	11000	<500	<500	4400	<500				<500				<1000	<1000		<500		280	<500			<500	NA				<500	<500	<500	<500		<500		<500	
W-7	Jun-97	23	<5	<5	61	<5				<5					<10	<10		<5		12			<5	NA				<5	<5	<5	<5		<5		<5	
EV-8	Jun-97	<5	<5	<5	8	<5				<5					<10	<10		<5		<5	<5		<5	NA				<5	<5	<5	<5		<5		<5	
W-10B	Jun-97	170	<5	<5	35	18				<5					<10	<10		<5		8	<5		<5	NA				<5	<5	<5	17		<5		<5	
W-13	Jun-97	<5	<5	<5	10	<5				<5					<10	<10		<5		<5	<5		<5	NA				<5	<5	<5	<5		<5		<5	
W-15A	Jun-97	<5	<5	<5	<5	<5				<5					<10	<10		<5		34			<5	NA				<5	<5	<5	<5		<5		<5	
EV-13	Jun-97	<5	<5	<5	7	<5				<5					<10	<10		<5		64			<5	NA				<5	<5	<5	<5		<5		<5	
S-3	Sep-97	12000	<5	<5	3900	<5				<5					<10	<10		<5		<5	<5		<5	NA				<5	<5	<5	<5		<5		<5	
W-7	Sep-97	14	<5	<5	58	<5				<5					<10	<10		<5		<5	<5		<5	NA				<5	<5	<5	<5		<5		<5	
EV-8	Sep-97	<5	<5	<5	5	<5				<5					<10	<10		<5		<5	<5		<5	NA				<5	<5	<5	<5		<5		<5	
W-10B	Sep-97	210	<5	<5	37	19				<5					<10	<10		<5		6	<5		<5	NA				<5	<5	<5	14		<5		<5	
W-13	Sep-97	<5	<5	<5	9	<5				<5					<10	<10		<5		<5	<5		<5	NA				<5	<5	<5	<5		<5		<5	
W-15A	Sep-97	<5	<5	<5	<5	<5				<5					<10	<10		<5		24			<5	NA				<5	<5	<5	<5		<5		<5	
EV-13	Sep-97	<5	<5	<5	<5	<5				<5					<10	<10		<5		51			<5	NA				<5	<5	<5	<5		<5		<5	
EV-18	Sep-9																																			

Historical Summary of Groundwater Chemistry - VOCs																																			
Sample Location	Date Sampled	1,1,1-Trichloroethane	1,1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethane	1,2,4-Trimethylbenzene	1,2-Dibromoethane (EDB)	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,4-Dichlorobenzene	2-Butanone (MEK)	Acetone	Benzene	Bromodichloromethane	Carbon Tetrachloride	Chloroethane (Ethyl Chloride)	cis-1,2-Dichloroethane	Ethylbenzene	Isopropylbenzene (Cumene)	Methylene Chloride	Mineral Spirits (Stoddard Solvent)	Naphthalene	n-Butylbenzene	n-Propylbenzene	Tetrachloroethane	Toluene	trans-1,2-Dichloroethane	Trichloroethane	Trichlorofluoromethane	Vinyl Chloride	Xylene (Total)	
S-3	Jan-98	4400	<5	<5	2200	36				<5				19	30		<5		<5	9			22	NA				<5	<5	<5	110		<5		
W-7	Jan-98	6	<5	<5	95	6				<5				<10	<5		<5		<5	15			<5	NA				<5	<5	<5	<5		<5		
W-10B	Jan-98	130	<5	<5	34	15				<5				<10	27		<5		<5	<5			<5	NA				<5	<5	<5	11		<5		
W-13	Jan-98	<5	<5	<5	12	<5				<5				<10	13		<5		<5	<5			21	NA				<5	<5	<5	<5		<5		
W-15A	Jan-98	<5	<5	<5	<5	<5				<5				<10	24		<5		<5	24			31	NA				<5	<5	<5	<5		<5		
EV-8	Jan-98	10	<5	<5	7	<5				<5					16		<5		<5	<5			22	NA				<5	<5	<5	<5		<5		
EV-13	Jan-98	<5	<5	<5	<5	<5				<5				<10	13		<5		<5	30			65	NA				6	<5	<5	<5	<5		<5	
EV-18	Jan-98	<5	<5	<5	5	<5				<5				<10	13		<5		<5	<5			16	NA				<5	<5	<5	<5		<5		
S-3	Jul-98	6400	<5	<5	4400	<5				<5				<5	1000		<5		810	ND			75	NA				<5	<5	ND	<5		<10		
W-7	Jul-98	25	<5	<5	36	2				<5				<10	<10		<5		<10	6			<5	NA				<5	<5	<5	<5		<5		
W-10B	Jul-98	130	<5	<5	16	6				<5				<10	<10		<5		<10	2			<5	NA				<5	<5	<5	9		<10		
W-13	Jul-98	1	<5	<5	5	<5				<5				<10	<10		<5		<10	2			1	NA				<5	<5	<5	<5		<10		
W-15A	Jul-98	<5	<5	<5	1	<5				<5				<10	<10		<5		<5	12			<5	NA				<5	<5	0.9	<5		<10		
EV-8	Jul-98	<5	<5	<5	36	2				<5				<10			<5		16	<5			2	NA				<5	<5	<5	<5		<10		
EV-13	Jul-98	12	<5	<5	3	<5				<5				<10	<10		<5		<10	16			<5	NA				21	<5	1	13		<10		
EV-18	Jul-98	<5	<5	<5	<5	<5				<5				<10	<10		<5		<10	<5			<5	NA				<5	<5	<5	<5		<10		
SB - 1	5/11/2011	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10		<5	<5	<5	<5	<5	<5	<5	<5	NA	<5	<5	<5	<5	<5	<5	<5	<5	<2	<10	
SB - 2	5/11/2011	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10		<5	<5	<5	<5	<5	<5	<5	<5	NA	<5	<5	<5	<5	<5	<5	<5	<5	<2	<10	
SB - 3	5/11/2011	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10		<5	<5	<5	<5	<5	<5	<5	<5	NA	<5	<5	<5	<5	<5	<5	<5	<5	<2	<10	
SB - 4	5/12/2011	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10		<5	<5	<5	<5	<5	<5	<5	<5	NA	<5	<5	<5	<5	<5	<5	<5	<5	<2	<10	
SB - 5	5/12/2011	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10		<5	<5	<5	<5	<5	<5	<5	<5	NA	<5	<5	<5	<5	<5	<5	<5	<5	<2	<10	
SB - 6	5/12/2011	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10		<5	<5	<5	<5	<5	<5	<5	<5	NA	<5	<5	<5	<5	<5	<5	<5	<5	<2	<10	
SB - 7	5/13/2011	5.69	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10		<5	<5	<5	<5	<5	<5	<5	<5	NA	<5	<5	<5	<5	<5	<5	<5	<5	<2	<10	
SB - 8	5/12/2011	11.8	<5	<5	17.9	<5	<5	<5	<5	<5	<5	<5	<5	<10		<5	<5	<5	<5	<5	<5	<5	<5	NA	<5	<5	<5	<5	<5	<5	<5	<5	<2	<10	
SB - 10	5/13/2011	<5	<5	<5	<5	8.88	<5	<5	<5	<5	<5	<5	<5	<10		<5	<5	<5	<5	<5	<5	<5	<5	NA	<5	<5	<5	<5	<5	<5	<5	<5	<2	<10	
W - 1	5/19/2011	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10		<5	<5	<5	<5	<5	<5	<5	<5	NA	<5	<5	<5	<5	<5	<5	<5	<5	<2	<10	
W - 3	5/19/2011	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10		<5	<5	<5	<5	<5	<5	<5	<5	NA	<5	<5	<5	<5	<5	<5	<5	<5	<2	<10	
W - 5	5/18/2011	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10		<5	<5	<5	<5	<5	<5	<5	<5	NA	<5	<5	<5	<5	<5	<5	<5	<5	<2	<10	
W - 7	5/18/2011	<5	<5	<5	6.29	<5	<5	<5	<5	<5	<5	<5	<5	<10		<5	<5	<5	<5	<5	<5	<5	<5	NA	<5	<5	<5	<5	<5	<5	<5	<5	<2	<10	
W - 8	5/18/2011	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10		<5	<5	<5	<5	<5	<5	<5	<5	NA	<5	<5	<5	<5	<5	<5	<5	<5	<2	<10	
W - 9	5/19/2011	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10		<5	<5	<5	<5	<5	<5	<5	<5	NA	<5	<5	<5	<5	<5	<5	<5	<5	<2	<10	
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W - 13	5/19/2011	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10		<5	<5	<5	<5	<5	<5	<5	<5	NA	<5	<5	<5	<5	<5	<5	<5	<5	<2	<10	
W - UNK - 1	5/18/2011	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10		<5	<5	<5	<5	<5	<5	<5	<5	NA	<5	<5	<5	<5	<5	<5	<5	<5	<2	<10	
W - UNK - 2	5/18/2011	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10		<5	<5	<5	<5	<5	<5	<5	<5	NA	<5	<5	<5	<5	<5	<5	<5	<5	<2	<10	
W-1	4/29/13	<5	<0.66	<5	<5	<5	<5	<1	<5	<5	<5	<5	<5	<10	<100	<5	<5	<5	<5	<5	<5	<5	<5	NA	<1.4	<5	<5	<5	<5	<5	<5	<5	<2	<10	
W-3	4/30/13	<5	<0.66	<5	<5	<5	<5	<1	<5	<5	<5	<5	<5	<10	<100	<5	<5	<5	<5	<5	<5	<5	<5	NA	<1.4	<5	<5	<5	<5	<5	<5	<5	<2	<10	
W5	4/29/13	<5	<0.66	<5	<5	<5	<5	<1	<5	<5	<5	<5	<5	<10	<100	<5	<5	<5	<5	<5	<5	<5	<5	NA	<1.4	<5	<5	<5	<5	<5	<5	<5	<2	<10	
W-7	4/30/13	<5	<0.66	<5	<5	<5	<5	<1	<5	<5	<5	<5	<5	<10	<100	<5	<5	<5	<5	<5	<5	<5	<5	NA	<1.4	<5	<5	<5	<5	<5	<5	<5	<2	<10	
W-8	4/30/13	<5	<0.66	<5	<5	<5	<5	<1	<5	<5	<5	<5	<5	<10	<100	<5	<5	<5	<5	<5	<5	<5	<5	NA	<1.4	<5	<5	<5	<5	<5	<5	<5	<2	<10	
W9	4/29/13	<5	<0.66	<5	<5	<5	<5	<1	<5	<5	<5	<5	<5	<10	<100	<5	<5	<5	<5	<5	<5	<5	<5	NA	<1.4	<5	<5	<5	<5	<5	<5	<5	<2	<10	
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W-12	5/1/13	<5	<0.66	<5	<5	6.41	<5	<1	<5	<5	<5	<5	<5	<10	<100	<5	<5	<5	<5	<5	<5	<5	<5	NA	<1.4	<5	<5	<5	<5	<5	<5	<5	<2	<10	
W-13	5/1/13	<5	<0.66	<5	<5	<5	&																												

Historical Summary of Groundwater Chemistry - VOCs																																		
Sample Location	Date Sampled	1,1,1-Trichloroethane µg/L	1,1,1,2,2-Tetrachloroethane µg/L	1,1,2-Trichloroethane µg/L	1,1-Dichloroethane µg/L	1,1-Dichloroethane µg/L	1,2,4-Trimethylbenzene µg/L	1,2-Dibromoethane (EDB) µg/L	1,2-Dichlorobenzene µg/L	1,2-Dichloroethane µg/L	1,2-Dichloropropane µg/L	1,3,5-Trimethylbenzene µg/L	1,4-Dichlorobenzene µg/L	2-Butanone (MEK) µg/L	Acetone µg/L	Benzene µg/L	Bromodichloromethane µg/L	Carbon Tetrachloride µg/L	Chloroethane (Ethyl Chloride) µg/L	cis-1,2-Dichloroethane µg/L	Ethylbenzene µg/L	Isopropylbenzene (Cumene) µg/L	Methylene Chloride µg/L	Mineral Spirits (Stoddard Solvent) µg/L	Naphthalene µg/L	n-Butylbenzene µg/L	n-Propylbenzene µg/L	Tetrachloroethane µg/L	Toluene µg/L	trans-1,2-Dichloroethane µg/L	Trichloroethene µg/L	Trichlorofluoromethane µg/L	Vinyl Chloride µg/L	Xylene (Total) µg/L
S-3	9/25/14	<5	<0.66	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100	<5	<5	<5	<5	<5	<5	<5	<5	NA	<1.4	<5	<5	<5	<5	<5	<5	<5	<2	<10
W-1	9/25/14	<5	<0.66	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100	<5	<5	<5	<5	<5	<5	<5	<5	NA	<1.4	<5	<5	<5	<5	<5	<5	<5	<2	<10
W-3	9/25/14	<5	<0.66	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100	<5	<5	<5	<5	<5	<5	<5	<5	NA	<1.4	<5	<5	<5	<5	<5	<5	<5	<2	<10
W-100A	9/25/14	<5	<0.66	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100	<5	<5	<5	<5	<5	<5	<5	<5	NA	<1.4	<5	<5	<5	<5	<5	<5	<5	<2	<10
W-100B	9/25/14	<5	<0.66	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100	<5	<5	<5	<5	<5	<5	<5	<5	NA	<1.4	<5	<5	<5	<5	<5	<5	<5	<2	<10
W-101A	9/25/14	<5	<0.66	<5	<5	5.57	<5	<5	<5	<5	<5	<5	<5	<10	<100	<5	<5	<5	<5	<5	<5	<5	<5	NA	<1.4	<5	<5	<5	<5	<5	<5	<5	<2	<10
W-101B	9/25/14	<5	<0.66	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100	<5	<5	<5	<5	<5	<5	<5	<5	NA	<1.4	<5	<5	<5	<5	<5	<5	<5	<2	<10
W-16	9/25/14	<5	<0.66	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100	<5	<5	<5	<5	<5	<5	<5	<5	NA	<1.4	<5	<5	<5	<5	<5	<5	<5	<2	<10
W-15B	9/26/14	<5	<0.66	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100	<5	<5	<5	<5	<5	<5	<5	<5	NA	<1.4	<5	<5	<5	<5	<5	<5	<5	<2	<10
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W-14A	9/26/14	<5	<0.66	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100	<5	<5	<5	<5	<5	<5	<5	<5	NA	<1.4	<5	<5	<5	<5	<5	<5	<5	<2	<10
W-14B	9/26/14	<5	<0.66	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100	<5	<5	<5	<5	<5	<5	<5	<5	NA	<1.4	<5	<5	<5	<5	<5	<5	<5	<2	<10
W-10B	9/26/14	12.0	<0.66	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100	<5	<5	<5	<5	<5	<5	<5	<5	NA	<1.4	<5	<5	<5	<5	<5	<5	<5	<2	<10
W-10A	9/26/14	<5	<0.66	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100	<5	<5	<5	<5	<5	<5	<5	<5	NA	<1.4	<5	<5	<5	<5	<5	<5	<5	<2	<10
TRIP BLANK	9/24/14	<5	<0.66	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<100	<5	<5	<5	<5	<5	<5	<5	<5	NA	<1.4	<5	<5	<5	<5	<5	<5	<5	<2	<10

Notes:
 µg/L - micrograms per Liter mg/L - milligrams per Liter
 ppb - parts per billion, ppm - parts per million
 VOCs - volatile organic compounds
 ND - Not Detected, NA - Not Analyzed, BPQL - Below Practical Quantification Limit, N/A - Not Applicable
 Concentrations exceeding the Residential Ingestion Screening Level are shown in bold
 Table compiled from summary tables of previous reports. Previous analyses used analytical methods other than 8260 and, therefore, may not have analyzed for all compounds shown in table. Blank cells represent either no analysis available or no value reported.

APPENDIX D

Laboratory Certificates of Analysis and Chain of Custody



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South Bend, IN 46615

October 13, 2014

ENVision Project Number: 2014-2873
Client Project Name: UEA Sample Street

Dear Mr. Vijay,

Please find the attached analytical report for the samples received September 29, 2014. All test methods performed were fully compliant with local, state, and federal EPA methods unless otherwise noted. The project was analyzed as requested on the enclosed chain of custody record. Please review the comments section for additional information about your results or Quality Control data. Metals analyses are not included in the NELAC certification.

Feel free to contact me if you have any questions or comments regarding your analytical report or service.

Thank you for your business. ENVision Laboratories looks forward to working with you on your next project.

Yours Sincerely,

A handwritten signature in black ink that reads "David Norris".

David Norris

Client Services Manager
ENVision Laboratories, Inc.

PA DEP Lab Code: 68-04846 NELAP Cert:004





Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 8260
Prep Method: EPA 5030B
Analytical Batch: 100514VW

Client Sample ID: W-5 **Sample Collection Date/Time:** 9/24/14 11:00
Envision Sample Number: 14-22305 **Sample Received Date/Time:** 9/30/14 16:00
Sample Matrix: water

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Acetone	< 100	100	
Acrolein	< 1	1	
Acrylonitrile	< 0.45	1	1
Benzene	< 5	5	
Bromobenzene	< 5	5	
Bromochloromethane	< 5	5	
Bromodichloromethane	< 5	5	
Bromoform	< 5	5	
Bromomethane	< 5	5	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 5	5	
sec-Butylbenzene	< 5	5	
tert-Butylbenzene	< 5	5	
Carbon Disulfide	< 5	5	
Carbon Tetrachloride	< 5	5	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 5	5	
Chloromethane	< 5	5	
2-Chlorotoluene	< 5	5	
4-Chlorotoluene	< 5	5	
1,2-Dibromo-3-chloropropane	< 1	1	
Dibromochloromethane	< 5	5	
1,2-Dibromoethane (EDB)	< 1	1	
Dibromomethane	< 5	5	
1,2-Dichlorobenzene	< 5	5	
1,3-Dichlorobenzene	< 5	5	
1,4-Dichlorobenzene	< 5	5	
trans-1,4-Dichloro-2-butene	< 1	1	
Dichlorodifluoromethane	< 5	5	



Analytical Report

8260 continued...

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
1,1-Dichloroethane	< 5	5	
1,2-Dichloroethane	< 5	5	
1,1-Dichloroethene	< 5	5	
cis-1,2-Dichloroethene	< 5	5	
trans-1,2-Dichloroethene	< 5	5	
1,2-Dichloropropane	< 5	5	
1,3-Dichloropropane	< 5	5	
2,2-Dichloropropane	< 5	5	
1,1-Dichloropropene	< 5	5	
1,3-Dichloropropene	< 4.1	4.1	
Ethylbenzene	< 5	5	
Ethyl methacrylate	< 100	100	
Hexachloro-1,3-butadiene	< 2.6	2.6	
n-Hexane	< 10	10	
2-Hexanone	< 10	10	
Iodomethane	< 10	10	
Isopropylbenzene (Cumene)	< 5	5	
p-Isopropyltoluene	< 5	5	
Methylene chloride	< 5	5	
4-Methyl-2-pentanone (MIBK)	< 10	10	
Methyl-tert-butyl-ether	< 5	5	
1-Methylnaphthalene	< 5	5	
2-Methylnaphthalene	< 5	5	
Naphthalene	< 1.4	1.4	
n-Propylbenzene	< 5	5	
Styrene	< 5	5	
1,1,1,2-Tetrachloroethane	< 5	5	
1,1,2,2-Tetrachloroethane	< 0.66	1	1
Tetrachloroethene	< 5	5	
Toluene	< 5	5	
1,2,3-Trichlorobenzene	< 5	5	
1,2,4-Trichlorobenzene	< 5	5	
1,1,1-Trichloroethane	< 5	5	
1,1,2-Trichloroethane	< 5	5	
Trichloroethene	< 5	5	
Trichlorofluoromethane	< 5	5	
1,2,3-Trichloropropane	< 1	1	
1,2,4-Trimethylbenzene	< 5	5	
1,3,5-Trimethylbenzene	< 5	5	
Vinyl acetate	< 10	10	
Vinyl chloride	< 2	2	
Xylene, M&P	< 5	5	
Xylene, Ortho	< 5	5	
Xylene (Total)	< 10	10	
Dibromofluoromethane (surrogate)	105%		
1,2-Dichloroethane-d4 (surrogate)	105%		
Toluene-d8 (surrogate)	97%		
4-bromofluorobenzene (surrogate)	96%		
Analysis Date/Time:	10-05-14/22:19		
Analyst Initials	tjg		



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Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 6010
Prep Method: EPA 3010A

Client Sample ID: W-5
Envision Sample Number: 14-22305
Sample Matrix: water

Sample Collection Date/Time: 9/24/14 11:00
Sample Received Date/Time: 9/30/14 16:00

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Lead	< 10	10	

ICP Analysis Date/Time: 10-6-14/20:55
Analyst Initials: gjd
Date Digested: 10/4/2014
Initial Sample Volume: 50 mL
Final Volume: 50 mL
Analytical Batch: 100514icp



Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 8260
Prep Method: EPA 5030B
Analytical Batch: 100514VW

Client Sample ID: W-9 **Sample Collection Date/Time:** 9/24/14 12:30
Envision Sample Number: 14-22306 **Sample Received Date/Time:** 9/30/14 16:00
Sample Matrix: water

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Acetone	< 100	100	
Acrolein	< 1	1	
Acrylonitrile	< 0.45	1	1
Benzene	< 5	5	
Bromobenzene	< 5	5	
Bromochloromethane	< 5	5	
Bromodichloromethane	< 5	5	
Bromoform	< 5	5	
Bromomethane	< 5	5	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 5	5	
sec-Butylbenzene	< 5	5	
tert-Butylbenzene	< 5	5	
Carbon Disulfide	< 5	5	
Carbon Tetrachloride	< 5	5	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 5	5	
Chloromethane	< 5	5	
2-Chlorotoluene	< 5	5	
4-Chlorotoluene	< 5	5	
1,2-Dibromo-3-chloropropane	< 1	1	
Dibromochloromethane	< 5	5	
1,2-Dibromoethane (EDB)	< 1	1	
Dibromomethane	< 5	5	
1,2-Dichlorobenzene	< 5	5	
1,3-Dichlorobenzene	< 5	5	
1,4-Dichlorobenzene	< 5	5	
trans-1,4-Dichloro-2-butene	< 1	1	
Dichlorodifluoromethane	< 5	5	



Analytical Report

8260 continued...

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
1,1-Dichloroethane	< 5	5	
1,2-Dichloroethane	< 5	5	
1,1-Dichloroethene	< 5	5	
cis-1,2-Dichloroethene	< 5	5	
trans-1,2-Dichloroethene	< 5	5	
1,2-Dichloropropane	< 5	5	
1,3-Dichloropropane	< 5	5	
2,2-Dichloropropane	< 5	5	
1,1-Dichloropropene	< 5	5	
1,3-Dichloropropene	< 4.1	4.1	
Ethylbenzene	< 5	5	
Ethyl methacrylate	< 100	100	
Hexachloro-1,3-butadiene	< 2.6	2.6	
n-Hexane	< 10	10	
2-Hexanone	< 10	10	
Iodomethane	< 10	10	
Isopropylbenzene (Cumene)	< 5	5	
p-Isopropyltoluene	< 5	5	
Methylene chloride	< 5	5	
4-Methyl-2-pentanone (MIBK)	< 10	10	
Methyl-tert-butyl-ether	< 5	5	
1-Methylnaphthalene	< 5	5	
2-Methylnaphthalene	< 5	5	
Naphthalene	< 1.4	1.4	
n-Propylbenzene	< 5	5	
Styrene	< 5	5	
1,1,1,2-Tetrachloroethane	< 5	5	
1,1,2,2-Tetrachloroethane	< 0.66	1	1
Tetrachloroethene	< 5	5	
Toluene	< 5	5	
1,2,3-Trichlorobenzene	< 5	5	
1,2,4-Trichlorobenzene	< 5	5	
1,1,1-Trichloroethane	< 5	5	
1,1,2-Trichloroethane	< 5	5	
Trichloroethene	< 5	5	
Trichlorofluoromethane	< 5	5	
1,2,3-Trichloropropane	< 1	1	
1,2,4-Trimethylbenzene	< 5	5	
1,3,5-Trimethylbenzene	< 5	5	
Vinyl acetate	< 10	10	
Vinyl chloride	< 2	2	
Xylene, M&P	< 5	5	
Xylene, Ortho	< 5	5	
Xylene (Total)	< 10	10	
Dibromofluoromethane (surrogate)	108%		
1,2-Dichloroethane-d4 (surrogate)	109%		
Toluene-d8 (surrogate)	93%		
4-bromofluorobenzene (surrogate)	92%		
Analysis Date/Time:	10-05-14/22:37		
Analyst Initials	tjg		



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Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 6010
Prep Method: EPA 3010A

Client Sample ID: W-9
Envision Sample Number: 14-22306
Sample Matrix: water

Sample Collection Date/Time: 9/24/14 12:30
Sample Received Date/Time: 9/30/14 16:00

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Lead	< 10	10	

ICP Analysis Date/Time: 10-6-14/21:00
Analyst Initials: gjd
Date Digested: 10/4/2014
Initial Sample Volume: 50 mL
Final Volume: 50 mL
Analytical Batch: 100514icp



Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 8260
Prep Method: EPA 5030B
Analytical Batch: 100514VW

Client Sample ID: W-7 **Sample Collection Date/Time:** 9/24/14 14:10
Envision Sample Number: 14-22307 **Sample Received Date/Time:** 9/30/14 16:00
Sample Matrix: water

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Acetone	< 100	100	
Acrolein	< 1	1	
Acrylonitrile	< 0.45	1	1
Benzene	< 5	5	
Bromobenzene	< 5	5	
Bromochloromethane	< 5	5	
Bromodichloromethane	< 5	5	
Bromoform	< 5	5	
Bromomethane	< 5	5	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 5	5	
sec-Butylbenzene	< 5	5	
tert-Butylbenzene	< 5	5	
Carbon Disulfide	< 5	5	
Carbon Tetrachloride	< 5	5	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 5	5	
Chloromethane	< 5	5	
2-Chlorotoluene	< 5	5	
4-Chlorotoluene	< 5	5	
1,2-Dibromo-3-chloropropane	< 1	1	
Dibromochloromethane	< 5	5	
1,2-Dibromoethane (EDB)	< 1	1	
Dibromomethane	< 5	5	
1,2-Dichlorobenzene	< 5	5	
1,3-Dichlorobenzene	< 5	5	
1,4-Dichlorobenzene	< 5	5	
trans-1,4-Dichloro-2-butene	< 1	1	
Dichlorodifluoromethane	< 5	5	



Analytical Report

8260 continued...

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
1,1-Dichloroethane	< 5	5	
1,2-Dichloroethane	< 5	5	
1,1-Dichloroethene	< 5	5	
cis-1,2-Dichloroethene	< 5	5	
trans-1,2-Dichloroethene	< 5	5	
1,2-Dichloropropane	< 5	5	
1,3-Dichloropropane	< 5	5	
2,2-Dichloropropane	< 5	5	
1,1-Dichloropropene	< 5	5	
1,3-Dichloropropene	< 4.1	4.1	
Ethylbenzene	< 5	5	
Ethyl methacrylate	< 100	100	
Hexachloro-1,3-butadiene	< 2.6	2.6	
n-Hexane	< 10	10	
2-Hexanone	< 10	10	
Iodomethane	< 10	10	
Isopropylbenzene (Cumene)	< 5	5	
p-Isopropyltoluene	< 5	5	
Methylene chloride	< 5	5	
4-Methyl-2-pentanone (MIBK)	< 10	10	
Methyl-tert-butyl-ether	< 5	5	
1-Methylnaphthalene	< 5	5	
2-Methylnaphthalene	< 5	5	
Naphthalene	< 1.4	1.4	
n-Propylbenzene	< 5	5	
Styrene	< 5	5	
1,1,1,2-Tetrachloroethane	< 5	5	
1,1,2,2-Tetrachloroethane	< 0.66	1	1
Tetrachloroethene	< 5	5	
Toluene	< 5	5	
1,2,3-Trichlorobenzene	< 5	5	
1,2,4-Trichlorobenzene	< 5	5	
1,1,1-Trichloroethane	< 5	5	
1,1,2-Trichloroethane	< 5	5	
Trichloroethene	< 5	5	
Trichlorofluoromethane	< 5	5	
1,2,3-Trichloropropane	< 1	1	
1,2,4-Trimethylbenzene	< 5	5	
1,3,5-Trimethylbenzene	< 5	5	
Vinyl acetate	< 10	10	
Vinyl chloride	< 2	2	
Xylene, M&P	< 5	5	
Xylene, Ortho	< 5	5	
Xylene (Total)	< 10	10	
Dibromofluoromethane (surrogate)	104%		
1,2-Dichloroethane-d4 (surrogate)	106%		
Toluene-d8 (surrogate)	92%		
4-bromofluorobenzene (surrogate)	92%		
Analysis Date/Time:	10-05-14/22:56		
Analyst Initials	tjg		



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Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 6010
Prep Method: EPA 3010A

Client Sample ID: W-7
Envision Sample Number: 14-22307
Sample Matrix: water

Sample Collection Date/Time: 9/24/14 14:10
Sample Received Date/Time: 9/30/14 16:00

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Lead	< 10	10	

ICP Analysis Date/Time: 10-6-14/21:05
Analyst Initials: gjd
Date Digested: 10/4/2014
Initial Sample Volume: 50 mL
Final Volume: 50 mL
Analytical Batch: 100514icp



Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 8260
Prep Method: EPA 5030B
Analytical Batch: 100514VW

Client Sample ID: W-8 **Sample Collection Date/Time:** 9/24/14 14:55
Envision Sample Number: 14-22308 **Sample Received Date/Time:** 9/30/14 16:00
Sample Matrix: water

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Acetone	< 100	100	
Acrolein	< 1	1	
Acrylonitrile	< 0.45	1	1
Benzene	< 5	5	
Bromobenzene	< 5	5	
Bromochloromethane	< 5	5	
Bromodichloromethane	< 5	5	
Bromoform	< 5	5	
Bromomethane	< 5	5	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 5	5	
sec-Butylbenzene	< 5	5	
tert-Butylbenzene	< 5	5	
Carbon Disulfide	< 5	5	
Carbon Tetrachloride	< 5	5	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 5	5	
Chloromethane	< 5	5	
2-Chlorotoluene	< 5	5	
4-Chlorotoluene	< 5	5	
1,2-Dibromo-3-chloropropane	< 1	1	
Dibromochloromethane	< 5	5	
1,2-Dibromoethane (EDB)	< 1	1	
Dibromomethane	< 5	5	
1,2-Dichlorobenzene	< 5	5	
1,3-Dichlorobenzene	< 5	5	
1,4-Dichlorobenzene	< 5	5	
trans-1,4-Dichloro-2-butene	< 1	1	
Dichlorodifluoromethane	< 5	5	



Analytical Report

8260 continued...

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
1,1-Dichloroethane	< 5	5	
1,2-Dichloroethane	< 5	5	
1,1-Dichloroethene	< 5	5	
cis-1,2-Dichloroethene	< 5	5	
trans-1,2-Dichloroethene	< 5	5	
1,2-Dichloropropane	< 5	5	
1,3-Dichloropropane	< 5	5	
2,2-Dichloropropane	< 5	5	
1,1-Dichloropropene	< 5	5	
1,3-Dichloropropene	< 4.1	4.1	
Ethylbenzene	< 5	5	
Ethyl methacrylate	< 100	100	
Hexachloro-1,3-butadiene	< 2.6	2.6	
n-Hexane	< 10	10	
2-Hexanone	< 10	10	
Iodomethane	< 10	10	
Isopropylbenzene (Cumene)	< 5	5	
p-Isopropyltoluene	< 5	5	
Methylene chloride	< 5	5	
4-Methyl-2-pentanone (MIBK)	< 10	10	
Methyl-tert-butyl-ether	< 5	5	
1-Methylnaphthalene	< 5	5	
2-Methylnaphthalene	< 5	5	
Naphthalene	< 1.4	1.4	
n-Propylbenzene	< 5	5	
Styrene	< 5	5	
1,1,1,2-Tetrachloroethane	< 5	5	
1,1,2,2-Tetrachloroethane	< 0.66	1	1
Tetrachloroethene	< 5	5	
Toluene	< 5	5	
1,2,3-Trichlorobenzene	< 5	5	
1,2,4-Trichlorobenzene	< 5	5	
1,1,1-Trichloroethane	< 5	5	
1,1,2-Trichloroethane	< 5	5	
Trichloroethene	< 5	5	
Trichlorofluoromethane	< 5	5	
1,2,3-Trichloropropane	< 1	1	
1,2,4-Trimethylbenzene	< 5	5	
1,3,5-Trimethylbenzene	< 5	5	
Vinyl acetate	< 10	10	
Vinyl chloride	< 2	2	
Xylene, M&P	< 5	5	
Xylene, Ortho	< 5	5	
Xylene (Total)	< 10	10	
Dibromofluoromethane (surrogate)	101%		
1,2-Dichloroethane-d4 (surrogate)	107%		
Toluene-d8 (surrogate)	91%		
4-bromofluorobenzene (surrogate)	96%		
Analysis Date/Time:	10-05-14/23:14		
Analyst Initials	tjg		



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Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 6010
Prep Method: EPA 3010A

Client Sample ID: W-8
Envision Sample Number: 14-22308
Sample Matrix: water

Sample Collection Date/Time: 9/24/14 14:55
Sample Received Date/Time: 9/30/14 16:00

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Lead	< 10	10	

ICP Analysis Date/Time: 10-6-14/21:10
Analyst Initials: gjd
Date Digested: 10/4/2014
Initial Sample Volume: 50 mL
Final Volume: 50 mL
Analytical Batch: 100514icp



Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 8260
Prep Method: EPA 5030B
Analytical Batch: 100514VW

Client Sample ID: W-13 **Sample Collection Date/Time:** 9/24/14 16:15
Envision Sample Number: 14-22309 **Sample Received Date/Time:** 9/30/14 16:00
Sample Matrix: water

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Acetone	< 100	100	
Acrolein	< 1	1	
Acrylonitrile	< 0.45	1	1
Benzene	< 5	5	
Bromobenzene	< 5	5	
Bromochloromethane	< 5	5	
Bromodichloromethane	< 5	5	
Bromoform	< 5	5	
Bromomethane	< 5	5	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 5	5	
sec-Butylbenzene	< 5	5	
tert-Butylbenzene	< 5	5	
Carbon Disulfide	< 5	5	
Carbon Tetrachloride	< 5	5	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 5	5	
Chloromethane	< 5	5	
2-Chlorotoluene	< 5	5	
4-Chlorotoluene	< 5	5	
1,2-Dibromo-3-chloropropane	< 1	1	
Dibromochloromethane	< 5	5	
1,2-Dibromoethane (EDB)	< 1	1	
Dibromomethane	< 5	5	
1,2-Dichlorobenzene	< 5	5	
1,3-Dichlorobenzene	< 5	5	
1,4-Dichlorobenzene	< 5	5	
trans-1,4-Dichloro-2-butene	< 1	1	
Dichlorodifluoromethane	< 5	5	



Analytical Report

8260 continued...

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
1,1-Dichloroethane	< 5	5	
1,2-Dichloroethane	< 5	5	
1,1-Dichloroethene	< 5	5	
cis-1,2-Dichloroethene	< 5	5	
trans-1,2-Dichloroethene	< 5	5	
1,2-Dichloropropane	< 5	5	
1,3-Dichloropropane	< 5	5	
2,2-Dichloropropane	< 5	5	
1,1-Dichloropropene	< 5	5	
1,3-Dichloropropene	< 4.1	4.1	
Ethylbenzene	< 5	5	
Ethyl methacrylate	< 100	100	
Hexachloro-1,3-butadiene	< 2.6	2.6	
n-Hexane	< 10	10	
2-Hexanone	< 10	10	
Iodomethane	< 10	10	
Isopropylbenzene (Cumene)	< 5	5	
p-Isopropyltoluene	< 5	5	
Methylene chloride	< 5	5	
4-Methyl-2-pentanone (MIBK)	< 10	10	
Methyl-tert-butyl-ether	< 5	5	
1-Methylnaphthalene	< 5	5	
2-Methylnaphthalene	< 5	5	
Naphthalene	< 1.4	1.4	
n-Propylbenzene	< 5	5	
Styrene	< 5	5	
1,1,1,2-Tetrachloroethane	< 5	5	
1,1,2,2-Tetrachloroethane	< 0.66	1	1
Tetrachloroethene	< 5	5	
Toluene	< 5	5	
1,2,3-Trichlorobenzene	< 5	5	
1,2,4-Trichlorobenzene	< 5	5	
1,1,1-Trichloroethane	< 5	5	
1,1,2-Trichloroethane	< 5	5	
Trichloroethene	< 5	5	
Trichlorofluoromethane	< 5	5	
1,2,3-Trichloropropane	< 1	1	
1,2,4-Trimethylbenzene	< 5	5	
1,3,5-Trimethylbenzene	< 5	5	
Vinyl acetate	< 10	10	
Vinyl chloride	< 2	2	
Xylene, M&P	< 5	5	
Xylene, Ortho	< 5	5	
Xylene (Total)	< 10	10	
Dibromofluoromethane (surrogate)	107%		
1,2-Dichloroethane-d4 (surrogate)	110%		
Toluene-d8 (surrogate)	95%		
4-bromofluorobenzene (surrogate)	95%		
Analysis Date/Time:	10-05-14/23:33		
Analyst Initials	tjg		



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Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 6010
Prep Method: EPA 3010A

Client Sample ID: W-13
Envision Sample Number: 14-22309
Sample Matrix: water

Sample Collection Date/Time: 9/24/14 16:15
Sample Received Date/Time: 9/30/14 16:00

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Lead	< 10	10	

ICP Analysis Date/Time: 10-6-14/21:15
Analyst Initials: gjd
Date Digested: 10/4/2014
Initial Sample Volume: 50 mL
Final Volume: 50 mL
Analytical Batch: 100514icp



Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 8260
Prep Method: EPA 5030B
Analytical Batch: 100514VW

Client Sample ID: W-12 **Sample Collection Date/Time:** 9/24/14 17:20
Envision Sample Number: 14-22310 **Sample Received Date/Time:** 9/30/14 16:00
Sample Matrix: water

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Acetone	< 100	100	
Acrolein	< 1	1	
Acrylonitrile	< 0.45	1	1
Benzene	< 5	5	
Bromobenzene	< 5	5	
Bromochloromethane	< 5	5	
Bromodichloromethane	< 5	5	
Bromoform	< 5	5	
Bromomethane	< 5	5	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 5	5	
sec-Butylbenzene	< 5	5	
tert-Butylbenzene	< 5	5	
Carbon Disulfide	< 5	5	
Carbon Tetrachloride	< 5	5	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 5	5	
Chloromethane	< 5	5	
2-Chlorotoluene	< 5	5	
4-Chlorotoluene	< 5	5	
1,2-Dibromo-3-chloropropane	< 1	1	
Dibromochloromethane	< 5	5	
1,2-Dibromoethane (EDB)	< 1	1	
Dibromomethane	< 5	5	
1,2-Dichlorobenzene	< 5	5	
1,3-Dichlorobenzene	< 5	5	
1,4-Dichlorobenzene	< 5	5	
trans-1,4-Dichloro-2-butene	< 1	1	
Dichlorodifluoromethane	< 5	5	



Analytical Report

8260 continued...

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
1,1-Dichloroethane	< 5	5	
1,2-Dichloroethane	< 5	5	
1,1-Dichloroethene	< 5	5	
cis-1,2-Dichloroethene	< 5	5	
trans-1,2-Dichloroethene	< 5	5	
1,2-Dichloropropane	< 5	5	
1,3-Dichloropropane	< 5	5	
2,2-Dichloropropane	< 5	5	
1,1-Dichloropropene	< 5	5	
1,3-Dichloropropene	< 4.1	4.1	
Ethylbenzene	< 5	5	
Ethyl methacrylate	< 100	100	
Hexachloro-1,3-butadiene	< 2.6	2.6	
n-Hexane	< 10	10	
2-Hexanone	< 10	10	
Iodomethane	< 10	10	
Isopropylbenzene (Cumene)	< 5	5	
p-Isopropyltoluene	< 5	5	
Methylene chloride	< 5	5	
4-Methyl-2-pentanone (MIBK)	< 10	10	
Methyl-tert-butyl-ether	< 5	5	
1-Methylnaphthalene	< 5	5	
2-Methylnaphthalene	< 5	5	
Naphthalene	< 1.4	1.4	
n-Propylbenzene	< 5	5	
Styrene	< 5	5	
1,1,1,2-Tetrachloroethane	< 5	5	
1,1,2,2-Tetrachloroethane	< 0.66	1	1
Tetrachloroethene	< 5	5	
Toluene	< 5	5	
1,2,3-Trichlorobenzene	< 5	5	
1,2,4-Trichlorobenzene	< 5	5	
1,1,1-Trichloroethane	< 5	5	
1,1,2-Trichloroethane	< 5	5	
Trichloroethene	< 5	5	
Trichlorofluoromethane	< 5	5	
1,2,3-Trichloropropane	< 1	1	
1,2,4-Trimethylbenzene	< 5	5	
1,3,5-Trimethylbenzene	< 5	5	
Vinyl acetate	< 10	10	
Vinyl chloride	< 2	2	
Xylene, M&P	< 5	5	
Xylene, Ortho	< 5	5	
Xylene (Total)	< 10	10	
Dibromofluoromethane (surrogate)	104%		
1,2-Dichloroethane-d4 (surrogate)	105%		
Toluene-d8 (surrogate)	94%		
4-bromofluorobenzene (surrogate)	95%		
Analysis Date/Time:	10-05-14/23:52		
Analyst Initials	tjg		



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Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 6010
Prep Method: EPA 3010A

Client Sample ID: W-12
Envision Sample Number: 14-22310
Sample Matrix: water

Sample Collection Date/Time: 9/24/14 17:20
Sample Received Date/Time: 9/30/14 16:00

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Lead	< 10	10	

ICP Analysis Date/Time: 10-6-14/21:20
Analyst Initials: gjd
Date Digested: 10/4/2014
Initial Sample Volume: 50 mL
Final Volume: 50 mL
Analytical Batch: 100514icp



Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873
Analytical Method: EPA 8260
Prep Method: EPA 5030B
Analytical Batch: 100514VW

Client Sample ID: S-3A **Sample Collection Date/Time:** 9/25/14 9:05
Envision Sample Number: 14-22311 **Sample Received Date/Time:** 9/30/14 16:00
Sample Matrix: water

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Acetone	< 100	100	
Acrolein	< 1	1	
Acrylonitrile	< 0.45	1	1
Benzene	< 5	5	
Bromobenzene	< 5	5	
Bromochloromethane	< 5	5	
Bromodichloromethane	< 5	5	
Bromoform	< 5	5	
Bromomethane	< 5	5	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 5	5	
sec-Butylbenzene	< 5	5	
tert-Butylbenzene	< 5	5	
Carbon Disulfide	< 5	5	
Carbon Tetrachloride	< 5	5	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 5	5	
Chloromethane	< 5	5	
2-Chlorotoluene	< 5	5	
4-Chlorotoluene	< 5	5	
1,2-Dibromo-3-chloropropane	< 1	1	
Dibromochloromethane	< 5	5	
1,2-Dibromoethane (EDB)	< 1	1	
Dibromomethane	< 5	5	
1,2-Dichlorobenzene	< 5	5	
1,3-Dichlorobenzene	< 5	5	
1,4-Dichlorobenzene	< 5	5	
trans-1,4-Dichloro-2-butene	< 1	1	
Dichlorodifluoromethane	< 5	5	



Analytical Report

8260 continued...

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
1,1-Dichloroethane	< 5	5	
1,2-Dichloroethane	< 5	5	
1,1-Dichloroethene	< 5	5	
cis-1,2-Dichloroethene	< 5	5	
trans-1,2-Dichloroethene	< 5	5	
1,2-Dichloropropane	< 5	5	
1,3-Dichloropropane	< 5	5	
2,2-Dichloropropane	< 5	5	
1,1-Dichloropropene	< 5	5	
1,3-Dichloropropene	< 4.1	4.1	
Ethylbenzene	< 5	5	
Ethyl methacrylate	< 100	100	
Hexachloro-1,3-butadiene	< 2.6	2.6	
n-Hexane	< 10	10	
2-Hexanone	< 10	10	
Iodomethane	< 10	10	
Isopropylbenzene (Cumene)	< 5	5	
p-Isopropyltoluene	< 5	5	
Methylene chloride	< 5	5	
4-Methyl-2-pentanone (MIBK)	< 10	10	
Methyl-tert-butyl-ether	< 5	5	
1-Methylnaphthalene	< 5	5	
2-Methylnaphthalene	< 5	5	
Naphthalene	< 1.4	1.4	
n-Propylbenzene	< 5	5	
Styrene	< 5	5	
1,1,1,2-Tetrachloroethane	< 5	5	
1,1,2,2-Tetrachloroethane	< 0.66	1	1
Tetrachloroethene	< 5	5	
Toluene	< 5	5	
1,2,3-Trichlorobenzene	< 5	5	
1,2,4-Trichlorobenzene	< 5	5	
1,1,1-Trichloroethane	< 5	5	
1,1,2-Trichloroethane	< 5	5	
Trichloroethene	< 5	5	
Trichlorofluoromethane	< 5	5	
1,2,3-Trichloropropane	< 1	1	
1,2,4-Trimethylbenzene	< 5	5	
1,3,5-Trimethylbenzene	< 5	5	
Vinyl acetate	< 10	10	
Vinyl chloride	< 2	2	
Xylene, M&P	< 5	5	
Xylene, Ortho	< 5	5	
Xylene (Total)	< 10	10	
Dibromofluoromethane (surrogate)	105%		
1,2-Dichloroethane-d4 (surrogate)	110%		
Toluene-d8 (surrogate)	94%		
4-bromofluorobenzene (surrogate)	94%		
Analysis Date/Time:	10-06-14/00:29		
Analyst Initials	tjg		



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Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 6010
Prep Method: EPA 3010A

Client Sample ID: S-3A
Envision Sample Number: 14-22311
Sample Matrix: water

Sample Collection Date/Time: 9/25/14 9:05
Sample Received Date/Time: 9/30/14 16:00

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Lead	< 10	10	

ICP Analysis Date/Time: 10-6-14/21:24
Analyst Initials: gjd
Date Digested: 10/4/2014
Initial Sample Volume: 50 mL
Final Volume: 50 mL
Analytical Batch: 100514icp



Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873
Analytical Method: EPA 8260
Prep Method: EPA 5030B
Analytical Batch: 100514VW

Client Sample ID: S-3 **Sample Collection Date/Time:** 9/25/14 9:55
Envision Sample Number: 14-22312 **Sample Received Date/Time:** 9/30/14 16:00
Sample Matrix: water

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Acetone	< 100	100	
Acrolein	< 1	1	
Acrylonitrile	< 0.45	1	1
Benzene	< 5	5	
Bromobenzene	< 5	5	
Bromochloromethane	< 5	5	
Bromodichloromethane	< 5	5	
Bromoform	< 5	5	
Bromomethane	< 5	5	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 5	5	
sec-Butylbenzene	< 5	5	
tert-Butylbenzene	< 5	5	
Carbon Disulfide	< 5	5	
Carbon Tetrachloride	< 5	5	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 5	5	
Chloromethane	< 5	5	
2-Chlorotoluene	< 5	5	
4-Chlorotoluene	< 5	5	
1,2-Dibromo-3-chloropropane	< 1	1	
Dibromochloromethane	< 5	5	
1,2-Dibromoethane (EDB)	< 1	1	
Dibromomethane	< 5	5	
1,2-Dichlorobenzene	< 5	5	
1,3-Dichlorobenzene	< 5	5	
1,4-Dichlorobenzene	< 5	5	
trans-1,4-Dichloro-2-butene	< 1	1	
Dichlorodifluoromethane	< 5	5	



Analytical Report

8260 continued...

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
1,1-Dichloroethane	< 5	5	
1,2-Dichloroethane	< 5	5	
1,1-Dichloroethene	< 5	5	
cis-1,2-Dichloroethene	< 5	5	
trans-1,2-Dichloroethene	< 5	5	
1,2-Dichloropropane	< 5	5	
1,3-Dichloropropane	< 5	5	
2,2-Dichloropropane	< 5	5	
1,1-Dichloropropene	< 5	5	
1,3-Dichloropropene	< 4.1	4.1	
Ethylbenzene	< 5	5	
Ethyl methacrylate	< 100	100	
Hexachloro-1,3-butadiene	< 2.6	2.6	
n-Hexane	< 10	10	
2-Hexanone	< 10	10	
Iodomethane	< 10	10	
Isopropylbenzene (Cumene)	< 5	5	
p-Isopropyltoluene	< 5	5	
Methylene chloride	< 5	5	
4-Methyl-2-pentanone (MIBK)	< 10	10	
Methyl-tert-butyl-ether	< 5	5	
1-Methylnaphthalene	< 5	5	
2-Methylnaphthalene	< 5	5	
Naphthalene	< 1.4	1.4	
n-Propylbenzene	< 5	5	
Styrene	< 5	5	
1,1,1,2-Tetrachloroethane	< 5	5	
1,1,2,2-Tetrachloroethane	< 0.66	1	1
Tetrachloroethene	< 5	5	
Toluene	< 5	5	
1,2,3-Trichlorobenzene	< 5	5	
1,2,4-Trichlorobenzene	< 5	5	
1,1,1-Trichloroethane	< 5	5	
1,1,2-Trichloroethane	< 5	5	
Trichloroethene	< 5	5	
Trichlorofluoromethane	< 5	5	
1,2,3-Trichloropropane	< 1	1	
1,2,4-Trimethylbenzene	< 5	5	
1,3,5-Trimethylbenzene	< 5	5	
Vinyl acetate	< 10	10	
Vinyl chloride	< 2	2	
Xylene, M&P	< 5	5	
Xylene, Ortho	< 5	5	
Xylene (Total)	< 10	10	
Dibromofluoromethane (surrogate)	106%		
1,2-Dichloroethane-d4 (surrogate)	106%		
Toluene-d8 (surrogate)	91%		
4-bromofluorobenzene (surrogate)	94%		
Analysis Date/Time:	10-06-14/00:47		
Analyst Initials	tjg		



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Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 6010
Prep Method: EPA 3010A

Client Sample ID: S-3
Envision Sample Number: 14-22312
Sample Matrix: water

Sample Collection Date/Time: 9/25/14 9:55
Sample Received Date/Time: 9/30/14 16:00

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Lead	< 10	10	

ICP Analysis Date/Time: 10-6-14/21:29
Analyst Initials: gjd
Date Digested: 10/4/2014
Initial Sample Volume: 50 mL
Final Volume: 50 mL
Analytical Batch: 100514icp



Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873
Analytical Method: EPA 8260
Prep Method: EPA 5030B
Analytical Batch: 100514VW

Client Sample ID: W-1 **Sample Collection Date/Time:** 9/25/14 11:00
Envision Sample Number: 14-22313 **Sample Received Date/Time:** 9/30/14 16:00
Sample Matrix: water

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Acetone	< 100	100	
Acrolein	< 1	1	
Acrylonitrile	< 0.45	1	1
Benzene	< 5	5	
Bromobenzene	< 5	5	
Bromochloromethane	< 5	5	
Bromodichloromethane	< 5	5	
Bromoform	< 5	5	
Bromomethane	< 5	5	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 5	5	
sec-Butylbenzene	< 5	5	
tert-Butylbenzene	< 5	5	
Carbon Disulfide	< 5	5	
Carbon Tetrachloride	< 5	5	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 5	5	
Chloromethane	< 5	5	
2-Chlorotoluene	< 5	5	
4-Chlorotoluene	< 5	5	
1,2-Dibromo-3-chloropropane	< 1	1	
Dibromochloromethane	< 5	5	
1,2-Dibromoethane (EDB)	< 1	1	
Dibromomethane	< 5	5	
1,2-Dichlorobenzene	< 5	5	
1,3-Dichlorobenzene	< 5	5	
1,4-Dichlorobenzene	< 5	5	
trans-1,4-Dichloro-2-butene	< 1	1	
Dichlorodifluoromethane	< 5	5	



Analytical Report

8260 continued...

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
1,1-Dichloroethane	< 5	5	
1,2-Dichloroethane	< 5	5	
1,1-Dichloroethene	< 5	5	
cis-1,2-Dichloroethene	< 5	5	
trans-1,2-Dichloroethene	< 5	5	
1,2-Dichloropropane	< 5	5	
1,3-Dichloropropane	< 5	5	
2,2-Dichloropropane	< 5	5	
1,1-Dichloropropene	< 5	5	
1,3-Dichloropropene	< 4.1	4.1	
Ethylbenzene	< 5	5	
Ethyl methacrylate	< 100	100	
Hexachloro-1,3-butadiene	< 2.6	2.6	
n-Hexane	< 10	10	
2-Hexanone	< 10	10	
Iodomethane	< 10	10	
Isopropylbenzene (Cumene)	< 5	5	
p-Isopropyltoluene	< 5	5	
Methylene chloride	< 5	5	
4-Methyl-2-pentanone (MIBK)	< 10	10	
Methyl-tert-butyl-ether	< 5	5	
1-Methylnaphthalene	< 5	5	
2-Methylnaphthalene	< 5	5	
Naphthalene	< 1.4	1.4	
n-Propylbenzene	< 5	5	
Styrene	< 5	5	
1,1,1,2-Tetrachloroethane	< 5	5	
1,1,2,2-Tetrachloroethane	< 0.66	1	1
Tetrachloroethene	< 5	5	
Toluene	< 5	5	
1,2,3-Trichlorobenzene	< 5	5	
1,2,4-Trichlorobenzene	< 5	5	
1,1,1-Trichloroethane	< 5	5	
1,1,2-Trichloroethane	< 5	5	
Trichloroethene	< 5	5	
Trichlorofluoromethane	< 5	5	
1,2,3-Trichloropropane	< 1	1	
1,2,4-Trimethylbenzene	< 5	5	
1,3,5-Trimethylbenzene	< 5	5	
Vinyl acetate	< 10	10	
Vinyl chloride	< 2	2	
Xylene, M&P	< 5	5	
Xylene, Ortho	< 5	5	
Xylene (Total)	< 10	10	
Dibromofluoromethane (surrogate)	106%		
1,2-Dichloroethane-d4 (surrogate)	111%		
Toluene-d8 (surrogate)	96%		
4-bromofluorobenzene (surrogate)	94%		
Analysis Date/Time:	10-06-14/01:06		
Analyst Initials	tjg		



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Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 6010
Prep Method: EPA 3010A

Client Sample ID: W-1
Envision Sample Number: 14-22313
Sample Matrix: water

Sample Collection Date/Time: 9/25/14 11:00
Sample Received Date/Time: 9/30/14 16:00

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Lead	< 10	10	

ICP Analysis Date/Time: 10-6-14/21:33
Analyst Initials: gjd
Date Digested: 10/4/2014
Initial Sample Volume: 50 mL
Final Volume: 50 mL
Analytical Batch: 100514icp



Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873
Analytical Method: EPA 8260
Prep Method: EPA 5030B
Analytical Batch: 100514VW

Client Sample ID: W-3 **Sample Collection Date/Time:** 9/25/14 12:05
Envision Sample Number: 14-22314 **Sample Received Date/Time:** 9/30/14 16:00
Sample Matrix: water

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Acetone	< 100	100	
Acrolein	< 1	1	
Acrylonitrile	< 0.45	1	1
Benzene	< 5	5	
Bromobenzene	< 5	5	
Bromochloromethane	< 5	5	
Bromodichloromethane	< 5	5	
Bromoform	< 5	5	
Bromomethane	< 5	5	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 5	5	
sec-Butylbenzene	< 5	5	
tert-Butylbenzene	< 5	5	
Carbon Disulfide	< 5	5	
Carbon Tetrachloride	< 5	5	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 5	5	
Chloromethane	< 5	5	
2-Chlorotoluene	< 5	5	
4-Chlorotoluene	< 5	5	
1,2-Dibromo-3-chloropropane	< 1	1	
Dibromochloromethane	< 5	5	
1,2-Dibromoethane (EDB)	< 1	1	
Dibromomethane	< 5	5	
1,2-Dichlorobenzene	< 5	5	
1,3-Dichlorobenzene	< 5	5	
1,4-Dichlorobenzene	< 5	5	
trans-1,4-Dichloro-2-butene	< 1	1	
Dichlorodifluoromethane	< 5	5	



Analytical Report

8260 continued...

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
1,1-Dichloroethane	< 5	5	
1,2-Dichloroethane	< 5	5	
1,1-Dichloroethene	< 5	5	
cis-1,2-Dichloroethene	< 5	5	
trans-1,2-Dichloroethene	< 5	5	
1,2-Dichloropropane	< 5	5	
1,3-Dichloropropane	< 5	5	
2,2-Dichloropropane	< 5	5	
1,1-Dichloropropene	< 5	5	
1,3-Dichloropropene	< 4.1	4.1	
Ethylbenzene	< 5	5	
Ethyl methacrylate	< 100	100	
Hexachloro-1,3-butadiene	< 2.6	2.6	
n-Hexane	< 10	10	
2-Hexanone	< 10	10	
Iodomethane	< 10	10	
Isopropylbenzene (Cumene)	< 5	5	
p-Isopropyltoluene	< 5	5	
Methylene chloride	< 5	5	
4-Methyl-2-pentanone (MIBK)	< 10	10	
Methyl-tert-butyl-ether	< 5	5	
1-Methylnaphthalene	< 5	5	
2-Methylnaphthalene	< 5	5	
Naphthalene	< 1.4	1.4	
n-Propylbenzene	< 5	5	
Styrene	< 5	5	
1,1,1,2-Tetrachloroethane	< 5	5	
1,1,2,2-Tetrachloroethane	< 0.66	1	1
Tetrachloroethene	< 5	5	
Toluene	< 5	5	
1,2,3-Trichlorobenzene	< 5	5	
1,2,4-Trichlorobenzene	< 5	5	
1,1,1-Trichloroethane	< 5	5	
1,1,2-Trichloroethane	< 5	5	
Trichloroethene	< 5	5	
Trichlorofluoromethane	< 5	5	
1,2,3-Trichloropropane	< 1	1	
1,2,4-Trimethylbenzene	< 5	5	
1,3,5-Trimethylbenzene	< 5	5	
Vinyl acetate	< 10	10	
Vinyl chloride	< 2	2	
Xylene, M&P	< 5	5	
Xylene, Ortho	< 5	5	
Xylene (Total)	< 10	10	
Dibromofluoromethane (surrogate)	106%		
1,2-Dichloroethane-d4 (surrogate)	109%		
Toluene-d8 (surrogate)	95%		
4-bromofluorobenzene (surrogate)	92%		
Analysis Date/Time:	10-06-14/01:24		
Analyst Initials	tjg		



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Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 6010
Prep Method: EPA 3010A

Client Sample ID: W-3
Envision Sample Number: 14-22314
Sample Matrix: water

Sample Collection Date/Time: 9/25/14 12:05
Sample Received Date/Time: 9/30/14 16:00

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Lead	< 10	10	

ICP Analysis Date/Time: 10-6-14/21:46
Analyst Initials: gjd
Date Digested: 10/4/2014
Initial Sample Volume: 50 mL
Final Volume: 50 mL
Analytical Batch: 100514icp



Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 8260
Prep Method: EPA 5030B
Analytical Batch: 100514VW

Client Sample ID: W-100A **Sample Collection Date/Time:** 9/25/14 13:00
Envision Sample Number: 14-22315 **Sample Received Date/Time:** 9/30/14 16:00
Sample Matrix: water

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Acetone	< 100	100	
Acrolein	< 1	1	
Acrylonitrile	< 0.45	1	1
Benzene	< 5	5	
Bromobenzene	< 5	5	
Bromochloromethane	< 5	5	
Bromodichloromethane	< 5	5	
Bromoform	< 5	5	
Bromomethane	< 5	5	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 5	5	
sec-Butylbenzene	< 5	5	
tert-Butylbenzene	< 5	5	
Carbon Disulfide	< 5	5	
Carbon Tetrachloride	< 5	5	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 5	5	
Chloromethane	< 5	5	
2-Chlorotoluene	< 5	5	
4-Chlorotoluene	< 5	5	
1,2-Dibromo-3-chloropropane	< 1	1	
Dibromochloromethane	< 5	5	
1,2-Dibromoethane (EDB)	< 1	1	
Dibromomethane	< 5	5	
1,2-Dichlorobenzene	< 5	5	
1,3-Dichlorobenzene	< 5	5	
1,4-Dichlorobenzene	< 5	5	
trans-1,4-Dichloro-2-butene	< 1	1	
Dichlorodifluoromethane	< 5	5	



Analytical Report

8260 continued...

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
1,1-Dichloroethane	< 5	5	
1,2-Dichloroethane	< 5	5	
1,1-Dichloroethene	< 5	5	
cis-1,2-Dichloroethene	< 5	5	
trans-1,2-Dichloroethene	< 5	5	
1,2-Dichloropropane	< 5	5	
1,3-Dichloropropane	< 5	5	
2,2-Dichloropropane	< 5	5	
1,1-Dichloropropene	< 5	5	
1,3-Dichloropropene	< 4.1	4.1	
Ethylbenzene	< 5	5	
Ethyl methacrylate	< 100	100	
Hexachloro-1,3-butadiene	< 2.6	2.6	
n-Hexane	< 10	10	
2-Hexanone	< 10	10	
Iodomethane	< 10	10	
Isopropylbenzene (Cumene)	< 5	5	
p-Isopropyltoluene	< 5	5	
Methylene chloride	< 5	5	
4-Methyl-2-pentanone (MIBK)	< 10	10	
Methyl-tert-butyl-ether	< 5	5	
1-Methylnaphthalene	< 5	5	
2-Methylnaphthalene	< 5	5	
Naphthalene	< 1.4	1.4	
n-Propylbenzene	< 5	5	
Styrene	< 5	5	
1,1,1,2-Tetrachloroethane	< 5	5	
1,1,2,2-Tetrachloroethane	< 0.66	1	1
Tetrachloroethene	< 5	5	
Toluene	< 5	5	
1,2,3-Trichlorobenzene	< 5	5	
1,2,4-Trichlorobenzene	< 5	5	
1,1,1-Trichloroethane	< 5	5	
1,1,2-Trichloroethane	< 5	5	
Trichloroethene	< 5	5	
Trichlorofluoromethane	< 5	5	
1,2,3-Trichloropropane	< 1	1	
1,2,4-Trimethylbenzene	< 5	5	
1,3,5-Trimethylbenzene	< 5	5	
Vinyl acetate	< 10	10	
Vinyl chloride	< 2	2	
Xylene, M&P	< 5	5	
Xylene, Ortho	< 5	5	
Xylene (Total)	< 10	10	
Dibromofluoromethane (surrogate)	106%		
1,2-Dichloroethane-d4 (surrogate)	107%		
Toluene-d8 (surrogate)	94%		
4-bromofluorobenzene (surrogate)	94%		
Analysis Date/Time:	10-06-14/01:43		
Analyst Initials	tjg		



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Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 6010
Prep Method: EPA 3010A

Client Sample ID: W-100A
Envision Sample Number: 14-22315
Sample Matrix: water

Sample Collection Date/Time: 9/25/14 13:00
Sample Received Date/Time: 9/30/14 16:00

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Lead	< 10	10	

ICP Analysis Date/Time: 10-6-14/21:51
Analyst Initials: gjd
Date Digested: 10/4/2014
Initial Sample Volume: 50 mL
Final Volume: 50 mL
Analytical Batch: 100514icp



Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 8260
Prep Method: EPA 5030B
Analytical Batch: 100514VW

Client Sample ID: W-100B **Sample Collection Date/Time:** 9/25/14 13:40
Envision Sample Number: 14-22316 **Sample Received Date/Time:** 9/30/14 16:00
Sample Matrix: water

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Acetone	< 100	100	
Acrolein	< 1	1	
Acrylonitrile	< 0.45	1	1
Benzene	< 5	5	
Bromobenzene	< 5	5	
Bromochloromethane	< 5	5	
Bromodichloromethane	< 5	5	
Bromoform	< 5	5	
Bromomethane	< 5	5	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 5	5	
sec-Butylbenzene	< 5	5	
tert-Butylbenzene	< 5	5	
Carbon Disulfide	< 5	5	
Carbon Tetrachloride	< 5	5	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 5	5	
Chloromethane	< 5	5	
2-Chlorotoluene	< 5	5	
4-Chlorotoluene	< 5	5	
1,2-Dibromo-3-chloropropane	< 1	1	
Dibromochloromethane	< 5	5	
1,2-Dibromoethane (EDB)	< 1	1	
Dibromomethane	< 5	5	
1,2-Dichlorobenzene	< 5	5	
1,3-Dichlorobenzene	< 5	5	
1,4-Dichlorobenzene	< 5	5	
trans-1,4-Dichloro-2-butene	< 1	1	
Dichlorodifluoromethane	< 5	5	



Analytical Report

8260 continued...

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
1,1-Dichloroethane	< 5	5	
1,2-Dichloroethane	< 5	5	
1,1-Dichloroethene	< 5	5	
cis-1,2-Dichloroethene	< 5	5	
trans-1,2-Dichloroethene	< 5	5	
1,2-Dichloropropane	< 5	5	
1,3-Dichloropropane	< 5	5	
2,2-Dichloropropane	< 5	5	
1,1-Dichloropropene	< 5	5	
1,3-Dichloropropene	< 4.1	4.1	
Ethylbenzene	< 5	5	
Ethyl methacrylate	< 100	100	
Hexachloro-1,3-butadiene	< 2.6	2.6	
n-Hexane	< 10	10	
2-Hexanone	< 10	10	
Iodomethane	< 10	10	
Isopropylbenzene (Cumene)	< 5	5	
p-Isopropyltoluene	< 5	5	
Methylene chloride	< 5	5	
4-Methyl-2-pentanone (MIBK)	< 10	10	
Methyl-tert-butyl-ether	< 5	5	
1-Methylnaphthalene	< 5	5	
2-Methylnaphthalene	< 5	5	
Naphthalene	< 1.4	1.4	
n-Propylbenzene	< 5	5	
Styrene	< 5	5	
1,1,1,2-Tetrachloroethane	< 5	5	
1,1,2,2-Tetrachloroethane	< 0.66	1	1
Tetrachloroethene	< 5	5	
Toluene	< 5	5	
1,2,3-Trichlorobenzene	< 5	5	
1,2,4-Trichlorobenzene	< 5	5	
1,1,1-Trichloroethane	< 5	5	
1,1,2-Trichloroethane	< 5	5	
Trichloroethene	< 5	5	
Trichlorofluoromethane	< 5	5	
1,2,3-Trichloropropane	< 1	1	
1,2,4-Trimethylbenzene	< 5	5	
1,3,5-Trimethylbenzene	< 5	5	
Vinyl acetate	< 10	10	
Vinyl chloride	< 2	2	
Xylene, M&P	< 5	5	
Xylene, Ortho	< 5	5	
Xylene (Total)	< 10	10	
Dibromofluoromethane (surrogate)	104%		
1,2-Dichloroethane-d4 (surrogate)	112%		
Toluene-d8 (surrogate)	95%		
4-bromofluorobenzene (surrogate)	95%		
Analysis Date/Time:	10-06-14/02:01		
Analyst Initials	tjg		



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Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 6010
Prep Method: EPA 3010A

Client Sample ID: W-100B
Envision Sample Number: 14-22316
Sample Matrix: water

Sample Collection Date/Time: 9/25/14 13:40
Sample Received Date/Time: 9/30/14 16:00

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Lead	< 10	10	

ICP Analysis Date/Time: 10-6-14/21:56
Analyst Initials: gjd
Date Digested: 10/4/2014
Initial Sample Volume: 50 mL
Final Volume: 50 mL
Analytical Batch: 100514icp



Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 8260
Prep Method: EPA 5030B
Analytical Batch: 100514VW

Client Sample ID: W-101A **Sample Collection Date/Time:** 9/25/14 14:35
Envision Sample Number: 14-22317 **Sample Received Date/Time:** 9/30/14 16:00
Sample Matrix: water

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Acetone	< 100	100	
Acrolein	< 1	1	
Acrylonitrile	< 0.45	1	1
Benzene	< 5	5	
Bromobenzene	< 5	5	
Bromochloromethane	< 5	5	
Bromodichloromethane	< 5	5	
Bromoform	< 5	5	
Bromomethane	< 5	5	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 5	5	
sec-Butylbenzene	< 5	5	
tert-Butylbenzene	< 5	5	
Carbon Disulfide	< 5	5	
Carbon Tetrachloride	< 5	5	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 5	5	
Chloromethane	< 5	5	
2-Chlorotoluene	< 5	5	
4-Chlorotoluene	< 5	5	
1,2-Dibromo-3-chloropropane	< 1	1	
Dibromochloromethane	< 5	5	
1,2-Dibromoethane (EDB)	< 1	1	
Dibromomethane	< 5	5	
1,2-Dichlorobenzene	< 5	5	
1,3-Dichlorobenzene	< 5	5	
1,4-Dichlorobenzene	< 5	5	
trans-1,4-Dichloro-2-butene	< 1	1	
Dichlorodifluoromethane	< 5	5	



Analytical Report

8260 continued...

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
1,1-Dichloroethane	< 5	5	
1,2-Dichloroethane	< 5	5	
1,1-Dichloroethene	5.57	5	
cis-1,2-Dichloroethene	< 5	5	
trans-1,2-Dichloroethene	< 5	5	
1,2-Dichloropropane	< 5	5	
1,3-Dichloropropane	< 5	5	
2,2-Dichloropropane	< 5	5	
1,1-Dichloropropene	< 5	5	
1,3-Dichloropropene	< 4.1	4.1	
Ethylbenzene	< 5	5	
Ethyl methacrylate	< 100	100	
Hexachloro-1,3-butadiene	< 2.6	2.6	
n-Hexane	< 10	10	
2-Hexanone	< 10	10	
Iodomethane	< 10	10	
Isopropylbenzene (Cumene)	< 5	5	
p-Isopropyltoluene	< 5	5	
Methylene chloride	< 5	5	
4-Methyl-2-pentanone (MIBK)	< 10	10	
Methyl-tert-butyl-ether	< 5	5	
1-Methylnaphthalene	< 5	5	
2-Methylnaphthalene	< 5	5	
Naphthalene	< 1.4	1.4	
n-Propylbenzene	< 5	5	
Styrene	< 5	5	
1,1,1,2-Tetrachloroethane	< 5	5	
1,1,2,2-Tetrachloroethane	< 0.66	1	1
Tetrachloroethene	< 5	5	
Toluene	< 5	5	
1,2,3-Trichlorobenzene	< 5	5	
1,2,4-Trichlorobenzene	< 5	5	
1,1,1-Trichloroethane	< 5	5	
1,1,2-Trichloroethane	< 5	5	
Trichloroethene	< 5	5	
Trichlorofluoromethane	< 5	5	
1,2,3-Trichloropropane	< 1	1	
1,2,4-Trimethylbenzene	< 5	5	
1,3,5-Trimethylbenzene	< 5	5	
Vinyl acetate	< 10	10	
Vinyl chloride	< 2	2	
Xylene, M&P	< 5	5	
Xylene, Ortho	< 5	5	
Xylene (Total)	< 10	10	
Dibromofluoromethane (surrogate)	109%		
1,2-Dichloroethane-d4 (surrogate)	116%		
Toluene-d8 (surrogate)	97%		
4-bromofluorobenzene (surrogate)	93%		
Analysis Date/Time:	10-06-14/02:20		
Analyst Initials	tjg		



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Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 6010
Prep Method: EPA 3010A

Client Sample ID: W-101A
Envision Sample Number: 14-22317
Sample Matrix: water

Sample Collection Date/Time: 9/25/14 14:35
Sample Received Date/Time: 9/30/14 16:00

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Lead	< 10	10	

ICP Analysis Date/Time: 10-6-14/22:01
Analyst Initials: gjd
Date Digested: 10/4/2014
Initial Sample Volume: 50 mL
Final Volume: 50 mL
Analytical Batch: 100514icp



Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 8260
Prep Method: EPA 5030B
Analytical Batch: 100514VW

Client Sample ID: W-101B **Sample Collection Date/Time:** 9/25/14 16:15
Envision Sample Number: 14-22318 **Sample Received Date/Time:** 9/30/14 16:00
Sample Matrix: water

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Acetone	< 100	100	
Acrolein	< 1	1	
Acrylonitrile	< 0.45	1	1
Benzene	< 5	5	
Bromobenzene	< 5	5	
Bromochloromethane	< 5	5	
Bromodichloromethane	< 5	5	
Bromoform	< 5	5	
Bromomethane	< 5	5	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 5	5	
sec-Butylbenzene	< 5	5	
tert-Butylbenzene	< 5	5	
Carbon Disulfide	< 5	5	
Carbon Tetrachloride	< 5	5	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 5	5	
Chloromethane	< 5	5	
2-Chlorotoluene	< 5	5	
4-Chlorotoluene	< 5	5	
1,2-Dibromo-3-chloropropane	< 1	1	
Dibromochloromethane	< 5	5	
1,2-Dibromoethane (EDB)	< 1	1	
Dibromomethane	< 5	5	
1,2-Dichlorobenzene	< 5	5	
1,3-Dichlorobenzene	< 5	5	
1,4-Dichlorobenzene	< 5	5	
trans-1,4-Dichloro-2-butene	< 1	1	
Dichlorodifluoromethane	< 5	5	



Analytical Report

8260 continued...

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
1,1-Dichloroethane	< 5	5	
1,2-Dichloroethane	< 5	5	
1,1-Dichloroethene	< 5	5	
cis-1,2-Dichloroethene	< 5	5	
trans-1,2-Dichloroethene	< 5	5	
1,2-Dichloropropane	< 5	5	
1,3-Dichloropropane	< 5	5	
2,2-Dichloropropane	< 5	5	
1,1-Dichloropropene	< 5	5	
1,3-Dichloropropene	< 4.1	4.1	
Ethylbenzene	< 5	5	
Ethyl methacrylate	< 100	100	
Hexachloro-1,3-butadiene	< 2.6	2.6	
n-Hexane	< 10	10	
2-Hexanone	< 10	10	
Iodomethane	< 10	10	
Isopropylbenzene (Cumene)	< 5	5	
p-Isopropyltoluene	< 5	5	
Methylene chloride	< 5	5	
4-Methyl-2-pentanone (MIBK)	< 10	10	
Methyl-tert-butyl-ether	< 5	5	
1-Methylnaphthalene	< 5	5	
2-Methylnaphthalene	< 5	5	
Naphthalene	< 1.4	1.4	
n-Propylbenzene	< 5	5	
Styrene	< 5	5	
1,1,1,2-Tetrachloroethane	< 5	5	
1,1,2,2-Tetrachloroethane	< 0.66	1	1
Tetrachloroethene	< 5	5	
Toluene	< 5	5	
1,2,3-Trichlorobenzene	< 5	5	
1,2,4-Trichlorobenzene	< 5	5	
1,1,1-Trichloroethane	< 5	5	
1,1,2-Trichloroethane	< 5	5	
Trichloroethene	< 5	5	
Trichlorofluoromethane	< 5	5	
1,2,3-Trichloropropane	< 1	1	
1,2,4-Trimethylbenzene	< 5	5	
1,3,5-Trimethylbenzene	< 5	5	
Vinyl acetate	< 10	10	
Vinyl chloride	< 2	2	
Xylene, M&P	< 5	5	
Xylene, Ortho	< 5	5	
Xylene (Total)	< 10	10	
Dibromofluoromethane (surrogate)	106%		
1,2-Dichloroethane-d4 (surrogate)	111%		
Toluene-d8 (surrogate)	95%		
4-bromofluorobenzene (surrogate)	95%		
Analysis Date/Time:	10-06-14/02:38		
Analyst Initials	tjg		



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Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 6010
Prep Method: EPA 3010A

Client Sample ID: W-101B
Envision Sample Number: 14-22318
Sample Matrix: water

Sample Collection Date/Time: 9/25/14 16:15
Sample Received Date/Time: 9/30/14 16:00

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Lead	< 10	10	

ICP Analysis Date/Time: 10-6-14/22:05
Analyst Initials: gjd
Date Digested: 10/4/2014
Initial Sample Volume: 50 mL
Final Volume: 50 mL
Analytical Batch: 100514icp



Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873
Analytical Method: EPA 8260
Prep Method: EPA 5030B
Analytical Batch: 100514VW

Client Sample ID: W-16 **Sample Collection Date/Time:** 9/25/14 17:20
Envision Sample Number: 14-22319 **Sample Received Date/Time:** 9/30/14 16:00
Sample Matrix: water

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Acetone	< 100	100	
Acrolein	< 1	1	
Acrylonitrile	< 0.45	1	1
Benzene	< 5	5	
Bromobenzene	< 5	5	
Bromochloromethane	< 5	5	
Bromodichloromethane	< 5	5	
Bromoform	< 5	5	
Bromomethane	< 5	5	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 5	5	
sec-Butylbenzene	< 5	5	
tert-Butylbenzene	< 5	5	
Carbon Disulfide	< 5	5	
Carbon Tetrachloride	< 5	5	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 5	5	
Chloromethane	< 5	5	
2-Chlorotoluene	< 5	5	
4-Chlorotoluene	< 5	5	
1,2-Dibromo-3-chloropropane	< 1	1	
Dibromochloromethane	< 5	5	
1,2-Dibromoethane (EDB)	< 1	1	
Dibromomethane	< 5	5	
1,2-Dichlorobenzene	< 5	5	
1,3-Dichlorobenzene	< 5	5	
1,4-Dichlorobenzene	< 5	5	
trans-1,4-Dichloro-2-butene	< 1	1	
Dichlorodifluoromethane	< 5	5	



Analytical Report

8260 continued...

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
1,1-Dichloroethane	< 5	5	
1,2-Dichloroethane	< 5	5	
1,1-Dichloroethene	< 5	5	
cis-1,2-Dichloroethene	< 5	5	
trans-1,2-Dichloroethene	< 5	5	
1,2-Dichloropropane	< 5	5	
1,3-Dichloropropane	< 5	5	
2,2-Dichloropropane	< 5	5	
1,1-Dichloropropene	< 5	5	
1,3-Dichloropropene	< 4.1	4.1	
Ethylbenzene	< 5	5	
Ethyl methacrylate	< 100	100	
Hexachloro-1,3-butadiene	< 2.6	2.6	
n-Hexane	< 10	10	
2-Hexanone	< 10	10	
Iodomethane	< 10	10	
Isopropylbenzene (Cumene)	< 5	5	
p-Isopropyltoluene	< 5	5	
Methylene chloride	< 5	5	
4-Methyl-2-pentanone (MIBK)	< 10	10	
Methyl-tert-butyl-ether	< 5	5	
1-Methylnaphthalene	< 5	5	
2-Methylnaphthalene	< 5	5	
Naphthalene	< 1.4	1.4	
n-Propylbenzene	< 5	5	
Styrene	< 5	5	
1,1,1,2-Tetrachloroethane	< 5	5	
1,1,2,2-Tetrachloroethane	< 0.66	1	1
Tetrachloroethene	< 5	5	
Toluene	< 5	5	
1,2,3-Trichlorobenzene	< 5	5	
1,2,4-Trichlorobenzene	< 5	5	
1,1,1-Trichloroethane	< 5	5	
1,1,2-Trichloroethane	< 5	5	
Trichloroethene	< 5	5	
Trichlorofluoromethane	< 5	5	
1,2,3-Trichloropropane	< 1	1	
1,2,4-Trimethylbenzene	< 5	5	
1,3,5-Trimethylbenzene	< 5	5	
Vinyl acetate	< 10	10	
Vinyl chloride	< 2	2	
Xylene, M&P	< 5	5	
Xylene, Ortho	< 5	5	
Xylene (Total)	< 10	10	
Dibromofluoromethane (surrogate)	105%		
1,2-Dichloroethane-d4 (surrogate)	113%		
Toluene-d8 (surrogate)	93%		
4-bromofluorobenzene (surrogate)	94%		
Analysis Date/Time:	10-06-14/02:57		
Analyst Initials	tjg		



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Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 6010
Prep Method: EPA 3010A

Client Sample ID: W-16
Envision Sample Number: 14-22319
Sample Matrix: water

Sample Collection Date/Time: 9/25/14 17:20
Sample Received Date/Time: 9/30/14 16:00

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Lead	< 10	10	

ICP Analysis Date/Time: 10-6-14/22:10
Analyst Initials: gjd
Date Digested: 10/4/2014
Initial Sample Volume: 50 mL
Final Volume: 50 mL
Analytical Batch: 100514icp



Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 8260
Prep Method: EPA 5030B
Analytical Batch: 100514VW

Client Sample ID: W-15B **Sample Collection Date/Time:** 9/26/14 9:15
Envision Sample Number: 14-22320 **Sample Received Date/Time:** 9/30/14 16:00
Sample Matrix: water

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Acetone	< 100	100	
Acrolein	< 1	1	
Acrylonitrile	< 0.45	1	1
Benzene	< 5	5	
Bromobenzene	< 5	5	
Bromochloromethane	< 5	5	
Bromodichloromethane	< 5	5	
Bromoform	< 5	5	
Bromomethane	< 5	5	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 5	5	
sec-Butylbenzene	< 5	5	
tert-Butylbenzene	< 5	5	
Carbon Disulfide	< 5	5	
Carbon Tetrachloride	< 5	5	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 5	5	
Chloromethane	< 5	5	
2-Chlorotoluene	< 5	5	
4-Chlorotoluene	< 5	5	
1,2-Dibromo-3-chloropropane	< 1	1	
Dibromochloromethane	< 5	5	
1,2-Dibromoethane (EDB)	< 1	1	
Dibromomethane	< 5	5	
1,2-Dichlorobenzene	< 5	5	
1,3-Dichlorobenzene	< 5	5	
1,4-Dichlorobenzene	< 5	5	
trans-1,4-Dichloro-2-butene	< 1	1	
Dichlorodifluoromethane	< 5	5	



Analytical Report

8260 continued...

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
1,1-Dichloroethane	< 5	5	
1,2-Dichloroethane	< 5	5	
1,1-Dichloroethene	< 5	5	
cis-1,2-Dichloroethene	< 5	5	
trans-1,2-Dichloroethene	< 5	5	
1,2-Dichloropropane	< 5	5	
1,3-Dichloropropane	< 5	5	
2,2-Dichloropropane	< 5	5	
1,1-Dichloropropene	< 5	5	
1,3-Dichloropropene	< 4.1	4.1	
Ethylbenzene	< 5	5	
Ethyl methacrylate	< 100	100	
Hexachloro-1,3-butadiene	< 2.6	2.6	
n-Hexane	< 10	10	
2-Hexanone	< 10	10	
Iodomethane	< 10	10	
Isopropylbenzene (Cumene)	< 5	5	
p-Isopropyltoluene	< 5	5	
Methylene chloride	< 5	5	
4-Methyl-2-pentanone (MIBK)	< 10	10	
Methyl-tert-butyl-ether	< 5	5	
1-Methylnaphthalene	< 5	5	
2-Methylnaphthalene	< 5	5	
Naphthalene	< 1.4	1.4	
n-Propylbenzene	< 5	5	
Styrene	< 5	5	
1,1,1,2-Tetrachloroethane	< 5	5	
1,1,2,2-Tetrachloroethane	< 0.66	1	1
Tetrachloroethene	< 5	5	
Toluene	< 5	5	
1,2,3-Trichlorobenzene	< 5	5	
1,2,4-Trichlorobenzene	< 5	5	
1,1,1-Trichloroethane	< 5	5	
1,1,2-Trichloroethane	< 5	5	
Trichloroethene	< 5	5	
Trichlorofluoromethane	< 5	5	
1,2,3-Trichloropropane	< 1	1	
1,2,4-Trimethylbenzene	< 5	5	
1,3,5-Trimethylbenzene	< 5	5	
Vinyl acetate	< 10	10	
Vinyl chloride	< 2	2	
Xylene, M&P	< 5	5	
Xylene, Ortho	< 5	5	
Xylene (Total)	< 10	10	
Dibromofluoromethane (surrogate)	108%		
1,2-Dichloroethane-d4 (surrogate)	110%		
Toluene-d8 (surrogate)	92%		
4-bromofluorobenzene (surrogate)	90%		
Analysis Date/Time:	10-06-14/03:15		
Analyst Initials	tjg		



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Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 6010
Prep Method: EPA 3010A

Client Sample ID: W-15B
Envision Sample Number: 14-22320
Sample Matrix: water

Sample Collection Date/Time: 9/26/14 9:15
Sample Received Date/Time: 9/30/14 16:00

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Lead	< 10	10	

ICP Analysis Date/Time: 10-6-14/22:14
Analyst Initials: gjd
Date Digested: 10/4/2014
Initial Sample Volume: 50 mL
Final Volume: 50 mL
Analytical Batch: 100514icp



Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873
Analytical Method: EPA 8260
Prep Method: EPA 5030B
Analytical Batch: 100514VW

Client Sample ID: W-15A **Sample Collection Date/Time:** 9/26/14 10:05
Envision Sample Number: 14-22321 **Sample Received Date/Time:** 9/30/14 16:00
Sample Matrix: water

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Acetone	< 100	100	
Acrolein	< 1	1	
Acrylonitrile	< 0.45	1	1
Benzene	< 5	5	
Bromobenzene	< 5	5	
Bromochloromethane	< 5	5	
Bromodichloromethane	< 5	5	
Bromoform	< 5	5	
Bromomethane	< 5	5	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 5	5	
sec-Butylbenzene	< 5	5	
tert-Butylbenzene	< 5	5	
Carbon Disulfide	< 5	5	
Carbon Tetrachloride	< 5	5	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 5	5	
Chloromethane	< 5	5	
2-Chlorotoluene	< 5	5	
4-Chlorotoluene	< 5	5	
1,2-Dibromo-3-chloropropane	< 1	1	
Dibromochloromethane	< 5	5	
1,2-Dibromoethane (EDB)	< 1	1	
Dibromomethane	< 5	5	
1,2-Dichlorobenzene	< 5	5	
1,3-Dichlorobenzene	< 5	5	
1,4-Dichlorobenzene	< 5	5	
trans-1,4-Dichloro-2-butene	< 1	1	
Dichlorodifluoromethane	< 5	5	



Analytical Report

8260 continued...

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
1,1-Dichloroethane	< 5	5	
1,2-Dichloroethane	< 5	5	
1,1-Dichloroethene	< 5	5	
cis-1,2-Dichloroethene	12.8	5	
trans-1,2-Dichloroethene	< 5	5	
1,2-Dichloropropane	< 5	5	
1,3-Dichloropropane	< 5	5	
2,2-Dichloropropane	< 5	5	
1,1-Dichloropropene	< 5	5	
1,3-Dichloropropene	< 4.1	4.1	
Ethylbenzene	< 5	5	
Ethyl methacrylate	< 100	100	
Hexachloro-1,3-butadiene	< 2.6	2.6	
n-Hexane	< 10	10	
2-Hexanone	< 10	10	
Iodomethane	< 10	10	
Isopropylbenzene (Cumene)	< 5	5	
p-Isopropyltoluene	< 5	5	
Methylene chloride	< 5	5	
4-Methyl-2-pentanone (MIBK)	< 10	10	
Methyl-tert-butyl-ether	< 5	5	
1-Methylnaphthalene	< 5	5	
2-Methylnaphthalene	< 5	5	
Naphthalene	< 1.4	1.4	
n-Propylbenzene	< 5	5	
Styrene	< 5	5	
1,1,1,2-Tetrachloroethane	< 5	5	
1,1,2,2-Tetrachloroethane	< 0.66	1	1
Tetrachloroethene	< 5	5	
Toluene	< 5	5	
1,2,3-Trichlorobenzene	< 5	5	
1,2,4-Trichlorobenzene	< 5	5	
1,1,1-Trichloroethane	< 5	5	
1,1,2-Trichloroethane	< 5	5	
Trichloroethene	< 5	5	
Trichlorofluoromethane	< 5	5	
1,2,3-Trichloropropane	< 1	1	
1,2,4-Trimethylbenzene	< 5	5	
1,3,5-Trimethylbenzene	< 5	5	
Vinyl acetate	< 10	10	
Vinyl chloride	< 2	2	
Xylene, M&P	< 5	5	
Xylene, Ortho	< 5	5	
Xylene (Total)	< 10	10	
Dibromofluoromethane (surrogate)	107%		
1,2-Dichloroethane-d4 (surrogate)	113%		
Toluene-d8 (surrogate)	94%		
4-bromofluorobenzene (surrogate)	95%		
Analysis Date/Time:	10-06-14/03:34		
Analyst Initials	tjg		



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Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 6010
Prep Method: EPA 3010A

Client Sample ID: W-15A
Envision Sample Number: 14-22321
Sample Matrix: water

Sample Collection Date/Time: 9/26/14 10:05
Sample Received Date/Time: 9/30/14 16:00

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Lead	< 10	10	

ICP Analysis Date/Time: 10-6-14/22:18
Analyst Initials: gjd
Date Digested: 10/4/2014
Initial Sample Volume: 50 mL
Final Volume: 50 mL
Analytical Batch: 100514icp



Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 8260
Prep Method: EPA 5030B
Analytical Batch: 100514VW

Client Sample ID: W-14A **Sample Collection Date/Time:** 9/26/14 11:20
Envision Sample Number: 14-22322 **Sample Received Date/Time:** 9/30/14 16:00
Sample Matrix: water

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Acetone	< 100	100	
Acrolein	< 1	1	
Acrylonitrile	< 0.45	1	1
Benzene	< 5	5	
Bromobenzene	< 5	5	
Bromochloromethane	< 5	5	
Bromodichloromethane	< 5	5	
Bromoform	< 5	5	
Bromomethane	< 5	5	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 5	5	
sec-Butylbenzene	< 5	5	
tert-Butylbenzene	< 5	5	
Carbon Disulfide	< 5	5	
Carbon Tetrachloride	< 5	5	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 5	5	
Chloromethane	< 5	5	
2-Chlorotoluene	< 5	5	
4-Chlorotoluene	< 5	5	
1,2-Dibromo-3-chloropropane	< 1	1	
Dibromochloromethane	< 5	5	
1,2-Dibromoethane (EDB)	< 1	1	
Dibromomethane	< 5	5	
1,2-Dichlorobenzene	< 5	5	
1,3-Dichlorobenzene	< 5	5	
1,4-Dichlorobenzene	< 5	5	
trans-1,4-Dichloro-2-butene	< 1	1	
Dichlorodifluoromethane	< 5	5	



Analytical Report

8260 continued...

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
1,1-Dichloroethane	< 5	5	
1,2-Dichloroethane	< 5	5	
1,1-Dichloroethene	< 5	5	
cis-1,2-Dichloroethene	< 5	5	
trans-1,2-Dichloroethene	< 5	5	
1,2-Dichloropropane	< 5	5	
1,3-Dichloropropane	< 5	5	
2,2-Dichloropropane	< 5	5	
1,1-Dichloropropene	< 5	5	
1,3-Dichloropropene	< 4.1	4.1	
Ethylbenzene	< 5	5	
Ethyl methacrylate	< 100	100	
Hexachloro-1,3-butadiene	< 2.6	2.6	
n-Hexane	< 10	10	
2-Hexanone	< 10	10	
Iodomethane	< 10	10	
Isopropylbenzene (Cumene)	< 5	5	
p-Isopropyltoluene	< 5	5	
Methylene chloride	< 5	5	
4-Methyl-2-pentanone (MIBK)	< 10	10	
Methyl-tert-butyl-ether	< 5	5	
1-Methylnaphthalene	< 5	5	
2-Methylnaphthalene	< 5	5	
Naphthalene	< 1.4	1.4	
n-Propylbenzene	< 5	5	
Styrene	< 5	5	
1,1,1,2-Tetrachloroethane	< 5	5	
1,1,2,2-Tetrachloroethane	< 0.66	1	1
Tetrachloroethene	< 5	5	
Toluene	< 5	5	
1,2,3-Trichlorobenzene	< 5	5	
1,2,4-Trichlorobenzene	< 5	5	
1,1,1-Trichloroethane	< 5	5	
1,1,2-Trichloroethane	< 5	5	
Trichloroethene	< 5	5	
Trichlorofluoromethane	< 5	5	
1,2,3-Trichloropropane	< 1	1	
1,2,4-Trimethylbenzene	< 5	5	
1,3,5-Trimethylbenzene	< 5	5	
Vinyl acetate	< 10	10	
Vinyl chloride	< 2	2	
Xylene, M&P	< 5	5	
Xylene, Ortho	< 5	5	
Xylene (Total)	< 10	10	
Dibromofluoromethane (surrogate)	110%		
1,2-Dichloroethane-d4 (surrogate)	115%		
Toluene-d8 (surrogate)	96%		
4-bromofluorobenzene (surrogate)	96%		
Analysis Date/Time:	10-06-14/03:52		
Analyst Initials	tjg		



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Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 6010
Prep Method: EPA 3010A

Client Sample ID: W-14A
Envision Sample Number: 14-22322
Sample Matrix: water

Sample Collection Date/Time: 9/26/14 11:20
Sample Received Date/Time: 9/30/14 16:00

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Lead	< 10	10	

ICP Analysis Date/Time: 10-6-14/22:23
Analyst Initials: gjd
Date Digested: 10/4/2014
Initial Sample Volume: 50 mL
Final Volume: 50 mL
Analytical Batch: 100514icp



Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873
Analytical Method: EPA 8260
Prep Method: EPA 5030B
Analytical Batch: 100514VW

Client Sample ID: W-14B **Sample Collection Date/Time:** 9/26/14 12:00
Envision Sample Number: 14-22323 **Sample Received Date/Time:** 9/30/14 16:00
Sample Matrix: water

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Acetone	< 100	100	
Acrolein	< 1	1	
Acrylonitrile	< 0.45	1	1
Benzene	< 5	5	
Bromobenzene	< 5	5	
Bromochloromethane	< 5	5	
Bromodichloromethane	< 5	5	
Bromoform	< 5	5	
Bromomethane	< 5	5	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 5	5	
sec-Butylbenzene	< 5	5	
tert-Butylbenzene	< 5	5	
Carbon Disulfide	< 5	5	
Carbon Tetrachloride	< 5	5	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 5	5	
Chloromethane	< 5	5	
2-Chlorotoluene	< 5	5	
4-Chlorotoluene	< 5	5	
1,2-Dibromo-3-chloropropane	< 1	1	
Dibromochloromethane	< 5	5	
1,2-Dibromoethane (EDB)	< 1	1	
Dibromomethane	< 5	5	
1,2-Dichlorobenzene	< 5	5	
1,3-Dichlorobenzene	< 5	5	
1,4-Dichlorobenzene	< 5	5	
trans-1,4-Dichloro-2-butene	< 1	1	
Dichlorodifluoromethane	< 5	5	



Analytical Report

8260 continued...

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
1,1-Dichloroethane	< 5	5	
1,2-Dichloroethane	< 5	5	
1,1-Dichloroethene	< 5	5	
cis-1,2-Dichloroethene	< 5	5	
trans-1,2-Dichloroethene	< 5	5	
1,2-Dichloropropane	< 5	5	
1,3-Dichloropropane	< 5	5	
2,2-Dichloropropane	< 5	5	
1,1-Dichloropropene	< 5	5	
1,3-Dichloropropene	< 4.1	4.1	
Ethylbenzene	< 5	5	
Ethyl methacrylate	< 100	100	
Hexachloro-1,3-butadiene	< 2.6	2.6	
n-Hexane	< 10	10	
2-Hexanone	< 10	10	
Iodomethane	< 10	10	
Isopropylbenzene (Cumene)	< 5	5	
p-Isopropyltoluene	< 5	5	
Methylene chloride	< 5	5	
4-Methyl-2-pentanone (MIBK)	< 10	10	
Methyl-tert-butyl-ether	< 5	5	
1-Methylnaphthalene	< 5	5	
2-Methylnaphthalene	< 5	5	
Naphthalene	< 1.4	1.4	
n-Propylbenzene	< 5	5	
Styrene	< 5	5	
1,1,1,2-Tetrachloroethane	< 5	5	
1,1,2,2-Tetrachloroethane	< 0.66	1	1
Tetrachloroethene	< 5	5	
Toluene	< 5	5	
1,2,3-Trichlorobenzene	< 5	5	
1,2,4-Trichlorobenzene	< 5	5	
1,1,1-Trichloroethane	< 5	5	
1,1,2-Trichloroethane	< 5	5	
Trichloroethene	< 5	5	
Trichlorofluoromethane	< 5	5	
1,2,3-Trichloropropane	< 1	1	
1,2,4-Trimethylbenzene	< 5	5	
1,3,5-Trimethylbenzene	< 5	5	
Vinyl acetate	< 10	10	
Vinyl chloride	< 2	2	
Xylene, M&P	< 5	5	
Xylene, Ortho	< 5	5	
Xylene (Total)	< 10	10	
Dibromofluoromethane (surrogate)	109%		
1,2-Dichloroethane-d4 (surrogate)	114%		
Toluene-d8 (surrogate)	94%		
4-bromofluorobenzene (surrogate)	91%		
Analysis Date/Time:	10-06-14/04:11		
Analyst Initials	tjg		



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Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 6010
Prep Method: EPA 3010A

Client Sample ID: W-14B
Envision Sample Number: 14-22323
Sample Matrix: water

Sample Collection Date/Time: 9/26/14 12:00
Sample Received Date/Time: 9/30/14 16:00

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Lead	< 10	10	

ICP Analysis Date/Time: 10-6-14/22:28
Analyst Initials: gjd
Date Digested: 10/4/2014
Initial Sample Volume: 50 mL
Final Volume: 50 mL
Analytical Batch: 100514icp



Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873
Analytical Method: EPA 8260
Prep Method: EPA 5030B
Analytical Batch: 100514VW

Client Sample ID: W-10B **Sample Collection Date/Time:** 9/26/14 12:50
Envision Sample Number: 14-22324 **Sample Received Date/Time:** 9/30/14 16:00
Sample Matrix: water

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Acetone	< 100	100	
Acrolein	< 1	1	
Acrylonitrile	< 0.45	1	1
Benzene	< 5	5	
Bromobenzene	< 5	5	
Bromochloromethane	< 5	5	
Bromodichloromethane	< 5	5	
Bromoform	< 5	5	
Bromomethane	< 5	5	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 5	5	
sec-Butylbenzene	< 5	5	
tert-Butylbenzene	< 5	5	
Carbon Disulfide	< 5	5	
Carbon Tetrachloride	< 5	5	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 5	5	
Chloromethane	< 5	5	
2-Chlorotoluene	< 5	5	
4-Chlorotoluene	< 5	5	
1,2-Dibromo-3-chloropropane	< 1	1	
Dibromochloromethane	< 5	5	
1,2-Dibromoethane (EDB)	< 1	1	
Dibromomethane	< 5	5	
1,2-Dichlorobenzene	< 5	5	
1,3-Dichlorobenzene	< 5	5	
1,4-Dichlorobenzene	< 5	5	
trans-1,4-Dichloro-2-butene	< 1	1	
Dichlorodifluoromethane	< 5	5	



Analytical Report

8260 continued...

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
1,1-Dichloroethane	< 5	5	
1,2-Dichloroethane	< 5	5	
1,1-Dichloroethene	< 5	5	
cis-1,2-Dichloroethene	< 5	5	
trans-1,2-Dichloroethene	< 5	5	
1,2-Dichloropropane	< 5	5	
1,3-Dichloropropane	< 5	5	
2,2-Dichloropropane	< 5	5	
1,1-Dichloropropene	< 5	5	
1,3-Dichloropropene	< 4.1	4.1	
Ethylbenzene	< 5	5	
Ethyl methacrylate	< 100	100	
Hexachloro-1,3-butadiene	< 2.6	2.6	
n-Hexane	< 10	10	
2-Hexanone	< 10	10	
Iodomethane	< 10	10	
Isopropylbenzene (Cumene)	< 5	5	
p-Isopropyltoluene	< 5	5	
Methylene chloride	< 5	5	
4-Methyl-2-pentanone (MIBK)	< 10	10	
Methyl-tert-butyl-ether	< 5	5	
1-Methylnaphthalene	< 5	5	
2-Methylnaphthalene	< 5	5	
Naphthalene	< 1.4	1.4	
n-Propylbenzene	< 5	5	
Styrene	< 5	5	
1,1,1,2-Tetrachloroethane	< 5	5	
1,1,2,2-Tetrachloroethane	< 0.66	1	1
Tetrachloroethene	< 5	5	
Toluene	< 5	5	
1,2,3-Trichlorobenzene	< 5	5	
1,2,4-Trichlorobenzene	< 5	5	
1,1,1-Trichloroethane	12.0	5	
1,1,2-Trichloroethane	< 5	5	
Trichloroethene	< 5	5	
Trichlorofluoromethane	< 5	5	
1,2,3-Trichloropropane	< 1	1	
1,2,4-Trimethylbenzene	< 5	5	
1,3,5-Trimethylbenzene	< 5	5	
Vinyl acetate	< 10	10	
Vinyl chloride	< 2	2	
Xylene, M&P	< 5	5	
Xylene, Ortho	< 5	5	
Xylene (Total)	< 10	10	
Dibromofluoromethane (surrogate)	112%		
1,2-Dichloroethane-d4 (surrogate)	120%		
Toluene-d8 (surrogate)	96%		
4-bromofluorobenzene (surrogate)	91%		
Analysis Date/Time:	10-06-14/04:29		
Analyst Initials	tjg		



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Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 6010
Prep Method: EPA 3010A

Client Sample ID: W-10B
Envision Sample Number: 14-22324
Sample Matrix: water

Sample Collection Date/Time: 9/26/14 12:50
Sample Received Date/Time: 9/30/14 16:00

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Lead	< 10	10	

ICP Analysis Date/Time: 10-6-14/22:42
Analyst Initials: gjd
Date Digested: 10/4/2014
Initial Sample Volume: 50 mL
Final Volume: 50 mL
Analytical Batch: 100514icp



Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 8260
Prep Method: EPA 5030B
Analytical Batch: 100514VW

Client Sample ID: W-10A **Sample Collection Date/Time:** 9/26/14 13:35
Envision Sample Number: 14-22325 **Sample Received Date/Time:** 9/30/14 16:00
Sample Matrix: water

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Acetone	< 100	100	
Acrolein	< 1	1	
Acrylonitrile	< 0.45	1	1
Benzene	< 5	5	
Bromobenzene	< 5	5	
Bromochloromethane	< 5	5	
Bromodichloromethane	< 5	5	
Bromoform	< 5	5	
Bromomethane	< 5	5	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 5	5	
sec-Butylbenzene	< 5	5	
tert-Butylbenzene	< 5	5	
Carbon Disulfide	< 5	5	
Carbon Tetrachloride	< 5	5	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 5	5	
Chloromethane	< 5	5	
2-Chlorotoluene	< 5	5	
4-Chlorotoluene	< 5	5	
1,2-Dibromo-3-chloropropane	< 1	1	
Dibromochloromethane	< 5	5	
1,2-Dibromoethane (EDB)	< 1	1	
Dibromomethane	< 5	5	
1,2-Dichlorobenzene	< 5	5	
1,3-Dichlorobenzene	< 5	5	
1,4-Dichlorobenzene	< 5	5	
trans-1,4-Dichloro-2-butene	< 1	1	
Dichlorodifluoromethane	< 5	5	



Analytical Report

8260 continued...

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
1,1-Dichloroethane	< 5	5	
1,2-Dichloroethane	< 5	5	
1,1-Dichloroethene	< 5	5	
cis-1,2-Dichloroethene	< 5	5	
trans-1,2-Dichloroethene	< 5	5	
1,2-Dichloropropane	< 5	5	
1,3-Dichloropropane	< 5	5	
2,2-Dichloropropane	< 5	5	
1,1-Dichloropropene	< 5	5	
1,3-Dichloropropene	< 4.1	4.1	
Ethylbenzene	< 5	5	
Ethyl methacrylate	< 100	100	
Hexachloro-1,3-butadiene	< 2.6	2.6	
n-Hexane	< 10	10	
2-Hexanone	< 10	10	
Iodomethane	< 10	10	
Isopropylbenzene (Cumene)	< 5	5	
p-Isopropyltoluene	< 5	5	
Methylene chloride	< 5	5	
4-Methyl-2-pentanone (MIBK)	< 10	10	
Methyl-tert-butyl-ether	< 5	5	
1-Methylnaphthalene	< 5	5	
2-Methylnaphthalene	< 5	5	
Naphthalene	< 1.4	1.4	
n-Propylbenzene	< 5	5	
Styrene	< 5	5	
1,1,1,2-Tetrachloroethane	< 5	5	
1,1,2,2-Tetrachloroethane	< 0.66	1	1
Tetrachloroethene	< 5	5	
Toluene	< 5	5	
1,2,3-Trichlorobenzene	< 5	5	
1,2,4-Trichlorobenzene	< 5	5	
1,1,1-Trichloroethane	< 5	5	
1,1,2-Trichloroethane	< 5	5	
Trichloroethene	< 5	5	
Trichlorofluoromethane	< 5	5	
1,2,3-Trichloropropane	< 1	1	
1,2,4-Trimethylbenzene	< 5	5	
1,3,5-Trimethylbenzene	< 5	5	
Vinyl acetate	< 10	10	
Vinyl chloride	< 2	2	
Xylene, M&P	< 5	5	
Xylene, Ortho	< 5	5	
Xylene (Total)	< 10	10	
Dibromofluoromethane (surrogate)	109%		
1,2-Dichloroethane-d4 (surrogate)	118%		
Toluene-d8 (surrogate)	94%		
4-bromofluorobenzene (surrogate)	91%		
Analysis Date/Time:	10-06-14/04:48		
Analyst Initials	tjg		



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Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 6010
Prep Method: EPA 3010A

Client Sample ID: W-10A **Sample Collection Date/Time:** 9/26/14 13:35
Envision Sample Number: 14-22325 **Sample Received Date/Time:** 9/30/14 16:00
Sample Matrix: water

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Lead	< 10	10	

ICP Analysis Date/Time: 10-6-14/22:47
Analyst Initials: gjd
Date Digested: 10/4/2014
Initial Sample Volume: 50 mL
Final Volume: 50 mL
Analytical Batch: 100514icp



Analytical Report

Client Name: HEARTLAND
Project ID: UEA SAMPLE STREET
Client Project Manager: NIVAS VIJAY
ENVision Project Number: 2014-2873

Analytical Method: EPA 8260
Prep Method: EPA 5030B
Analytical Batch: 100514VW

Client Sample ID: TRIP BLANK **Sample Collection Date/Time:** 9/24/14
Envision Sample Number: 14-22326 **Sample Received Date/Time:** 9/30/14 16:00
Sample Matrix: water

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Acetone	< 100	100	
Acrolein	< 1	1	
Acrylonitrile	< 0.45	1	1
Benzene	< 5	5	
Bromobenzene	< 5	5	
Bromochloromethane	< 5	5	
Bromodichloromethane	< 5	5	
Bromoform	< 5	5	
Bromomethane	< 5	5	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 5	5	
sec-Butylbenzene	< 5	5	
tert-Butylbenzene	< 5	5	
Carbon Disulfide	< 5	5	
Carbon Tetrachloride	< 5	5	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 5	5	
Chloromethane	< 5	5	
2-Chlorotoluene	< 5	5	
4-Chlorotoluene	< 5	5	
1,2-Dibromo-3-chloropropane	< 1	1	
Dibromochloromethane	< 5	5	
1,2-Dibromoethane (EDB)	< 1	1	
Dibromomethane	< 5	5	
1,2-Dichlorobenzene	< 5	5	
1,3-Dichlorobenzene	< 5	5	
1,4-Dichlorobenzene	< 5	5	
trans-1,4-Dichloro-2-butene	< 1	1	
Dichlorodifluoromethane	< 5	5	



Analytical Report

8260 continued...

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
1,1-Dichloroethane	< 5	5	
1,2-Dichloroethane	< 5	5	
1,1-Dichloroethene	< 5	5	
cis-1,2-Dichloroethene	< 5	5	
trans-1,2-Dichloroethene	< 5	5	
1,2-Dichloropropane	< 5	5	
1,3-Dichloropropane	< 5	5	
2,2-Dichloropropane	< 5	5	
1,1-Dichloropropene	< 5	5	
1,3-Dichloropropene	< 4.1	4.1	
Ethylbenzene	< 5	5	
Ethyl methacrylate	< 100	100	
Hexachloro-1,3-butadiene	< 2.6	2.6	
n-Hexane	< 10	10	
2-Hexanone	< 10	10	
Iodomethane	< 10	10	
Isopropylbenzene (Cumene)	< 5	5	
p-Isopropyltoluene	< 5	5	
Methylene chloride	< 5	5	
4-Methyl-2-pentanone (MIBK)	< 10	10	
Methyl-tert-butyl-ether	< 5	5	
1-Methylnaphthalene	< 5	5	
2-Methylnaphthalene	< 5	5	
Naphthalene	< 1.4	1.4	
n-Propylbenzene	< 5	5	
Styrene	< 5	5	
1,1,1,2-Tetrachloroethane	< 5	5	
1,1,2,2-Tetrachloroethane	< 0.66	1	1
Tetrachloroethene	< 5	5	
Toluene	< 5	5	
1,2,3-Trichlorobenzene	< 5	5	
1,2,4-Trichlorobenzene	< 5	5	
1,1,1-Trichloroethane	< 5	5	
1,1,2-Trichloroethane	< 5	5	
Trichloroethene	< 5	5	
Trichlorofluoromethane	< 5	5	
1,2,3-Trichloropropane	< 1	1	
1,2,4-Trimethylbenzene	< 5	5	
1,3,5-Trimethylbenzene	< 5	5	
Vinyl acetate	< 10	10	
Vinyl chloride	< 2	2	
Xylene, M&P	< 5	5	
Xylene, Ortho	< 5	5	
Xylene (Total)	< 10	10	
Dibromofluoromethane (surrogate)	112%		
1,2-Dichloroethane-d4 (surrogate)	118%		
Toluene-d8 (surrogate)	98%		
4-bromofluorobenzene (surrogate)	99%		
Analysis Date/Time:	10-06-14/05:25		
Analyst Initials	tjg		



EPA 8260 Quality Control Data

ENVision Batch Number: 100514VW

<u>Method Blank (MB):</u>	<u>MB Results (ug/L)</u>	<u>Rep Lim (ug/L)</u>	<u>Flag</u>
Acetone	< 100	100	
Acrolein	< 1	1	
Acrylonitrile	< 0.45	1	1
Benzene	< 5	5	
Bromobenzene	< 5	5	
Bromochloromethane	< 5	5	
Bromodichloromethane	< 5	5	
Bromoform	< 5	5	
Bromomethane	< 5	5	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 5	5	
sec-Butylbenzene	< 5	5	
tert-Butylbenzene	< 5	5	
Carbon Disulfide	< 5	5	
Carbon Tetrachloride	< 5	5	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 5	5	
Chloromethane	< 5	5	
2-Chlorotoluene	< 5	5	
4-Chlorotoluene	< 5	5	
1,2-Dibromo-3-chloropropane	< 1	1	
Dibromochloromethane	< 5	5	
1,2-Dibromoethane (EDB)	< 1	1	
Dibromomethane	< 5	5	
1,2-Dichlorobenzene	< 5	5	
1,3-Dichlorobenzene	< 5	5	
1,4-Dichlorobenzene	< 5	5	
trans-1,4-Dichloro-2-butene	< 1	1	
Dichlorodifluoromethane	< 5	5	
1,1-Dichloroethane	< 5	5	
1,2-Dichloroethane	< 5	5	
1,1-Dichloroethene	< 5	5	
cis-1,2-Dichloroethene	< 5	5	
trans-1,2-Dichloroethene	< 5	5	
1,2-Dichloropropane	< 5	5	
1,3-Dichloropropane	< 5	5	
2,2-Dichloropropane	< 5	5	
1,1-Dichloropropene	< 5	5	
1,3-Dichloropropene	< 4.1	4.1	
Ethylbenzene	< 5	5	
Ethyl methacrylate	< 100	100	



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8260 QC Continued...

<u>Method Blank (MB):</u>	<u>MB Results (ug/L)</u>	<u>Rep Lim (ug/L)</u>	<u>Flag</u>
Hexachloro-1,3-butadiene	< 2.6	2.6	
2-Hexanone	< 10	10	
n-Hexane	< 10	10	
Iodomethane	< 10	10	
Isopropylbenzene (Cumene)	< 5	5	
p-Isopropyltoluene	< 5	5	
Methylene chloride	< 5	5	
4-Methyl-2-pentanone (MIBK)	< 10	10	
Methyl-tert-butyl-ether	< 5	5	
1-Methylnaphthalene	< 5	5	
2-Methylnaphthalene	< 5	5	
Naphthalene	< 1.4	1.4	
n-Propylbenzene	< 5	5	
Styrene	< 5	5	
1,1,1,2-Tetrachloroethane	< 5	5	
1,1,2,2-Tetrachloroethane	< 0.66	1	1
Tetrachloroethene	< 5	5	
Toluene	< 5	5	
1,2,3-Trichlorobenzene	< 5	5	
1,2,4-Trichlorobenzene	< 5	5	
1,1,1-Trichloroethane	< 5	5	
1,1,2-Trichloroethane	< 5	5	
Trichloroethene	< 5	5	
Trichlorofluoromethane	< 5	5	
1,2,3-Trichloropropane	< 1	1	
1,2,4-Trimethylbenzene	< 5	5	
1,3,5-Trimethylbenzene	< 5	5	
Vinyl acetate	< 10	10	
Vinyl chloride	< 2	2	
Xylene, M&P	< 5	5	
Xylene, Ortho	< 5	5	
Xylene (total)	< 10	10	
Dibromofluoromethane (surrogate)	109%		
1,2-Dichloroethane-d4 (surrogate)	108%		
Toluene-d8 (surrogate)	98%		
4-bromofluorobenzene (surrogate)	96%		
Analysis Date/Time:	10-05-14/20:27		
Analyst Initials	tjg		



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8260 QC Continued...

<u>Laboratory Control Standard (LCS):</u>	<u>LCS Results (ug/L)</u>	<u>LCS Conc(ug/L)</u>	<u>% Rec</u>	<u>Flag</u>
Vinyl Chloride	46.9	50	94%	
1,1-Dichloroethene	48.5	50	97%	
trans-1,2-Dichloroethene	45.1	50	90%	
Methyl-tert-butyl-ether	44.9	50	90%	
1,1-Dichloroethane	48.1	50	96%	
cis-1,2-Dichloroethene	46.3	50	93%	
Chloroform	46.6	50	93%	
1,1,1-Trichloroethane	50.0	50	100%	
Benzene	48.6	50	97%	
Trichloroethene	49.0	50	98%	
Toluene	46.3	50	93%	
1,1,1,2-Tetrachloroethane	50.1	50	100%	
Chlorobenzene	49.5	50	99%	
Ethylbenzene	51.4	50	103%	
o-Xylene	49.2	50	98%	
n-Propylbenzene	49.6	50	99%	
Dibromofluoromethane (surrogate)	99%			
1,2-Dichloroethane-d4 (surrogate)	97%			
Toluene-d8 (surrogate)	98%			
4-bromofluorobenzene (surrogate)	98%			
Analysis Date/Time:	10-05-14/20:09			
Analyst Initials	tjg			



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EPA 6010B Metals Quality Control Data

ENVision Batch Number: 100514icp

<u>Method Blank (MB):</u>	<u>MB Results (mg/L)</u>	<u>Rep Lim (mg/L)</u>	<u>Flag</u>
Lead, dissolved	< 0.01	0.01	
Analysis Date/Time:	10-5-14/07:49		
Analyst Initials:	gjd		

<u>Laboratory Control Standard (LCS):</u>	<u>LCS Results(mg/L)</u>	<u>LCS Conc(mg/L)</u>	<u>% Rec</u>	<u>Flag</u>
Lead, dissolved	0.49	0.50	98	
Analysis Date/Time:	10-5-14/07:44			
Analyst Initials:	gjd			



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EPA 6010B Metals Quality Control Data

ENVision Batch Number: 100514icp

<u>Method Blank (MB):</u>	<u>MB Results (mg/L)</u>	<u>Rep Lim (mg/L)</u>	<u>Flag</u>
Lead, total	< 0.01	0.01	
Analysis Date/Time:	10-5-14/08:21		
Analyst Initials:	gjd		

<u>Laboratory Control Standard (LCS):</u>	<u>LCS Results(mg/L)</u>	<u>LCS Conc(mg/L)</u>	<u>% Rec</u>	<u>Flag</u>
Lead, total	0.49	0.50	98	
Analysis Date/Time:	10-5-14/08:16			
Analyst Initials:	gjd			



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Flag Number

1

Comments

Reported value is below the reporting limit but above the MDL.



2014-2873

ENVISSION Proj#:

Page 1 of 2

CHAIN OF CUSTODY RECORD

ENVISSION Laboratories, Inc. | 1439 Sadlier Circle West Drive | Indianapolis, IN 46239 | Phone: (317) 351-8632 | Fax: (317) 351-8639

Client: <u>Heartland Environmental</u>	Invoice Address: <u>Same</u>
Report Address: <u>3410 Mishawaka Ave South Bend, IN 46615</u>	Project Name: <u>USA Sample Street</u>
Report To: <u>N. Vas Vijay</u>	Lab Contact: <u>David Nye</u>
Phone: <u>574-360-0961</u>	Sampled by: <u>David Nye</u>
Fax: <u>574-289-7480</u>	P.O. Number:
Desired TAT: (Please Circle One) 1-2 days 3-6 days <u>8-10 (7 bus. days)</u>	QA/QC Required: (circle if applicable) Level III Level IV

Sample Integrity:
 Cooler Temp: 3 °C
 Samples on Ice? Yes No
 Samples Intact? Yes No
 Custody Seal: Yes No
 ENVISSION provided bottles? Yes No
 VOC vials free of head-space? Yes No
 pH checked? Yes No
 Method 5035 collection used? Yes No
 5035 samples received within 48 hr of Collection? Yes No

Please indicate number of containers per preservative below

Sample ID	Coll. Date	Coll. Time	Comp (C) Grab (G)	Matrix	REQUESTED PARAMETERS							ENVISSION Sample ID
					HCl	HNO ₃	H ₂ SO ₄	NaOH	Other	None		
W-5	9-24-14	11:00	G	W	X	2	1					14-22305
W-9		12:30			X	2	1					14-22306
W-7		14:10			X	2	1					14-22307
W-8		14:55			X	2	1					14-22308
W-13		16:15			X	2	1					14-22309
W-12		17:20			X	2	1					14-22310
S-3A	9-25-14	09:05			X	2	1					14-22311
S-3		09:55			X	2	1					14-22312
W-1		11:00			X	2	1					14-22313
W-3		12:05			X	2	1					14-22314
W-100A		13:00	D	D	X	2	1					14-22315

Comments:

Relinquished by: <u>David Nye</u>	Date: <u>9-24-14</u>	Time: <u>10:00</u>	Received by: <u>David Nye</u>	Date: <u>9-29-14</u>	Time: <u>16:00</u>
				<u>9/29/14</u>	<u>16:00</u>



CHAIN OF CUSTODY RECORD

ENVISSION Laboratories, Inc. | 1439 Sadlier Circle West Drive | Indianapolis, IN 46239 | Phone: (317) 351-8632 | Fax: (317) 351-8639

Client: Heartland Environmental Invoice Address: Severe

Report To: Nivas Vijay Project Name: UEA

Address: 340 W. Shambaugh Ave Sample Street

Address: South Bend, IN 46615

Lab Contact: _____

Phone: 574-360-0961 Sampled by: David Nye

Fax: 574-287-7480 P.O. Number: _____

Desired TAT: (Please Circle One) 3-6 days (Std 7 bus. days)

QA/QC Required: (circle if applicable) Level III _____ Level IV _____

REQUESTED PARAMETERS

Sample Integrity:

Cooler Temp: 3 °C (Check)

Samples on Ice? Yes No

Samples Intact? Yes No

Custody Seal: Yes No

ENVISSION provided bottles: Yes No

VOC vials free of head-space: Yes No N/A

pH checked? Yes No N/A

Method 5035 collection used? Yes No

5035 samples received within 48 hr of Collection? Yes No

Please indicate number of containers per preservative below

Sample ID	Coll. Date	Coll. Time	Comp (C) Grab (G)	Matrix	Preservatives						ENVISSION Sample ID	
					HCl	HNO ₃	H ₂ SO ₄	NaOH	Other	None		
W-100 B	9-25-14	13:40	G	W	X	1						14-22316
W-101 A		14:35			X	1						14-22317
W-101 B		16:15			X	1						14-22318
W-16		17:20			X	1						14-22319
W-15 B	9-26-14	09:15			X	1						14-22320
W-15 A		10:05			X	1						14-22321
W-14 A		11:20			X	1						14-22322
W-14 B		12:00			X	1						14-22323
W-10 B		12:50			X	1						14-22324
W-10 A		13:35			X	1						14-22325
Tip Blank	9-24-14	-			X	2						14-22326

Comments:

Relinquished by: <u>David Nye</u>	Received by: <u>David Nye</u>
Date: <u>9-29-14</u>	Date: <u>9-29-14</u>
Time: <u>10:00</u>	Time: <u>10:00</u>
	Time: <u>16:10</u>

APPENDIX E
Sampling Data Sheets



LOW-FLOW GROUNDWATER SAMPLING DATA SHEET

Sample ID: W-5 Boring or Well ID: _____
 Lab No.: _____ Boring or Well Location: Sample Street Complex
 Sampling Personnel: David Nye Sample Date & Time: 9-24-14
 Sky: Clear Ground: None Precipitation: None Client: UEA
 Weather: _____ Humidity: 65% Moderate / Low % Project No.: 5093-12-01-05
 Site Location: 3702 West Sample St., South Bend, IN
 Laboratory: Envision Laboratories, Indianapolis, IN

Sample Type: (circle) Permanent Monitoring Well / Temporary Monitoring Well / Geoprobe® SP16 Sampler / Other: _____
 Well / Sampler Material: (circle) PVC / Stainless / Galvanized / Other: _____
 Screen / Casing Inside Diameter: 5 Inches Screened / Open Interval: _____
 Elevation Top of Casing (TOC): _____ Ft Grade Elevation: _____ Ft
 SWL Depth from TOC (prior to purge): 6.18 Ft SWL Elevation (prior to purge): _____ Ft
 Well / Sampler Depth from TOC: 36.37 Ft TOC to Grade: 3.1 Ft Well Depth from Grade: _____ Ft
 Volume/Foot Casing (d²x0.04079): _____ Gallons Volume of Water Column: _____ Gallons
 Volume of Water Purged: 1.8 Gallons Well Volume Purged: (circle) 1 2 3 4 5 6 7 8 9 10 well volumes

Pump Type: (circle) Bladder Pump / other: low flow Pump Intake Depth: 3.2 Ft below TOC Field Meter Type(s): Horiba U-53
 Pump Make / Model: Geopump 2 Tubing Type (circle): Teflon® FEP (inner)-HDPE (outer) / Teflon® FEP / (LDPE) / Other: _____
 Tubing Diameter: (circle) 0.19 inch ID x 0.25 inch OD / 0.31 inch ID x 0.44 inch OD / Other: 0.125 inch ID x 0.25 inch OD
 Were Metals Filtered Prior to Preservation?: (circle) Yes (No) / Yes & No / Metals Not Sampled Water Sample Appearance: Clear / Slightly Turbid / Moderately Turbid / Very Turbid /
 Filtration Method: (Gravity / Vacuum / Pressure) None (Color: Gray / Brown / Tan /)
 Filter: (Cartridge / Paper) Type: _____ Size: _____ Pore: _____ Were Samples Iced after Collection? YES / NO /

TIME	PUMPING	TEMPERATURE 3% (degrees C)	SPECIFIC CONDUCTIVITY 3% (mS/cm)		DISSOLVED OXYGEN 10% (mg/l)		pH 0.1 units (pH units)		TURBIDITY 10% (NTU)		ORP 10 mv (mv)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1030		22.73	0.113	NA	2.09	NA	5.72	NA	4.25	NA	108	NA	200	6.18
1036		17.45	0.421		0.04		7.30		2.32		2		196	6.18
1039		17.29	0.440		0.00		7.33		2.42		-30		194	6.18
1042		17.15	0.449		0.00		7.34	0.01	2.41		-45		200	6.18
1045		17.07	0.458		0.00		7.34		2.46		-58		200	6.18
1048		17.03	0.462	0.9	0.00	0	7.34	0	2.50	1.6	-68	10	200	6.18
1051		16.98	0.472	2.2	0.06	0	7.34	0	2.71	8.4	-74	6	196	6.18
1054		16.81	0.478	1.3	0.00	0	7.33	0.01	2.51	7.4	-79	5	196	6.18

COMMENTS:

*Indicator parameters have stabilized when 3 consecutive readings are within: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity.
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LOW-FLOW GROUNDWATER SAMPLING DATA SHEET

Sample ID: W-7 Boring or Well ID: 9-24-14 / 1410

Lab No.: DAF Boring or Well Location: Sample Street Complex

Sampling Personnel: David Nive Sample Street Complex: USA
Weather: Clear Ground: dry Wind: LD-10kph Precipitation: None
Temp.: 74°F Humidity: High / Moderate / Low %

Project No.: 5093-12-01:05
Site Location: 3702 West Sample St., South Bend, IN
Laboratory: Envision Laboratories, Indianapolis, IN

Sample Type: (circle) Permanent Monitoring Well / Temporary Monitoring Well / Geoprobe® SP16 Sampler / Other: _____
 Well / Sampler Material: (circle) PVC / Stainless / Galvanized / Other: _____
 Screen / Casing Inside Diameter: 4 inches Screened / Open Interval: _____ Ft
 Elevation Top of Casing (TOC): _____ Ft Grade Elevation: _____ Ft
 SWL Depth from TOC (prior to purge): 9.68 Ft SWL Elevation (prior to purge): _____ Ft
 Well / Sampler Depth from TOC: 31.9 Ft TOC to Grade: 0.3 Ft Well Depth from Grade: _____ Ft
 Volume/Foot Casing (d²x0.04079): _____ Gal/Ft Volume of Water Column: _____ Gallons
 Volume of Water Purged: 1.0 Gallons Well Volume Purged: (circle) 1 2 3 4 5 6 7 8 9 10 well volumes

Pump Type: (circle) Bladder Pump / other: low flow Pump Intake Depth: 30 Ft below TOC Field Meter Type(s): Horiba U-53
 Pump Make / Model: Geopump 2 Tubing Type (circle): Teflon® FEP (inner)-HDPE (outer) / Teflon® FEP / (LDPE) / Other: _____
 Tubing Diameter: (circle) 0.19 inch ID x 0.25 inch OD / 0.19 inch ID x 0.44 inch OD / 0.31 inch ID x 0.44 inch OD / Other: 0.125 inch ID x 0.25 inch OD
 Were Metals Filtered Prior to Preservation?: (circle) Yes / No / Yes & No / Metals Not Sampled Water Sample Appearance: (Clear / Slightly Turbid / Moderately Turbid / Very Turbid)
 Filtration Method: (Gravity / Vacuum / Pressure) None (Color: Gray / Brown / Tan /)
 Filter: (Cartridge / Paper) Type: _____ Size: _____ Pore: _____ Were Samples Iced after Collection? YES / NO /

TIME	TEMPERATURE 3% (degrees C)	SPECIFIC CONDUCTIVITY 3% (mS/cm)		DISSOLVED OXYGEN 10% (mg/l)		pH 0.1 units (pH units)		TURBIDITY 10% (NTU)		ORP 10 mv (mv)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
		READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1335	22.56	0.276	NA	8.68	NA	7.27	NA	4.22	NA	139	NA	140	9.68
1341	19.15	0.781		0.66		7.15		1.56		104		136	9.68
1344	19.01	0.794		0.34		7.11		0.00		-10		132	9.68
1347	19.00	0.803		0.26		7.09		0.00		-37		138	9.68
1350	19.08	0.807		0.16		7.09		0.00		-57		130	9.68
1353	18.99	0.806		0.00		7.09		0.00		-74		134	9.68
1356	18.80	0.806	0	0.00	0	7.10	0.01	0.00	0	-83	9	130	9.68
1359	18.85	0.803	0.4	0.00	0	7.10	0	0.00	0	-89	6	126	9.68
1402	18.63	0.803	0	0.00	0	7.10	0	0.00	0	-93	4	130	9.68

COMMENTS: _____

*Indicator parameters have stabilized when 3 consecutive readings are within: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity.

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LOW-FLOW GROUNDWATER SAMPLING DATA SHEET

Sample ID: W-8 Boring or Well ID: _____ Sample Date & Time: 9-24-14 14:55
 Lab No.: _____ Boring or Well Location: Sample Street Complex Client: UEA
 Sampling Personnel: David Nye Project No.: 5093-12-01:05
 Weather: Clear Ground: dry Wind: 5-10 mph Precipitation: None Site Location: 3702 West Sample St., South Bend, IN
 Temp.: 75°F Humidity: High / Moderate / Low % Laboratory: Envision Laboratories, Indianapolis, IN

Sample Type: (circle) Permanent Monitoring Well / Temporary Monitoring Well / Geoprobe® SP16 Sampler / Other: _____
 Well / Sampler Material: (circle) PVC / Stainless / Galvanized / Other: _____
 Screen / Casing Inside Diameter: 4 Inches Screened / Open Interval: _____ Ft
 Elevation Top of Casing (TOC): _____ Ft Grade Elevation: _____ Ft
 SWL Depth from TOC (prior to purge): 9.91 Ft SWL Elevation (prior to purge): _____ Ft
 Well / Sampler Depth from TOC: 59.92 Ft TOC to Grade: 0.8 Ft Well Depth from Grade: _____ Ft
 Volume/Foot Casing (d²x0.04079): _____ Gallons Volume of Water Column: _____ Gallons
 Volume of Water Purged: 1.0 Gallons Well Volume Purged: (circle) 1 2 3 4 5 6 7 8 9 10 well volumes

Pump Type: (circle) Bladder Pump / other: low flow Pump Intake Depth: 55 Ft below TOC Field Meter Type(s): Horiba U-52
 Pump Make / Model: Geopump 2 Tubing Type (circle): Teflon® FEP (inner)-HDPE (outer) / Teflon® FEP / (LDPE) / Other: _____
 Tubing Diameter: (circle) 0.19 inch ID x 0.25 inch OD / 0.31 inch ID x 0.44 inch OD / Other: 0.125 inch ID x 0.25 inch OD
 Were Metals Filtered Prior to Preservation?: (circle) Yes / No Yes & No / Metals Not Sampled Water Sample Appearance: Clear / Slightly Turbid / Moderately Turbid / Very Turbid /
 Filtration Method: (Gravity / Vacuum / Pressure) None (Color: Gray / Brown / Tan /)
 Filter: (Cartridge / Paper) Type: _____ Size: _____ Pore: _____ Were Samples Iced after Collection? YES / NO /

TIME	PUMPING	TEMPERATURE 3% (degrees C)	SPECIFIC CONDUCTIVITY 3% (mS/cm)		DISSOLVED OXYGEN 10% (mg/l)		pH 0.1 units (pH units)		TURBIDITY 10% (NTU)		ORP 10 mv (mv)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1430		22.16	0.2206	NA	7.73	NA	7.53	NA	0.84	NA	24	NA	180	9.91
1436		18.26	0.760		6.07		7.76		0.00		51		186	9.91
1439		18.16	0.761	0.1	5.99	1.3	7.16	0	0.00	0	57	6	188	9.91
1442		18.06	0.761	0	5.88	4.8	7.75	0.01	0.00	0	62	5	184	9.91
1445		18.05	0.761	0	6.04	2.7	7.75	0	0.00	0	68	6	188	9.91

COMMENTS: _____
 *Indicator parameters have stabilized when 3 consecutive readings are within: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity.
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LOW-FLOW GROUNDWATER SAMPLING DATA SHEET

Sample ID: W-13 Boring or Well ID: _____
 Lab No.: _____ Boring or Well Location: Sample Street Complex
 Sampling Personnel: David Nye Sample Street Complex _____
 Weather: 70°F Ground: _____ Precipitation: None
 Temp.: 70°F Humidity: High / Moderate / Low / _____ % % inside

Sample Date & Time: 9-24-14 1615
 Client: UEA
 Project No.: 5093-12-01-05
 Site Location: 3702 West Sample St., South Bend, IN
 Laboratory: Envision Laboratories, Indianapolis, IN

Sample Type: (circle) Permanent Monitoring Well / Temporary Monitoring Well / Geoprobe® SP16 Sampler / Other: _____
 Well / Sampler Material: (circle) PVC / Stainless / Galvanized / Other: _____
 Screen / Casing Inside Diameter: 2 Inches Screened / Open Interval: _____ Ft
 Elevation Top of Casing (TOC): _____ Ft Grade Elevation: _____ Ft
 SWL Depth from TOC (prior to purge): 9.90 Ft SWL Elevation (prior to purge): _____ Ft
 Well / Sampler Depth from TOC: 35.98 Ft TOC to Grade: _____ Ft
 Volume/Foot Casing (d²x0.04079): _____ Gall/Ft Volume of Water Column: _____ Gallons
 Volume of Water Purged: 1.0 Gallons Well Volume Purged: (circle) 1 2 3 4 5 6 7 8 9 10 well volumes

Pump Type: (circle) Bladder Pump / other: low flow Pump Intake Depth: 33 Ft below TOC Field Meter Type(s): Horiba U-52
 Pump Make / Model: Geopump 2 Tubing Type (circle): Teflon® FEP (inner)-HDPE (outer) / Teflon® FEP / (LDPE) / Other: _____
 Tubing Diameter: (circle) 0.19 inch ID x 0.44 inch OD / 0.19 inch ID x 0.25 inch OD / 0.31 inch ID x 0.44 inch OD / Other: 0.125 inch ID x 0.25 inch OD
 Were Metals Filtered Prior to Preservation?: (circle) Yes (No) Yes & No / Metals Not Sampled Water Sample Appearance: (circle) Clear / Slightly Turbid / Moderately Turbid / Very Turbid)
 Filtration Method: (Gravity / Vacuum / Pressure) None (Color: Gray / Brown / Tan /)
 Filter: (Cartridge / Paper) Type: _____ Size: _____ Pore: _____ Were Samples Iced after Collection? YES / NO /

TIME	TEMPERATURE 3% (degrees C)	SPECIFIC CONDUCTIVITY 3% (mS/cm)		DISSOLVED OXYGEN 10% (mg/l)		pH 0.1 units (pH units)		TURBIDITY 10% (NTU)		ORP 10 mv (mv)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
		READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1500	22.13	0.214	NA	8.51	NA	7.35	NA	0.00	NA	110	NA	148	9.90
1556	18.89	0.806		0.10		7.17		0.00		-87		146	9.90
1559	18.62	0.807		0.00		7.15		0.00		-94		148	9.90
1602	18.55	0.805	0.2	0.00	0	7.13	0.02	0.00	0	-98	4	150	9.90
1605	18.46	0.804	0.1	0.00	0	7.12	0.01	0.00	0	-101	3	148	9.90
1608	18.11	0.807	0.4	0.00	0	7.11	0.01	0.00	0	-102	1	150	9.90

COMMENTS:

*Indicator parameters have stabilized when 3 consecutive readings are within: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity.



LOW-FLOW GROUNDWATER SAMPLING DATA SHEET

Sample ID: W-12 Boring or Well ID: _____ Sample Date & Time: 9-24-14
 Lab No.: _____ Boring or Well Location: Sample Street Complex Client: UEA
 Sampling Personnel: David Nye Wind: 10-15 mph Precipitation: None Project No.: 5093-12-01:05
 Weather: Clear Ground: dry Humidity: Low % Precipitation: None Site Location: 3702 West Sample St., South Bend, IN
 Temp.: 75°F High / Moderate / Low / _____ % Laboratory: Envision Laboratories, Indianapolis, IN

Sample Type: (circle) Permanent Monitoring Well / Temporary Monitoring Well / Geoprobe® SP16 Sampler / Other: _____
 Well / Sampler Material: (circle) PVC Stainless / Galvanized / Other: _____
 Screen / Casing Inside Diameter: 2 Inches Screened / Open Interval: _____ Ft
 Elevation Top of Casing (TOC): _____ Ft Grade Elevation: _____ Ft
 SWL Depth from TOC (prior to purge): 8.91 Ft SWL Elevation (prior to purge): _____ Ft
 Well / Sampler Depth from TOC: 29.26 Ft TOC to Grade: (-0.3) Ft
 Volume/Foot Casing (d²x0.04079): _____ Gallons Volume of Water Column: _____ Gallons
 Volume of Water Purged: 0.8 Gallons Well Volume Purged: (circle) 1 2 3 4 5 6 7 8 9 10 well volumes

Pump Type: (circle) Bladder Pump / other: low flow Pump Intake Depth: 28 Ft below TOC Field Meter Type(s): Horiba U-53
 Pump Make / Model: Geopump 2 Tubing Type (circle): Teflon® FEP (inner)-HDPE (outer) / Teflon® FEP / (LDPE) / Other: _____
 Tubing Diameter: (circle) 0.19 inch ID x 0.44 inch OD / 0.31 inch ID x 0.25 inch OD / Other: 0.125 inch ID x 0.25 inch OD
 Were Metals Filtered Prior to Preservation?: (circle) Yes (No) Yes & No / Metals Not Sampled Water Sample Appearance: (Clear / Slightly Turbid / Moderately Turbid / Very Turbid)
 Filtration Method: (Gravity / Vacuum / Pressure) None
 Filter: (Cartridge / Paper) Type: _____ Size: _____ Pore: _____ Were Samples Iced after Collection? (YES) NO /

TIME	PUMPING	TEMPERATURE 3% (degrees C)	SPECIFIC CONDUCTIVITY 3% (mS/cm)		DISSOLVED OXYGEN 10% (mg/l)		pH 0.1 units (pH units)		TURBIDITY 10% (NTU)		ORP 10 mv (mv)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1700		23.41	0.207	NA	8.96	NA	7.53	NA	14.6	NA	39	NA	122	8.91
1706		19.76	0.972		6.46		7.07		8.39		-76		144	8.91
1709		19.38	0.976	0.6	6.73	4.2	7.05	0.02	8.17	2.6	-80	4	160	8.91
1712		19.03	0.983	0.5	6.56	2.5	7.04	0.01	7.38	9.7	-83	3	162	8.91
1715		18.96	0.40983	0	6.29	4.1	7.04	0	6.66	9.8	-84	1	164	8.91

COMMENTS: remove water before opening well

*Indicator parameters have stabilized when 3 consecutive readings are within: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity.



LOW-FLOW GROUNDWATER SAMPLING DATA SHEET

Sample ID: 53A Boring or Well ID: 9-25-14 0905
 Lab No.: _____ Client: USA
 Sampling Personnel: David Nye Project No.: 5093-12-01:05
 Weather: Clear Ground: dry Wind: 0-5-02 Precipitation: None
 Temp.: 56°F Humidity: High / Moderate / Low %

Sample Type: (circle) Permanent Monitoring Well / Temporary Monitoring Well / Geoprobe® SP16 Sampler / Other: _____
 Well / Sampler Material: (circle) PVC / Stainless / Galvanized / Other: _____
 Screen / Casing Inside Diameter: 4 Inches Screened / Open Interval: _____ Ft
 Elevation Top of Casing (TOC): _____ Ft Grade Elevation: _____ Ft
 SWL Depth from TOC (prior to purge): 6.21 Ft SWL Elevation (prior to purge): _____ Ft
 Well / Sampler Depth from TOC: 18.60 Ft TOC to Grade: (-0.1) Ft
 Volume/Foot Casing (d²x0.04079): _____ Gallons Volume of Water Column: _____ Gallons
 Volume of Water Purged: 1.5 Gallons Well Volume Purged: (circle) 1 2 3 4 5 6 7 8 9 10 well volumes

Pump Type: (circle) Bladder Pump / other: low flow Pump Intake Depth: 17 Ft below TOC Field Meter Type(s): Horiba U-53
 Pump Make / Model: Geopump 2 Tubing Type (circle): Tefon® FEP (inner)-HDPE (outer) / Tefon® FEP / (LDPE) / Other: _____
 Tubing Diameter: (circle) 0.19 inch ID x 0.44 inch OD / 0.49 inch ID x 0.25 inch OD / 0.31 inch ID x 0.44 inch OD / Other: 0.125 inch ID x 0.25 inch OD
 Were Metals Filtered Prior to Preservation?: (circle) Yes / No / Yes & No / Metals Not Sampled Water Sample Appearance: Clear / Slightly Turbid / Moderately Turbid / Very Turbid
 Filtration Method: (Gravity / Vacuum / Pressure) None (Color: Gray / Brown / Tan / a few rust colored solids)
 Filter: (Cartridge / Paper) Type: _____ Size: _____ Pore: _____ Were Samples Iced after Collection? YES / NO /

TIME	TEMPERATURE 3% (degrees C)		SPECIFIC CONDUCTIVITY 3% (mS/cm)		DISSOLVED OXYGEN 10% (mg/l)		pH 0.1 units (pH units)		TURBIDITY 10% (NTU)		ORP 10 mv (mv)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
<u>0835</u>	<u>24.21</u>	NA	<u>0.244</u>	NA	<u>9.95</u>	NA	<u>6.87</u>	NA	<u>14.8</u>	NA	<u>42</u>	NA	<u>160</u>	<u>6.21</u>
<u>0841</u>	<u>20.11</u>		<u>0.265</u>		<u>0.14</u>		<u>6.76</u>		<u>11.9</u>		<u>-36</u>		<u>158</u>	<u>6.21</u>
<u>0844</u>	<u>20.03</u>		<u>0.262</u>		<u>0.13</u>		<u>6.70</u>		<u>8.23</u>		<u>-38</u>		<u>162</u>	<u>6.21</u>
<u>0847</u>	<u>19.85</u>		<u>0.261</u>		<u>0.07</u>		<u>6.67</u>		<u>8.25</u>		<u>-40</u>		<u>172</u>	<u>6.21</u>
<u>0850</u>	<u>19.82</u>		<u>0.262</u>		<u>0.00</u>		<u>6.63</u>		<u>7.51</u>		<u>-41</u>		<u>188</u>	<u>6.21</u>
<u>0853</u>	<u>19.87</u>	<u>0.3</u>	<u>0.262</u>	<u>0</u>	<u>0.00</u>	<u>0</u>	<u>6.60</u>	<u>0.03</u>	<u>7.98</u>	<u>6.3</u>	<u>-42</u>	<u>1</u>	<u>198</u>	<u>6.21</u>
<u>0856</u>	<u>19.86</u>	<u>0.1</u>	<u>0.263</u>	<u>0.4</u>	<u>0.00</u>	<u>0</u>	<u>6.58</u>	<u>0.02</u>	<u>8.67</u>	<u>8.6</u>	<u>-44</u>	<u>2</u>	<u>200</u>	<u>6.21</u>
<u>0859</u>	<u>19.76</u>	<u>0.5</u>	<u>0.264</u>	<u>0.4</u>	<u>0.01</u>	<u>0</u>	<u>6.55</u>	<u>0.03</u>	<u>9.21</u>	<u>6.2</u>	<u>-46</u>	<u>2</u>	<u>200</u>	<u>6.21</u>

COMMENTS:

*Indicator parameters have stabilized when 3 consecutive readings are within: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity.



LOW-FLOW GROUNDWATER SAMPLING DATA SHEET

Sample ID: S3 Boring or Well ID: 9-25-14 0955

Sample Date & Time: 9-25-14

Lab No.: _____
Boring or Well Location: Sample Street Complex
Client: UEA
Project No.: 5093-12-01:05
Site Location: 3702 West Sample St., South Bend, IN
Laboratory: Envision Laboratories, Indianapolis, IN

Sampling Personnel: David Nye
Weather: Clear Ground: dry Wind: 0-5 mph Precipitation: None
Temp.: 61°F Humidity: High / Moderate / Low %

Sample Type: (circle) Permanent Monitoring Well / Temporary Monitoring Well / Geoprobe® SP16 Sampler / Other: _____
Well / Sampler Material: (circle) PVC / Stainless / Galvanized / Other: _____
Screen / Casing Inside Diameter: 4 Inches
Screened / Open Interval: _____ Ft
Elevation Top of Casing (TOC): _____ Ft
Grade Elevation: _____ Ft
SWL Depth from TOC (prior to purge): 6.21 Ft
SWL Elevation (prior to purge): _____ Ft
Well / Sampler Depth from TOC: 50.1 Ft
TOC to Grade: (-0.25) Ft
Volume/Foot Casing (d²x0.04079): _____ Gallons
Volume of Water Purged: 0.7 Gallons
Well Volume Purged: (circle) 1 2 3 4 5 6 7 8 9 10 well volumes

Pump Type: (circle) Bladder Pump / other: low flow Pump Intake Depth: 45 Ft below TOC Field Meter Type(s): Horiba U-53
Pump Make/Model: Geopump 2
Tubing Diameter: (circle) 0.19 inch ID x 0.44 inch OD / 0.19 inch ID x 0.25 inch OD / 0.31 inch ID x 0.44 inch OD / Other: 0.125 inch ID x 0.25 inch OD
Tubing Type (circle): Teflon® FEP (inner)-HDPE (outer) / Teflon® FEP / LDPE / Other: _____
Were Metals Filtered Prior to Preservation?: (circle) Yes (No) / Yes & No / Metals Not Sampled
Filtration Method: (Gravity / Vacuum / Pressure) None
Filter: (Cartridge / Paper) Type: _____ Size: _____ Pore: _____
Water Sample Appearance: Clear / Slightly Turbid / Moderately Turbid / Very Turbid)
(Color: Gray / Brown / Tan /)
Were Samples Iced after Collection? YES / NO /

TIME	PUMPING	TEMPERATURE 3% (degrees C)	SPECIFIC CONDUCTIVITY 3% (mS/cm)		DISSOLVED OXYGEN 10% (mg/l)		pH 0.1 units (pH units)		TURBIDITY 10% (NTU)		ORP 10 mv (mv)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
0935		19.44	0.149	NA	9.87	NA	6.25	NA	3.12	NA	58	NA	138	6.21
0941		17.33	0.317		6.37		8.00		0.00		7		140	6.21
0944		17.25	0.318	0.3	6.44	1.1	8.03	0.03	0.00	0	6	1	144	6.21
0947		17.19	0.318	0	6.29	2.3	8.07	0.04	0.00	0	6	0	148	6.21
0950		17.16	0.318	0	6.12	2.7	8.12	0.05	0.00	0	5	1	160	6.21

COMMENTS:

*Indicator parameters have stabilized when 3 consecutive readings are within: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity.



LOW-FLOW GROUNDWATER SAMPLING DATA SHEET

Sample ID: W-1 Boring or Well ID: _____
 Lab No.: _____ Boring or Well Location: Sample Street Complex
 Sampling Personnel: David Nye Client: UEA
 Weather: 120°F Ground: dry Wind: 0-5 mph Precipitation: None
 Temp.: 66°F Humidity: High / Moderate / Low %

Sample Type: (circle) Permanent Monitoring Well / Temporary Monitoring Well / Geoprobe® SP16 Sampler / Other: _____
 Well / Sampler Material: (circle) PVC / Stainless / Galvanized / Other: _____
 Screen / Casing Inside Diameter: _____ Inches
 Screened / Open Interval: _____ Ft
 Elevation Top of Casing (TOC): _____ Ft
 Screen Slot Size: _____ Ft
 Survey Info: _____ Ft
 SWL Depth from TOC (prior to purge): 9.06 Ft
 SWL Elevation (prior to purge): _____ Ft
 Well / Sampler Depth from TOC: 62.9 Ft
 TOC to Grade: (-0.3) Ft
 Well Depth from Grade: _____ Ft
 Volume/Foot Casing (d²x0.04079): _____ Gallons
 Volume of Water Column: _____ Gallons
 Well Volume Purged: (circle) 1 2 3 4 5 6 7 8 9 10 well volumes

Pump Type: (circle) Bladder Pump / other: low flow
 Pump Make / Model: Geopump 2
 Pump Intake Depth: 55 Ft below TOC
 Field Meter Type(s): Horiba U-53
 Tubing Diameter: (circle) 0.19 inch ID x 0.44 inch OD / 0.19 inch ID x 0.25 inch OD / 0.31 inch ID x 0.25 inch OD / Teflon® FEP (inner)-HDPE (outer) / Teflon® FEP / (LDPE) / Other: _____
 Were Metals Filtered Prior to Preservation?: (circle) Yes (No) / Yes & No / Metals Not Sampled
 Water Sample Appearance: Clear / Slightly Turbid / Moderately Turbid / Very Turbid
 Filtration Method: (Gravity / Vacuum / Pressure) None
 Filter: (Cartridge / Paper) Type: _____ Pore: _____
 Were Samples Iced after Collection? YES / NO /

TIME	PURGING	TEMPERATURE 3% (degrees C)	SPECIFIC CONDUCTIVITY 3% (mS/cm)		DISSOLVED OXYGEN 10% (mg/l)		pH		TURBIDITY 10% (NTU)		ORP 10 mv (mv)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1040		18.47	0.486	NA	2.17	NA	7.86	NA	0.48	NA	68	NA	192	9.06
1046		18.05	0.622		5.29		7.89		0.00		67		194	9.06
1049		17.92	0.7	2.9	5.32	0.6	7.87	0.02	0.00	0	65	2	190	9.06
1052		17.78	0.8	0.8	5.27	0.9	7.86	0.01	0.00	0	64	1	198	9.06
1055		17.72	0.3	0.2	5.38	2.1	7.85	0.01	0.00	0	63	1	202	9.06

COMMENTS: _____

*Indicator parameters have stabilized when 3 consecutive readings are within: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity.

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LOW-FLOW GROUNDWATER SAMPLING DATA SHEET

Sample ID: W-3 Boring or Well ID: 9-25-14 Sample Date & Time: 12:05

Lab No.: 719F Boring or Well Location: Sample Street Complex Client: UEA

Sampling Personnel: David Nye Sample Street Complex Project No.: 5093-12-01:05

Weather: Clear Ground: Dry Wind: None Precipitation: None Site Location: 3702 West Sample St., South Bend, IN

Temp.: 71°F Humidity: High / Moderate / Low % Laboratory: Envision Laboratories, Indianapolis, IN

Sample Type: (circle) Permanent Monitoring Well / Temporary Monitoring Well / Geoprobe® SP16 Sampler / Other: _____

Well / Sampler Material: (circle) PVC / Stainless / Galvanized / Other: _____

Screen / Casing Inside Diameter: 5 Inches Screened / Open Interval: _____ Ft

Elevation Top of Casing (TOC): _____ Ft Grade Elevation: _____ Ft

SWL Depth from TOC (prior to purge): 7.79 Ft SWL Elevation (prior to purge): _____ Ft

Well / Sampler Depth from TOC: 58.03 Ft TOC to Grade: (-1.0) Ft

Volume/Foot Casing (d²x0.04079): _____ Gallons Volume of Water Column: _____ Gallons

Volume of Water Purged: 1.0 Gallons Well Volume Purged: (circle) 1 2 3 4 5 6 7 8 9 10 well volumes

Pump Type: (circle) Bladder Pump / other: low flow Pump Intake Depth: 55 Ft below TOC Field Meter Type(s): Horiba U-52

Pump Make / Model: Geopump 2 Tubing Type (circle): Teflon® FEP (inner)-HDPE (outer) / Teflon® FEP / (LDPE) / Other: _____

Tubing Diameter: (circle) 0.19 inch ID x 0.44 inch OD / 0.19 inch ID x 0.25 inch OD / 0.31 inch ID x 0.44 inch OD / Other: 0.125 inch ID x 0.25 inch OD

Were Metals Filtered Prior to Preservation?: (circle) Yes / No / Yes & No / Metals Not Sampled

Filtration Method: (Gravity / Vacuum / Pressure) None

Filter: (Cartridge / Paper) Type: _____ Size: _____ Pore: _____

Water Sample Appearance: Clear / Slightly Turbid / Moderately Turbid / Very Turbid / (Color: Gray / Brown / Tan /)

Were Samples Iced after Collection? YES / NO /

TIME	TEMPERATURE 3% (degrees C)	SPECIFIC CONDUCTIVITY 3% (mS/cm)		DISSOLVED OXYGEN 10% (mg/l)		pH		TURBIDITY 10% (NTU)		ORP 10 mv (mv)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft. below TOC)
		READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1140	22.87	NA	NA	9.47	NA	7.67	NA	23.4	NA	7.3	NA	168	7.79
1146	17.77	1.04	0	0.23	0	7.10	0.01	10.7	0.01	-39	0	170	7.79
1149	17.64	1.05	0	0.00	0	7.10	0.01	10.3	0.01	-49	0	188	7.79
1152	17.46	1.05	0	0.00	0	7.09	0.01	9.31	0.01	-55	0	196	7.79
1155	17.37	1.05	0	0.00	0	7.09	0.01	8.39	0.01	-58	0	200	7.79
1158	17.31	1.05	0	0.00	0	7.08	0.01	8.10	0.01	-61	0	204	7.79

COMMENTS:

*Indicator parameters have stabilized when 3 consecutive readings are within: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity.

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LOW-FLOW GROUNDWATER SAMPLING DATA SHEET

Sample ID: W-100 A Boring or Well ID: _____
 Lab No.: _____ Boring or Well Location: Sample Street Complex
 Sampling Personnel: David Nye Client: UEA
 Weather: Sky: Clear Ground: dry Wind: 0-5 mph Precipitation: None
 Temp.: 74.0F Humidity: High / Moderate / Low / _____ %
 Sample Date & Time: 9-25-14 1300
 Project No.: 5093-12-01:05
 Site Location: 3702 West Sample St., South Bend, IN
 Laboratory: Envision Laboratories, Indianapolis, IN

Sample Type: (circle) Permanent Monitoring Well / Temporary Monitoring Well / Geoprobe® SP16 Sampler / Other: _____
 Well / Sampler Material: (circle) PVC / Stainless / Galvanized / Other: _____
 Screen / Casing Inside Diameter: _____ Inches
 Screened / Open Interval: _____ Ft
 Elevation Top of Casing (TOC): _____ Ft
 Screen Slot Size: _____ Ft
 Survey Info: _____ Ft
 SWL Depth from TOC (prior to purge): 8.78 Ft
 SWL Elevation (prior to purge): _____ Ft
 Well / Sampler Depth from TOC: 33.98 Ft
 TOC to Grade: (-0.45) Ft
 Well Depth from Grade: _____ Ft
 Volume/Foot Casing (d²x0.04079): _____ Gallons
 Volume of Water Purged: 1.2 Gallons
 Well Volume Purged: (circle) 1 2 3 4 5 6 7 8 9 10 well volumes
 Pump Type: (circle) Bladder Pump / other: low flow
 Pump Make / Model: Geopump 2
 Pump Intake Depth: 33 Ft below TOC
 Field Meter Type(s): Horiba U-53
 Tubing Diameter: (circle) 0.19 inch ID x 0.44 inch OD / 0.19 inch ID x 0.25 inch OD / 0.31 inch ID x 0.44 inch OD / Other: 0.125 inch ID x 0.25 inch OD
 Tubing Type (circle): Teflon® FEP (inner)-HDPE (outer) / Teflon® FEP / LDPE / Other: _____
 Were Metals Filtered Prior to Preservation?: (circle) Yes (No) / Yes & No / Metals Not Sampled
 Water Sample Appearance: Clear / Slightly Turbid / Moderately Turbid / Very Turbid /
 Filtration Method: (Gravity / Vacuum / Pressure) None
 Filter: (Cartridge / Paper) Type: _____ Pore: _____ Size: _____
 Were Samples Iced after Collection? YES / NO /

TIME	TEMPERATURE 3% (degrees C)		SPECIFIC CONDUCTIVITY 3% (mS/cm)		DISSOLVED OXYGEN 10% (mg/l)		pH 0.1 units (pH units)		TURBIDITY 10% (NTU)		ORP 10 mv (mv)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1240	25.11	NA	0.427	NA	9.46	NA	7.33	NA	23.1	NA	53	NA	200	-
1246	16.69		0.962		0.00		6.86		4.63		-52		200	-
1249	16.34	2.1	0.969	0.7	0.00	0	6.84	0.02	4.18	9.7	-56	4	200	-
1252	16.23	0.7	0.968	0.1	0.00	0	6.83	0.01	3.81	8.9	-60	4	200	-
1255	16.08	0.9	0.967	0.1	0.00	0	6.82	0.01	3.44	9.7	-62	2	200	-

COMMENTS:

*Indicator parameters have stabilized when 3 consecutive readings are within: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity.



LOW-FLOW GROUNDWATER SAMPLING DATA SHEET

Sample ID: W-100 B Boring or Well ID: _____
 Lab No.: _____ Boring or Well Location: Sample Street Complex
 Sampling Personnel: David Nye Client: UEA
 Sky: clear Ground: dry Wind: 0-5 mph Precipitation: None
 Temp.: 75°F Humidity: High / Moderate / Low %

Sample Date & Time: 9-25-14 1340
 Project No.: 5093-12-01:05
 Site Location: 3702 West Sample St., South Bend, IN
 Laboratory: Envision Laboratories, Indianapolis, IN

Sample Type: (circle) Permanent-Monitoring Well / Temporary Monitoring Well / Geoprobe® SP16 Sampler / Other: _____
 Well / Sampler Material: (circle) PVC / Stainless / Galvanized / Other: _____
 Screen / Casing Inside Diameter: _____ Inches
 Screened / Open Interval: _____ Ft
 Elevation Top of Casing (TOC): _____ Ft
 Screen Slot Size: _____ Ft
 Survey Info: _____
 SWL Depth from TOC (prior to purge): 8.85 Ft
 Grade Elevation: _____ Ft
 Well / Sampler Depth from TOC: 50.9 Ft
 SWL Elevation (prior to purge): _____ Ft
 Well / Sampler Depth from TOC: _____ Ft
 TOC to Grade: (-0.40) Ft
 Well Depth from Grade: _____ Ft
 Volume/Foot Casing (d²x0.04079): _____ Gallons
 Volume of Water Purged: 1.1 Gallons
 Well Volume Purged: (circle) 1 2 3 4 5 6 7 8 9 10 well volumes

Pump Type: (circle) Bladder Pump / other: low flow Pump Intake Depth: 4.9 Ft below TOC Field Meter Type(s): Horiba U-52
 Pump Make / Model: Geopump 2 Tubing Type (circle): Teflon® FEP (inner)-HDPE (outer) / Teflon® FEP / (LDPE) / Other: _____
 Tubing Diameter: (circle) 0.19 inch ID x 0.44 inch OD / 0.31 inch ID x 0.25 inch OD / 0.31 inch ID x 0.44 inch OD / Other: 0.125 inch ID x 0.25 inch OD
 Were Metals Filtered Prior to Preservation?: (circle) Yes (No) / Yes & No / Metals Not Sampled
 Water Sample Appearance: Clear / Slightly Turbid / Moderately Turbid / Very Turbid)
 Filtration Method: (Gravity / Vacuum / Pressure) None
 Filter: (Cartridge / Paper) Type: _____ Size: _____ Pore: _____
 Were Samples Iced after Collection? YES / NO /

TIME	TEMPERATURE 3% (degrees C)	SPECIFIC CONDUCTIVITY 3% (mS/cm)			DISSOLVED OXYGEN 10% (mg/l)			pH 0.1 units (pH units)			TURBIDITY 10% (NTU)			ORP 10 mv (mv)			PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
		READING	CHANGE*	NA	READING	CHANGE*	NA	READING	CHANGE*	NA	READING	CHANGE*	NA	READING	CHANGE*	NA		
1320	22.8	0.140	NA	8.81	NA	7.54	NA	1.18	NA	0	NA	200						
1326	17.16	0.850		0.00		7.14		0.21		-9.9		200						
1329	16.69	0.862	1.4	0.00	0	7.13	0.01	0.19	9.5	-10.0		200						
1332	16.44	0.806	0.5	0.00	0	7.12	0.01	0.18	5.3	-10.1		200						
1335	16.45	0.870	0.5	0.00	0	7.11	0.01	0.17	5.6	-10.3		200						

COMMENTS:

*Indicator parameters have stabilized when 3 consecutive readings are within: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity.
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LOW-FLOW GROUNDWATER SAMPLING DATA SHEET

Sample ID: W-101 B Boring or Well ID: _____
 Lab No.: _____ Boring or Well Location: Sample Street Complex
 Sampling Personnel: David Nye Sample Date & Time: 9-25-14 1615
 Sky: Clear Ground: dry Wind: 5-10 mph Client: UEA
 Weather: _____ Humidity: High / Moderate / Low / _____ Precipitation: None
 Temp.: 72°F Project No.: 5093-12-01:05
 Site Location: 3702 West Sample St., South Bend, IN
 Laboratory: Envision Laboratories, Indianapolis, IN

Sample Type: (circle) Permanent Monitoring Well / Temporary Monitoring Well / Geoprobe® SP16 Sampler / Other: _____
 Well / Sampler Material: (circle) PVC / Stainless / Galvanized / Other: _____
 Screen / Casing Inside Diameter: _____ Inches Screened / Open Interval: _____ Ft
 Elevation Top of Casing (TOC): _____ Ft Grade Elevation: _____ Ft
 SWL Depth from TOC (prior to purge): 9.53 Ft SWL Elevation (prior to purge): _____ Ft
 Well / Sampler Depth from TOC: 46.35 Ft TOC to Grade: (-0.3) Ft Well Depth from Grade: _____ Ft
 Volume/Foot Casing (d²x0.04079): _____ Gallons Volume of Water Column: _____ Gallons
 Volume of Water Purged: 0.9 Gallons Well Volume Purged: (circle) 1 2 3 4 5 6 7 8 9 10 well volumes

Pump Type: (circle) Bladder Pump / other: low flow Pump Intake Depth: 4.5 Ft below TOC Field Meter Type(s): Horiba U-53
 Pump Make / Model: Geopump 2 Tubing Type (circle): Teflon® FEP (inner)-HDPE (outer) / Teflon® FEP / (LDPE) / Other: _____
 Tubing Diameter: (circle) 0.19 inch ID x 0.44 inch OD / 0.31 inch ID x 0.25 inch OD / 0.31 inch ID x 0.44 inch OD / Other: 0.125 inch ID x 0.25 inch OD
 Were Metals Filtered Prior to Preservation?: (circle) Yes / No Yes & No / Metals Not Sampled Water Sample Appearance: Clear / Slightly Turbid / Moderately Turbid / Very Turbid)
 Filtration Method: (Gravity / Vacuum / Pressure) None (Color: Gray / Brown / Tan /)
 Filter: (Cartridge / Paper) Type: _____ Size: _____ Pore: _____ Were Samples Iced after Collection? YES / NO /

TIME	PURGING	SAMPLING	TEMPERATURE 3% (degrees C)		SPECIFIC CONDUCTIVITY 3% (mS/cm)		DISSOLVED OXYGEN 10% (mg/l)		pH 0.1 units (pH units)		TURBIDITY 10% (NTU)		ORP 10 mv (mv)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1550			20.08	NA	0.903	NA	7.63	NA	7.37	NA	1.72	NA	-71	NA	180	
1551			18.31		0.908		0.00		7.13		0.04		-108		186	
1559			18.18		0.905		0.00		7.10		0.00		-108		180	
1602			18.08	0.6	0.904	0.1	0.00	0	7.08	0.02	0.00	0	-108	0	168	
1605			18.60	2.9	0.901	0.3	0.00	0	7.06	0.02	0.00	0	-108	0	162	
1608			19.06	2.9	0.903	0.2	0.00	0	7.04	0.02	0.00	0	-110	2	150	

COMMENTS: _____

*Indicator parameters have stabilized when 3 consecutive readings are within: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity.

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LOW-FLOW GROUNDWATER SAMPLING DATA SHEET

Sample ID: W-16 Boring or Well ID: _____ Sample Date & Time: 9-25-14 1720
 Lab No.: _____ Boring or Well Location: Sample Street Complex Client: UEA
 Sampling Personnel: David Nye Project No.: 5093-12-01:05
 Weather: Clear Ground: 3-10 mph Precipitation: No Site Location: 3702 West Sample St., South Bend, IN
 Temp.: 76 F Humidity: High / Moderate / Low / _____ % Laboratory: Envision Laboratories, Indianapolis, IN

Sample Type: (circle) Permanent Monitoring Well / Temporary Monitoring Well / Geoprobe® SP16 Sampler / Other: _____
 Well / Sampler Material: (circle) PVC / Stainless / Galvanized / Other: _____
 Screen / Casing Inside Diameter: 4 Inches Screened / Open Interval: _____ Ft
 Elevation Top of Casing (TOC): _____ Ft Grade Elevation: _____ Ft
 SWL Depth from TOC (prior to purge): 11.95 Ft SWL Elevation (prior to purge): _____ Ft
 Well / Sampler Depth from TOC: 60.55 Ft TOC to Grade: 3.4 Ft Well Depth from Grade: _____ Ft
 Volume/Foot Casing (d²x0.04079): _____ Gallons Volume of Water Column: _____ Gallons
 Volume of Water Purged: 0.8 Gallons Well Volume Purged: (circle) 1 2 3 4 5 6 7 8 9 10 well volumes

Pump Type: (circle) Bladder Pump / other: low flow Pump Intake Depth: 50 Ft below TOC Field Meter Type(s): Horiba U-53
 Pump Make / Model: Geopump 2 Tubing Type (circle): Teflon® FEP (inner)-HDPE (outer) / Teflon® FEP / LDPE / Other: _____
 Tubing Diameter: (circle) 0.19 inch ID x 0.44 inch OD / 0.19 inch ID x 0.25 inch OD / 0.31 inch ID x 0.44 inch OD / Other: 0.125 inch ID x 0.25 inch OD
 Were Metals Filtered Prior to Preservation?: (circle) Yes / No Yes & No / Metals Not Sampled Water Sample Appearance: Clear / Slightly Turbid / Moderately Turbid / Very Turbid /
 Filtration Method: (Gravity / Vacuum / Pressure) None (Color: Gray / Brown / Tan /)
 Filter: (Cartridge / Paper) Type: _____ Size: _____ Pore: _____ Were Samples Iced after Collection? YES NO /

TIME	TEMPERATURE 3% (degrees C)	SPECIFIC CONDUCTIVITY 3% (mS/cm)		DISSOLVED OXYGEN 10% (mg/l)		pH 0.1 units (pH units)		TURBIDITY 10% (NTU)		ORP 10 mv (mv)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
		READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1700	22.25	0.466	NA	8.03	NA	7.25	NA	0.00	NA	35	NA	140	11.95
1706	20.07	1.12		4.25		7.27		0.00		69		144	11.95
1709	19.80	1.13	0.9	3.89	8.5	7.24	0.03	0.00	0	74	5	122	11.95
1712	19.76	1.13	0	3.74	3.9	7.22	0.02	0.00	0	78	4	112	11.95
1715	19.56	1.13	0	4.09	9.4	7.21	0.01	0.00	0	81	3	128	11.95

COMMENTS: _____

*Indicator parameters have stabilized when 3 consecutive readings are within: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity.

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LOW-FLOW GROUNDWATER SAMPLING DATA SHEET

Sample ID: W-15B

Boring or Well ID: W-15B

Boring or Well Location: Sample Street Complex

Sample Date & Time: 9.26.14

Client: UEA

Project No.: 5093-12-01:05

Site Location: 3702 West Sample St., South Bend, IN

Laboratory: Envision Laboratories, Indianapolis, IN

Sampling Personnel: David Nive

Weather: clear Ground: damp Wind: 0.5 mph Precipitation: None

Temp.: SRF Humidity: High / Moderate / Low / %

Sample Type: (circle) Permanent Monitoring Well / Temporary Monitoring Well / Geoprobe® SP16 Sampler / Other: _____

Well / Sampler Material: (circle) PVC / Stainless / Galvanized / Other: _____

Screen / Casing Inside Diameter: 2 Inches

Screen Slot Size: _____ Ft

Survey Info: _____ Ft

Elevation Top of Casing (TOC): _____ Ft

SWL Depth from TOC (prior to purge): 10.47 Ft

Well / Sampler Depth from TOC: 11.58 Ft

Volume/Foot Casing (d²x0.04079): _____ Gallons

Volume of Water Purged: 1.1 Gallons

Well Volume Purged: (circle) 1 2 3 4 5 6 7 8 9 10 well volumes

Well Depth from Grade: _____ Ft

Field Meter Type(s): Horiba U-53

Pump Make / Model: Bladder Pump / Geopump 2

Tubing Type (circle): Teflon® FEP (inner)-HDPE (outer) / Teflon® FEP / (LDPE) / Other: _____

Tubing Diameter (circle): 0.19 inch ID x 0.44 inch OD / 0.31 inch ID x 0.25 inch OD / Other: 0.125 inch ID x 0.25 inch OD

Water Sample Appearance: Clear / Slightly Turbid / Moderately Turbid / Very Turbid

Color: Gray / Brown / Tan / _____

Were Metals Filtered Prior to Preservation?: (circle) Yes / No / Metals Not Sampled

Filtration Method: (Gravity / Vacuum / Pressure) None

Filter: (Cartridge / Paper) Type: _____ Size: _____ Pore: _____

Were Samples Iced after Collection? YES / NO / _____

TIME	PUMPING	TEMPERATURE 3% (degrees C)	SPECIFIC CONDUCTIVITY 3% (mS/cm)			DISSOLVED OXYGEN 10% (mg/l)			pH 0.1 units (pH units)			TURBIDITY 10% (NTU)			ORP 10 mv (mv)	PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	NA	READING	CHANGE*	NA	READING	CHANGE*	NA	READING	CHANGE*	NA			
0850		22.59	0.290	NA	9.42	NA	7.38	NA	3.04	NA	117	NA	200	11.47			
0856		19.12	1.22		6.84		6.84		1.63		131		182	11.47			
0859		18.99	1.28		6.82		6.82		1.23		132		168	11.47			
0902		19.92	1.34		6.80		6.80		0.00		132		174	11.47			
0905		18.86	1.37	2.2	6.79	0.01	6.79	0.00	0.00	0	132	0	180	11.47			
0908		18.81	1.40	2.2	6.79	0	6.79	0	0.00	0	132	0	180	11.47			
0911		19.87	1.44	2.4	6.78	0.01	6.78	0.00	0.00	0	132	0	182	11.47			

COMMENTS:

*Indicator parameters have stabilized when 3 consecutive readings are within: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity.

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LOW-FLOW GROUNDWATER SAMPLING DATA SHEET

Sample ID: W-15A Boring or Well ID: _____
 Lab No.: _____ Boring or Well Location: Sample Street Complex
 Sampling Personnel: David Nya Client: UEA
 Weather: Clear Ground: dry Wind: 0-5 mph Precipitation: None
 Temp.: 50°F Humidity: High / Moderate / Low / _____ %

Sample Type: (circle) Permanent Monitoring Well / Temporary Monitoring Well / Geoprobe® SP16 Sampler / Other: _____
 Well / Sampler Material: (circle) PVC / Stainless / Galvanized / Other: _____
 Screen / Casing Inside Diameter: 2 Inches Screened / Open Interval: _____ Ft
 Elevation Top of Casing (TOC): _____ Ft Grade Elevation: _____ Ft
 SWL Depth from TOC (prior to purge): 1.09 Ft SWL Elevation (prior to purge): _____ Ft
 Well / Sampler Depth from TOC: 35.30 Ft TOC to Grade: 2.7 Ft
 Volume/Foot Casing (d³×0.04079): _____ Gallons Volume of Water Column: _____ Gallons
 Volume of Water Purged: 1.4 Gallons Well Volume Purged: (circle) 1 2 3 4 5 6 7 8 9 10 well volumes

Pump Type: (circle) Bladder Pump / other: low flow Pump Intake Depth: 33 Ft below TOC
 Pump Make / Model: Geopump 2 Tubing Type (circle): Teflon® FEP (inner)-HDPE (outer) / Teflon® FEP / (LDPE) / Other: _____
 Tubing Diameter: (circle) 0.19 inch ID x 0.44 inch OD / 0.19 inch ID x 0.25 inch OD / 0.31 inch ID x 0.44 inch OD / Other: 0.125 inch ID x 0.25 inch OD
 Were Metals Filtered Prior to Preservation?: (circle) Yes (No) Yes & No / Metals Not Sampled
 Filtration Method: (Gravity / Vacuum / Pressure) None
 Filter: (Cartridge / Paper) Type: _____ Size: _____ Pore: _____
 Water Sample Appearance: (Circle) Clear / Slightly Turbid / Moderately Turbid / Very Turbid)
 (Color: Gray / Brown / Tan /)
 Were Samples Iced after Collection? (YES / NO /)

TIME	PURGING	TEMPERATURE 3% (degrees C)	SPECIFIC CONDUCTIVITY 3% (mS/cm)		DISSOLVED OXYGEN 10% (mg/l)		pH 0.1 units (pH units)		TURBIDITY 10% (NTU)		ORP 10 mv (mv)	PUMPING RATE (ml/min)	DEPTH TO WATER (ft. below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*			
0440		20.87	0.427	NA	9.67	NA	9.11	NA	57.7	NA	109	200	11.09
0946		17.66	1.87		0.05		6.89		31.2		-69	200	11.09
0949		17.57	1.87		0.00		6.89		17.0		-75	200	11.09
0952		17.48	0.5		0.00		6.88	0.01	16.4	3.5	-79	200	11.09
0955		17.48	0		0.00		6.88	0	15.3	6.7	-82	200	11.09
0958		17.47	0.1	0.5	0.00	0	6.88	0	14.0	8.5	-85	200	11.09

COMMENTS: _____

*Indicator parameters have stabilized when 3 consecutive readings are within: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity.

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LOW-FLOW GROUNDWATER SAMPLING DATA SHEET

Sample ID: W-14A Boring or Well ID: _____
 Lab No.: _____ Boring or Well Location: Sample Street Complex
 Sampling Personnel: David Nye Client: UEA
 Weather: Sky: clear Ground: dry Wind: 0-5 mph Project No.: 5093-12-01:05
 Temp.: 56°F Humidity: High / Moderate / Low % Precipitation: None
 Site Location: 3702 West Sample St, South Bend, IN
 Laboratory: Envision Laboratories, Indianapolis, IN

Sample Type: (circle) Permanent Monitoring Well / Temporary Monitoring Well / Geoprobe® SP16 Sampler / Other: _____
 Well / Sampler Material: (circle) PVC / Stainless / Galvanized / Other: _____
 Screen / Casing Inside Diameter: _____ Inches Screened / Open Interval: _____ Ft
 Elevation Top of Casing (TOC): _____ Ft Grade Elevation: _____ Ft
 SWL Depth from TOC (prior to purge): _____ Ft SWL Elevation (prior to purge): _____ Ft
 Well / Sampler Depth from TOC: _____ Ft TOC to Grade: 2.5 Ft
 Volume/Foot Casing (d²x0.04079): 60.95 Gal/Ft Volume of Water Column: _____ Gallons
 Volume of Water Purged: 1.2 Gallons Well Volume Purged: (circle) 1 2 3 4 5 6 7 8 9 10 well volumes

Pump Type: (circle) Bladder Pump / other: low flow Pump Intake Depth: 60 Ft below TOC Field Meter Type(s): Horiba U-53
 Pump Make / Model: Geopump 2 Tubing Type (circle): Teflon® FEP (inner)-HDPE (outer) / Teflon® FEP / LDPE / Other: _____
 Tubing Diameter: (circle) 0.19 inch ID x 0.44 inch OD / 0.19 inch ID x 0.25 inch OD / 0.31 inch ID x 0.44 inch OD / Other: 0.125 inch ID x 0.25 inch OD

Were Metals Filtered Prior to Preservation?: (circle) Yes / No / Yes & No / Metals Not Sampled Water Sample Appearance: Clear / Slightly Turbid / Moderately Turbid / Very Turbid /
 Filtration Method: (Gravity / Vacuum / Pressure) None (Color: Gray / Brown / Tan /)
 Filter: (Cartridge / Paper) Type: _____ Size: _____ Pore: _____ Were Samples Iced after Collection? YES / NO /

TIME	TEMPERATURE 3% (degrees C)	SPECIFIC CONDUCTIVITY 3% (mS/cm)		DISSOLVED OXYGEN 10% (mg/l)		pH 0.1 units (pH units)		TURBIDITY 10% (NTU)		ORP 10 mv (mv)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
		READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1100	21.05	0.415	NA	9.83	NA	7.34	NA	21.3	NA	39	NA	194	11.63
1106	18.60	1.28		0.25		7.68		11.2		-104		192	11.63
1109	18.57	1.28		0.00		7.08		10.3		-108		188	11.63
1112	18.60	0.2	0	0.00	0	7.07	0.01	9.92	3.7	-111	3	182	11.63
1115	18.56	0.2	0.8	0.00	0	7.07	0	9.76	1.6	-113	2	176	11.63
1118	18.51	0.3	0	0.00	0	7.06	0.01	9.62	1.4	-114	1	170	11.63

COMMENTS: _____

*Indicator parameters have stabilized when 3 consecutive readings are within: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity.

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LOW-FLOW GROUNDWATER SAMPLING DATA SHEET

Sample ID: W-14B Boring or Well ID: _____
 Lab No.: _____ Boring or Well Location: Sample Street Complex
 Sampling Personnel: David Nye Client: UEA
 Weather: clear Ground: dry Wind: 0-5 mph Precipitation: None Project No.: 5093-12-01:05
 Temp.: 55°F Humidity: High / Moderate / Low / _____ % Site Location: 3702 West Sample St., South Bend, IN
 Laboratory: Envision Laboratories, Indianapolis, IN

Sample Type: (circle) Permanent Monitoring Well / Temporary Monitoring Well / Geoprobe® SP16 Sampler / Other: _____
 Well / Sampler Material: (circle) PVC / Stainless / Galvanized / Other: _____
 Screen / Casing Inside Diameter: _____ Inches Screened / Open Interval: _____ Ft
 Elevation Top of Casing (TOC): _____ Ft Grade Elevation: _____ Ft
 SWL Depth from TOC (prior to purge): 12.17 Ft SWL Elevation (prior to purge): _____ Ft
 Well / Sampler Depth from TOC: 44.13 Ft TOC to Grade: 2.9 Ft Well Depth from Grade: _____ Ft
 Volume/Foot Casing (d²x0.04079): _____ Gallons Volume of Water Column: _____ Gallons
 Volume of Water Purged: 1.0 Gallons Well Volume Purged: (circle) 1 2 3 4 5 6 7 8 9 10 well volumes
 Pump Type: (circle) Bladder Pump / other: low flow Pump Intake Depth: 43 Ft below TOC
 Pump Make / Model: Geopump 2 Tubing Type (circle): Teflon® FEP (inner)-HDPE (outer) / Teflon® FEP / LDPE / Other: _____
 Tubing Diameter: (circle) 0.19 inch ID x 0.44 inch OD / 0.19 inch ID x 0.25 inch OD / 0.31 inch ID x 0.44 inch OD / Other: 0.125 inch ID x 0.25 inch OD
 Were Metals Filtered Prior to Preservation?: (circle) Yes / No Yes & No / Metals Not Sampled
 Filtration Method: (Gravity / Vacuum / Pressure / None)
 Filter: (Cartridge / Paper) Type: _____ Size: _____ Pore: _____
 Were Samples Iced after Collection? YES / NO / _____
 Water Sample Appearance: Clear / Slightly Turbid / Moderately Turbid / Very Turbid
 Color: Gray / Brown / Tan / _____

TIME	TEMPERATURE 3% (degrees C)	SPECIFIC CONDUCTIVITY 3% (mS/cm)		DISSOLVED OXYGEN 10% (mg/l)		pH 0.1 units (pH units)		TURBIDITY 10% (NTU)		ORP 10 mv (mv)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
		READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1140	22.22	0.328	NA	8.63	NA	7.53	NA	16.2	NA	-28	NA	164	12.17
1146	19.30	0.830		0.08		7.08		8.50		-91		162	12.17
1149	19.17	0.826		0.00		7.07		0.0		-96		152	12.17
1152	18.92	1.3	0.1	0.00	0	7.07	0	0.0	0	-100	4	154	12.17
1155	18.76	0.8	0.1	0.00	0	7.07	0	0.0	0	-102	2	162	12.17
1158	18.61	0.8	0.1	0.00	0	7.07	0	0.0	0	-104	2	178	12.17

COMMENTS:

*Indicator parameters have stabilized when 3 consecutive readings are within: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity.



LOW-FLOW GROUNDWATER SAMPLING DATA SHEET

Sample ID: W-10 B Boring or Well ID: 9-26-14 Sample Date & Time: 1250
 Lab No.: _____ Boring or Well Location: Sample Street Complex Client: UEA
 Sampling Personnel: David Nye Sample Street Complex _____ Project No.: 5093-12-01:05
 Weather: Sky: clear Ground: dry Wind: 0-5 mph Precipitation: None Site Location: 3702 West Sample St., South Bend, IN
 Temp.: 58°F Humidity: High / Moderate / Low _____ % Laboratory: Envision Laboratories, Indianapolis, IN

Sample Type: (circle) Permanent Monitoring Well / Temporary Monitoring Well / Geoprobe® SP16 Sampler / Other: _____
 Well / Sampler Material: (circle) PVC / Stainless / Galvanized / Other: _____
 Screen / Casing Inside Diameter: 2 Inches Screened / Open Interval: _____ Ft
 Elevation Top of Casing (TOC): _____ Ft Grade Elevation: _____ Ft
 SWL Depth from TOC (prior to purge): 11.22 Ft SWL Elevation (prior to purge): _____ Ft
 Well / Sampler Depth from TOC: 31.31 Ft TOC to Grade: 2.5 Ft Well Depth from Grade: _____ Ft
 Volume/Foot Casing (d²x0.04079): _____ Gal/Ft Volume of Water Column: _____ Gallons
 Volume of Water Purged: 1.2 Gallons Well Volume Purged: (circle) 1 2 3 4 5 6 7 8 9 10 well volumes

Pump Type: (circle) Bladder Pump / other: low flow Pump Intake Depth: 30 Ft below TOC Field Meter Type(s): Horiba U-53
 Pump Make / Model: Geopump 2 Tubing Type (circle): Teflon® FEP (inner)-HDPE (outer) / Teflon® FEP / LDPE / Other: _____
 Tubing Diameter (circle) 0.19 inch ID x 0.44 inch OD / 0.31 inch ID x 0.44 inch OD / Other: 0.125 inch ID x 0.25 inch OD
 Were Metals Filtered Prior to Preservation?: (circle) Yes No / Yes & No / Metals Not Sampled Water Sample Appearance: Clear / Slightly Turbid / Moderately Turbid / Very Turbid)
 Filtration Method: (Gravity / Vacuum / Pressure) None Filter: (Cartridge / Paper) Type: _____ Size: _____ Pore: _____
 Were Samples Iced after Collection? YES / NO / _____
 (Color: Gray / Brown / Tan /)

TIME	PUMPING RATE (ml/min)	TEMPERATURE 3% (degrees C)	SPECIFIC CONDUCTIVITY 3% (mS/cm)		DISSOLVED OXYGEN 10% (mg/l)		pH 0.1 units (pH units)		TURBIDITY 10% (NTU)		ORP 10 mv (mv)		DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	
1230		22.67	NA	0.245	8.51	NA	7.76	3.20	NA	10	NA	11.22	
1236		19.59		0.569	0.08		7.13	1.16		28		11.22	
1239		19.06		0.553	0.00		7.12	0.00		24		11.22	
1242		18.94	0.16	0.540	0.00	0	7.11	0.01	0	22	2	11.22	
1245		18.84	0.1	0.527	0.00	0	7.12	0.01	0	21	1	11.22	
1248		18.77	0.14	0.522	0.00	0	7.11	0.01	0	20	1	11.22	

COMMENTS: _____

*Indicator parameters have stabilized when 3 consecutive readings are within: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity.

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LOW-FLOW GROUNDWATER SAMPLING DATA SHEET

Sample ID: W-10A Boring or Well ID: _____
 Lab No.: _____ Boring or Well Location: Sample Street Complex
 Sampling Personnel: David Nye Sample Date & Time: 9-26-14 / 1335
 Weather: dry Ground: dry Wind: 0-5 mph Client: UEA
 Precipitation: None Project No.: 5093-12-01:05
 Humidity: High / Moderate / Low / _____ Site Location: 3702 West Sample St., South Bend, IN
 Temp.: 58°F Laboratory: Envision Laboratories, Indianapolis, IN

Sample Type: (circle) Permanent Monitoring Well / Temporary Monitoring Well / Geoprobe® SP16 Sampler / Other: _____
 Well / Sampler Material: (circle) PVC / Stainless / Galvanized / Other: _____
 Screen / Casing Inside Diameter: 2 inches Screened / Open Interval: _____ Ft
 Elevation Top of Casing (TOC): _____ Ft Grade Elevation: _____ Ft
 SWL Depth from TOC (prior to purge): 11.16 Ft SWL Elevation (prior to purge): _____ Ft
 Well / Sampler Depth from TOC: 62.1 Ft TOC to Grade: 2.3 Ft
 Volume/Foot Casing (d²x0.04079): _____ Gall/Ft Volume of Water Column: _____ Gallons
 Volume of Water Purged: 0.8 Gallons Well Volume Purged: (circle) 1 2 3 4 5 6 7 8 9 10 well volumes

Pump Type: (circle) Bladder Pump / other: low flow Pump Intake Depth: 60 Ft below TOC Field Meter Type(s): Horiba U-53
 Pump Make / Model: Geopump 2 Tubing Type (circle): Teflon® FEP (inner)-HDPE (outer) / Teflon® FEP / LDPE / Other: _____
 Tubing Diameter (circle) 0.19 inch ID x 0.44 inch OD / 0.31 inch ID x 0.25 inch OD / 0.44 inch OD / Other: 0.125 inch ID x 0.25 inch OD
 Were Metals Filtered Prior to Preservation?: (circle) Yes / No / Yes & No / Metals Not Sampled Water Sample Appearance: Clear / Slightly Turbid / Moderately Turbid / Very Turbid /
 Filtration Method: (Gravity / Vacuum / Pressure) None (Color: Gray / Brown / Tan /)
 Filter: (Cartridge / Paper) Type: _____ Pore: _____ Size: _____ Were Samples Iced after Collection? YES / NO /

TIME	TEMPERATURE 3% (degrees C)	SPECIFIC CONDUCTIVITY 3% (mS/cm)		DISSOLVED OXYGEN 10% (mg/l)		pH 0.1 units (pH units)		TURBIDITY 10% (NTU)		ORP 10 mv (mv)		PUMPING RATE (ml/min)	DEPTH TO WATER (ft below TOC)
		READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1310	21.28	0.383	NA	9.35	NA	7.65	NA	6.77	35	NA	120	11.16	
1316	20.69	1.19		0.53		7.09		0.76	-82		122	11.16	
1319	20.34	1.19		0.34		7.08		0.12	-94		112	11.16	
1322	20.26	1.20		0.00		7.08		0.05	-99		108	11.16	
1325	20.12	0.7	0	0.00	0	7.07	0.01	0.04	-103	4	106	11.16	
1328	19.90	1.1	0.8	0.00	0	7.07	0	0.04	-106	3	116	11.16	
1331	19.74	0.8	0	0.00	0	7.07	0	0.04	-108	2	128	11.16	

COMMENTS:

*Indicator parameters have stabilized when 3 consecutive readings are within: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity.

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