



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

**1st Quarter 2014
January 1 – March 31, 2014**

April 24, 2014

"Your dependable partner for environmental compliance"

3410 Mishawaka Ave.

South Bend, Indiana 46615

Phone 574.289.1191

Fax 574.289.7480

This report is prepared by:

Heartland Environmental Associates, Inc.
3410 Mishawaka Avenue, South Bend, IN 46615
574-289-1191 Fax: 574-289-7480

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.

4/24/2014
Date

Heartland Environmental Associates, Inc.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
1.0 SITE HISTORY.....	2
2.0 SITE WORK COMPLETED TO DATE	3
3.0 QUARTERLY RESULTS.....	5
3.1 Groundwater Elevation and Flow Direction.....	5
3.2 Groundwater Sampling Results	6
4.0 DISCUSSION.....	8
5.0 REFERENCES	9
6.0 LIMITATIONS.....	11

APPENDICES

APPENDIX A	Figures
APPENDIX B	Historic Groundwater Elevation Data Tables
APPENDIX C	Historic Analytical Data Summary Tables
APPENDIX D	Laboratory Certificates of Analysis and Chain of Custody
APPENDIX E	Sampling Data Sheets

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.

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 November 25-27, 2013. Samples from all wells were collected using dedicated bailers. Samples were analyzed for Volatile Organic Compounds (VOCs) using U.S. EPA Method 8260.

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

One on-site monitoring well, W-10B, exhibited a concentration of trichloroethene (TCE) that exceeded the RCG Screening Levels. One off-site monitoring well, W-101A, exhibited a vinyl chloride concentration that exceeded the RCG Screening Level for groundwater.

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 March 24-26, 2013. 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	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

Water levels in shallow wells with screen bottom elevations of 682.5 to 703 feet are shown in Figure 2. Groundwater flow in the shallow wells is southwest to northeast. Water levels in deep wells with screen bottoms of 654 to 682.5 feet are shown in Figure 3. Groundwater flow in the deeper wells is from east to west.

3.2 Groundwater Sampling Results

On March 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 four 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	3/24/14	< 5	< 5	< 5	< 10	< 5	< 5	< 5	< 5	< 2	< 5	< 5	< 5	< 5
W-9	3/24/14	< 5	< 5	< 5	< 10	< 5	< 5	< 5	< 5	< 2	< 5	< 5	< 5	< 5
W-7	3/24/14	< 5	< 5	< 5	< 10	< 5	< 5	< 5	< 5	< 2	< 5	< 5	< 5	< 5
W-8	3/24/14	< 5	< 5	< 5	< 10	< 5	< 5	< 5	< 5	< 2	< 5	< 5	< 5	< 5
S-3A	3/24/14	< 5	< 5	< 5	< 10	< 5	< 5	< 5	< 5	< 2	< 5	< 5	< 5	< 5
S-3	3/24/14	< 5	< 5	< 5	< 10	< 5	< 5	< 5	< 5	< 2	< 5	< 5	< 5	< 5
W-12	3/25/14	< 5	< 5	< 5	< 10	5.35	< 5	< 5	< 5	< 2	< 5	< 5	< 5	< 5
W-1	3/25/14	< 5	< 5	< 5	< 10	< 5	< 5	< 5	< 5	< 2	< 5	< 5	< 5	< 5
W-3	3/25/14	< 5	< 5	< 5	< 10	< 5	< 5	< 5	< 5	< 2	< 5	< 5	< 5	< 5
W-100A	3/25/14	< 5	< 5	< 5	< 10	< 5	< 5	< 5	< 5	< 2	< 5	< 5	< 5	< 5
W-100B	3/25/14	< 5	< 5	< 5	< 10	< 5	< 5	< 5	< 5	< 2	< 5	< 5	< 5	< 5
W-101A	3/25/14	< 5	< 5	< 5	< 10	< 5	< 5	< 5	< 5	5.54	< 5	< 5	< 5	< 5
W-101B	3/25/14	< 5	< 5	< 5	< 10	< 5	< 5	< 5	< 5	< 2	< 5	< 5	< 5	< 5
W-16	3/25/14	< 5	< 5	< 5	< 10	< 5	< 5	< 5	< 5	< 2	< 5	< 5	< 5	< 5
W-15B	3/26/14	< 5	< 5	< 5	< 10	< 5	< 5	< 5	< 5	< 2	< 5	< 5	< 5	< 5
W-15A	3/26/14	< 5	< 5	< 5	< 10	10	< 5	< 5	< 5	< 2	< 5	< 5	< 5	< 5
W-14A	3/26/14	< 5	< 5	< 5	< 10	< 5	< 5	< 5	< 5	< 2	< 5	< 5	< 5	< 5
W-14B	3/26/14	< 5	< 5	< 5	< 10	< 5	< 5	< 5	< 5	< 2	< 5	< 5	< 5	< 5
W-10B	3/26/14	< 5	< 5	< 5	< 10	< 5	< 5	< 5	5.07	< 2	32.1	5.34	< 5	< 5
W-10A	3/26/14	< 5	< 5	< 5	< 10	< 5	< 5	< 5	< 5	< 2	< 5	< 5	< 5	< 5
W-13	3/26/14	< 5	< 5	< 5	< 10	< 5	< 5	< 5	< 5	< 2	< 5	< 5	< 5	< 5
TRIP BLANK	3/24/14	< 5	< 5	< 5	< 10	< 5	< 5	< 5	< 5	< 2	< 5	< 5	< 5	-

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
 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.

4.0 DISCUSSION

Groundwater levels were measured March 24 – 26, 2014. Groundwater flow in the shallow wells (screen bottom elevations of 682.5 to 703 feet) is southwest to northeast. Groundwater flow in deep wells (screen bottom elevations of 654 to 682.5 feet) is from east to west. Water level contours are shown on Figures 2 and 3, Appendix A. Water levels have increased an average of 1.35 feet since the previous measurement in November 2013.

Low-flow sampling had been performed at the site to reduce the 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.

One monitoring well, W-10B, exhibited a concentration of trichloroethene (TCE) that exceeded the RCG Screening Levels. Monitoring well W-10B is an on-site well, located on the north side of the main building. W-10B has previously exhibited TCE concentrations that exceed the RCG Screening Level for groundwater.

An off-site monitoring well, W-101A, exhibited a vinyl chloride concentration that exceeded the RCG Screening Level for groundwater. W-101B is located east of the subject site on the Jupiter Aluminum Products property.

Monitoring wells that have previously exhibited concentrations of COCs that exceed the RCG Screening Levels include the on-site well W-12, and the off-site wells, W-100, and W-101B. However, no concentrations exceeding the RCG Screening Levels were found in these wells in the current quarterly samples.

5.0 REFERENCES

Canonie Engineers, Inc., Environmental Assessment. Torrington's Bantam Bearing Division Plant. October 1984, *in* Capsule Environmental Engineering, Inc. Summary Report of Previous Assessment Activities, Former Torrington Heavy Bearings Facility, South Bend, Indiana, September 10, 1992, Capsule Environmental Engineering, 1970 Oakcrest Ave, Suite 215, St. Paul, MN 55113

Torrington Company, Environmental Assessment, Torrington Company Heavy Bearings Facility, South Bend, Indiana, March 11, 1985, *in* Capsule Environmental Engineering, Inc. Summary Report of Previous Assessment Activities, Former Torrington Heavy Bearings Facility, South Bend, Indiana, September 10, 1992, Capsule Environmental Engineering, 1970 Oakcrest Ave, Suite 215, St. Paul, MN 55113

Harza Environmental Services, Inc., Environmental Assessment, The Torrington Company. June 1986, *in* Capsule Environmental Engineering, Inc. Summary Report of Previous Assessment Activities, Former Torrington Heavy Bearings Facility, South Bend, Indiana, September 10, 1992, Capsule Environmental Engineering, 1970 Oakcrest Ave, Suite 215, St. Paul, MN 55113

EIS Environmental Engineers Site Walk-Through Report, November 14, 1988

Best Environmental, Inc., Final Report Environmental Assessment, The Torrington Company Bantam Bearing Division Plant, South Bend, Indiana, October 1990, *in* Capsule Environmental Engineering, Inc. Summary Report of Previous Assessment Activities, Former Torrington Heavy Bearings Facility, South Bend, Indiana, September 10, 1992, Capsule Environmental Engineering, 1970 Oakcrest Ave, Suite 215, St. Paul, MN 55113

Best Environmental, Inc., Subsurface Environmental Assessment and Remedial Action Plan Torrington Site, April 1991, *in* Capsule Environmental Engineering, Inc. Summary Report of Previous Assessment Activities, Former Torrington Heavy Bearings Facility, South Bend, Indiana, September 10, 1992, Capsule Environmental Engineering, 1970 Oakcrest Ave, Suite 215, St. Paul, MN 55113

Best Environmental, Inc., Interior Pit Cleaning Project, Torrington Bearing Plant. September 1991, P.O. Box 576, Channahon, IL 60410

Capsule Environmental Engineering, Inc., Torrington Investigation Report. December 11, 1991, Capsule Environmental Engineering, 1970 Oakcrest Ave, Suite 215, St. Paul, MN 55113

Law Environmental, Inc., Summary Report of Previous Assessment Activities, Former Torrington Heavy Bearings Facility, South Bend, Indiana, September 10, 1992, *in* Capsule Environmental Engineering, Inc. Summary Report of Previous Assessment Activities, Former Torrington Heavy Bearings Facility, South Bend, Indiana, September 10, 1992, Capsule Environmental Engineering, 1970 Oakcrest Ave, Suite 215, St. Paul, MN 55113

Capsule Environmental Engineering, Inc., Phase II, Volumes 1 & 2, Torrington Investigation Report, The Torrington Company. May 26, 1992, Capsule Environmental Engineering, 1970 Oakcrest Ave, Suite 215, St. Paul, MN 55113

Capsule Environmental Engineering, Inc. Soil Gas Study Report, July 30, 1992, Capsule Environmental Engineering, 1970 Oakcrest Ave, Suite 215, St. Paul, MN 55113

Law Environmental, Inc., Remedial Investigation Work Plan, The Torrington Company, September 21, 1992, *for* Capsule Environmental Engineering, 1970 Oakcrest Ave, Suite 215, St. Paul, MN 55113

Law Engineering, Inc., Report of Soil Gas Investigation, Former Torrington Heavy Bearings Facility. February 12, 1993.

Capsule Environmental Engineering, Inc., Soil Vapor Extraction/Air Sparging Documentation Report & Conceptual Design, The Torrington Company. June 21, 1994, Capsule Environmental Engineering, 1970 Oakcrest Ave, Suite 215, St. Paul, MN 55113

Capsule Environmental Engineering, Inc., Corrective Action Work Plan, Revision 1, Torrington Company Former Heavy Bearings Facility. February 27, 1995, Capsule Environmental Engineering, 1970 Oakcrest Ave, Suite 215, St. Paul, MN 55113

Capsule Environmental Engineering, Inc., Operation and Maintenance Manual, In Situ Volatilization/Air Sparging System, Volumes 1 & 2, The Torrington Company. July 1996, Capsule Environmental Engineering, 1970 Oakcrest Ave, Suite 215, St. Paul, MN 55113

Capsule Environmental Engineering, Inc., 1997 Annual System Effectiveness Report, Torrington Company Former Heavy Bearings Facility. March 5, 1998, Capsule Environmental Engineering, 1970 Oakcrest Ave, Suite 215, St. Paul, MN 55113, *Report not available.*

Capsule Environmental Engineering, Inc., 1998 Annual System Effectiveness Report, Torrington Company Former Heavy Bearings Facility. February 16, 1999, Capsule Environmental Engineering, 1970 Oakcrest Ave, Suite 215, St. Paul, MN 55113

Quality Environmental Professionals, Inc. Document Review and Findings Report, September 27, 2010

Heartland Environmental Associates, Inc., Limited Phase II Environmental Site Assessment, June 19, 2011, Heartland Environmental Assoc., Inc., 3410 Mishawaka Avenue, South Bend, IN 46615

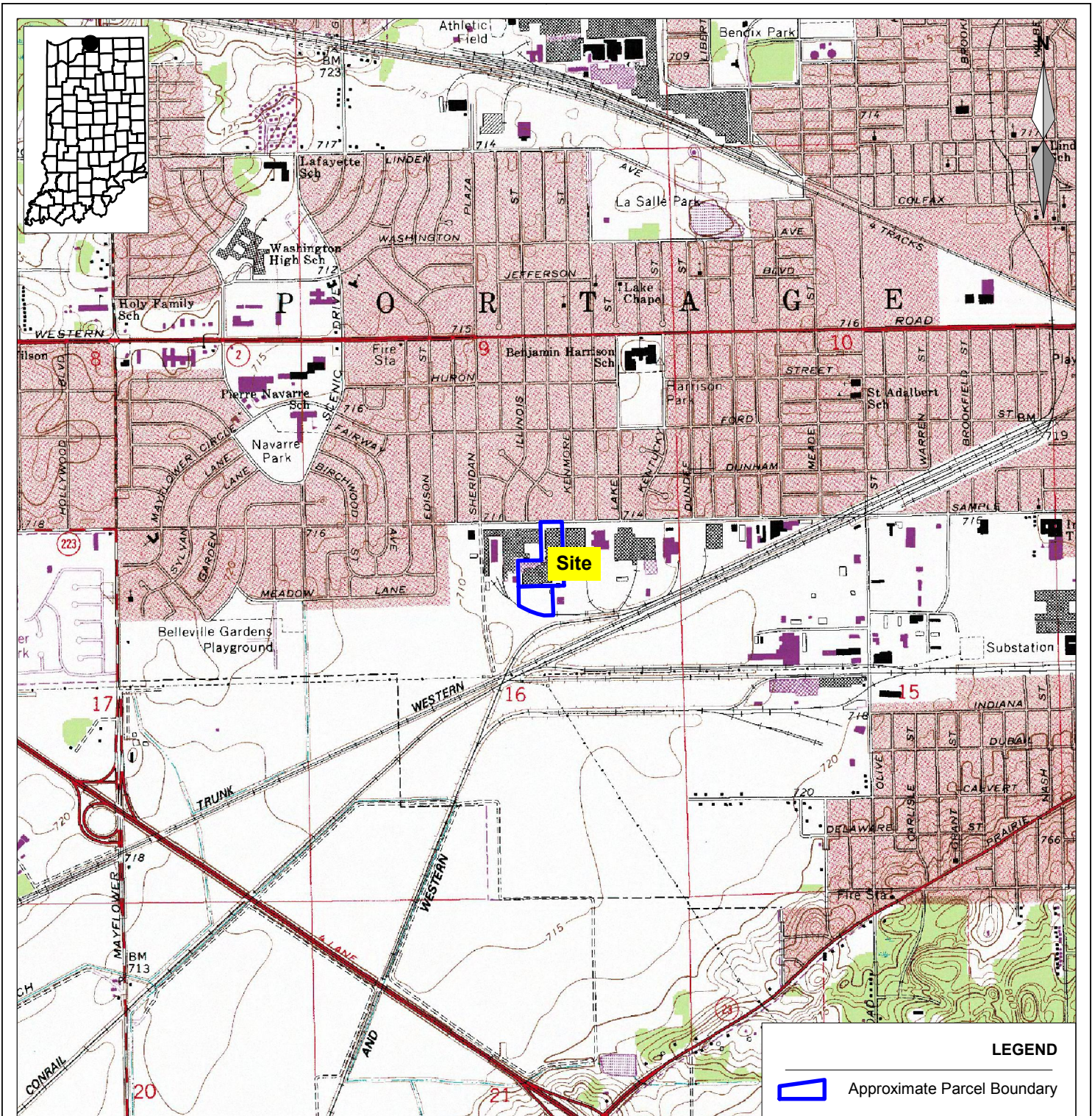
Heartland Environmental Associates, Inc., Remediation Work Plan, Sample Street Business Complex 3702 West Sample Street, South Bend, Saint Joseph County, Indiana 46619, VRP ID # 6120801, August 19, 2013, Heartland Environmental Assoc., Inc., 3410 Mishawaka Avenue, South Bend, IN 46615

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



Heartland Environmental Associates, Inc.
 3410 Mishawaka Ave.
 South Bend, IN 46615

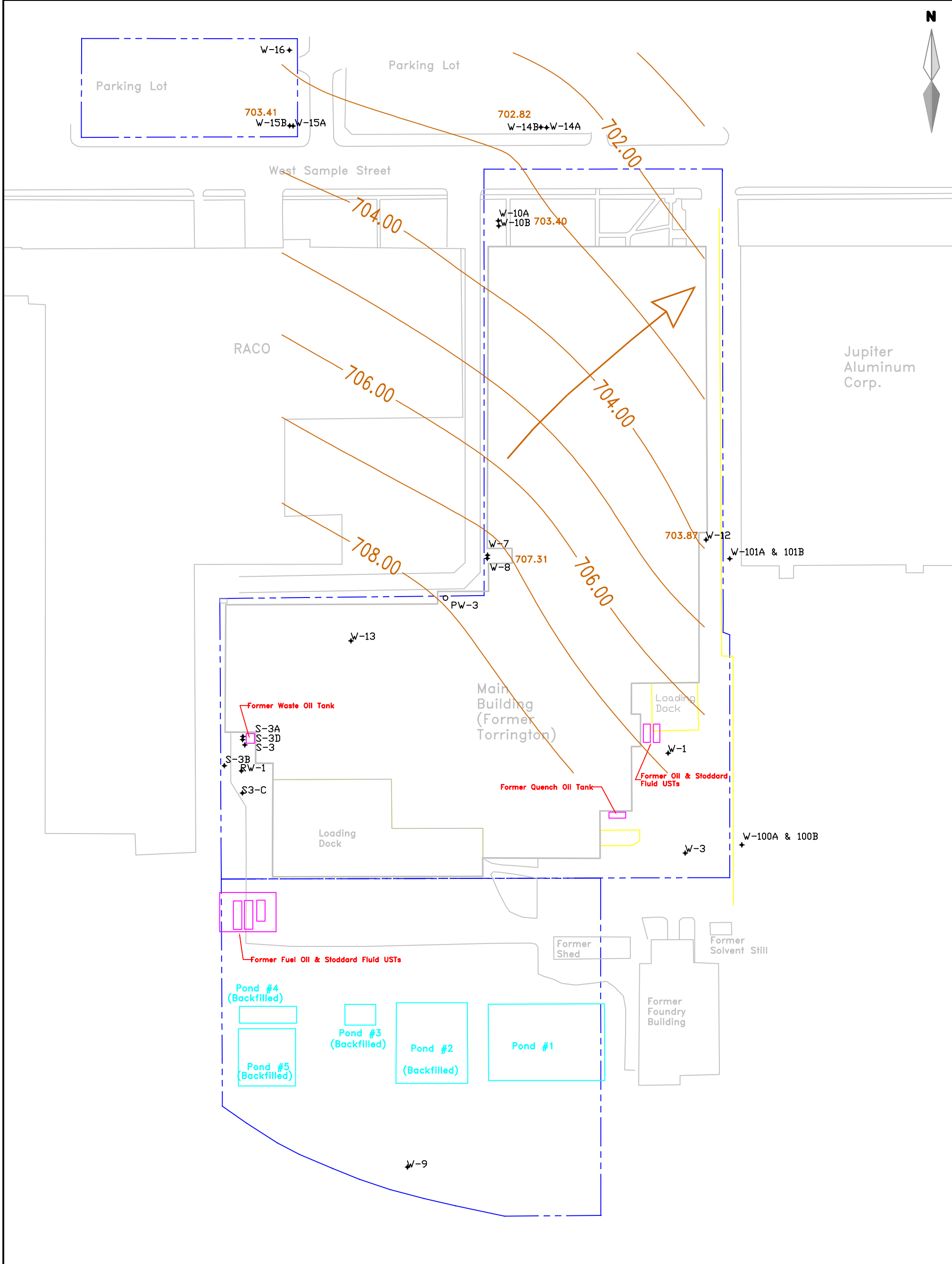
Figure 1
 Topographic Map
 Sample Street Business Complex
 3702 West Sample Street
 South Bend, Indiana 46619

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

Date:
 4/5/2013

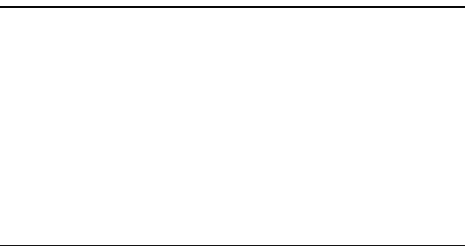
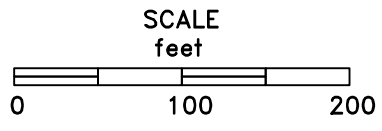
Drawn by:
 JRB

Scale:
 1 in : 2000.00 ft



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

Groundwater Surface in wells with screen bottom elevations between elevations of 682.5 to 703 feet.



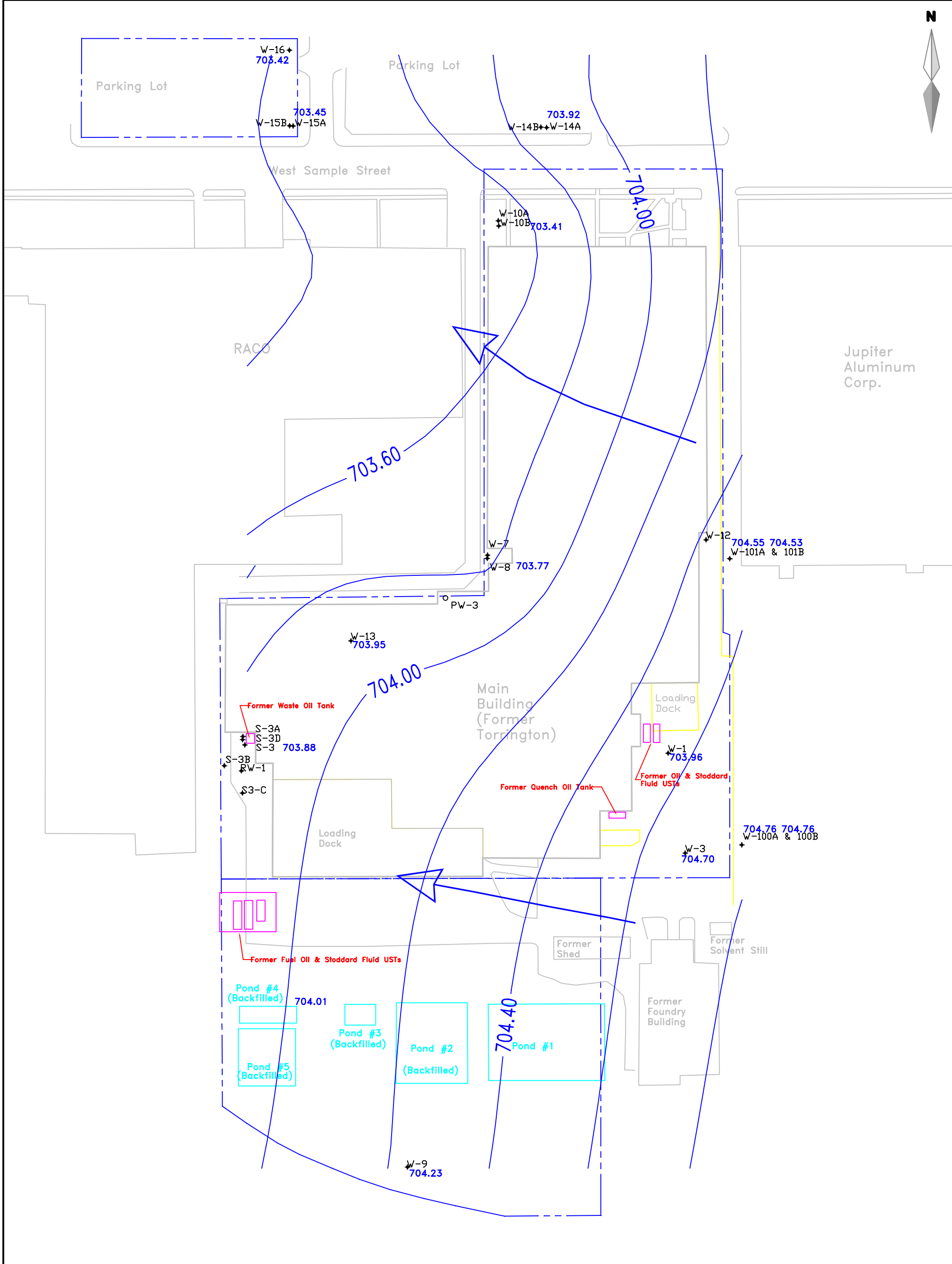
Heartland Environmental Associates, Inc.
 3410 Mishawaka Avenue
 South Bend, Indiana 46615
 888.289.1191

Figure 2
Potentiometric Surface
Shallow Wells
Measured 3/24 - 3/26/2013
Sample Street Business Complex
3702 West Sample Street
South Bend, Indiana

Client:
Urban Enterprise
Association
of South Bend, Inc.

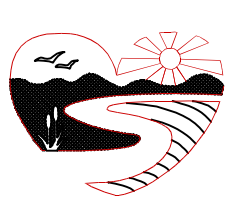
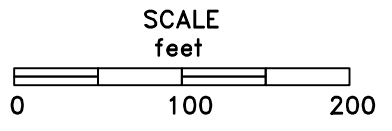
Date: 4/24/2014

Drawn by: JRB



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

Groundwater Surface in wells with screen bottom elevations between elevations of 654 to 683 feet.



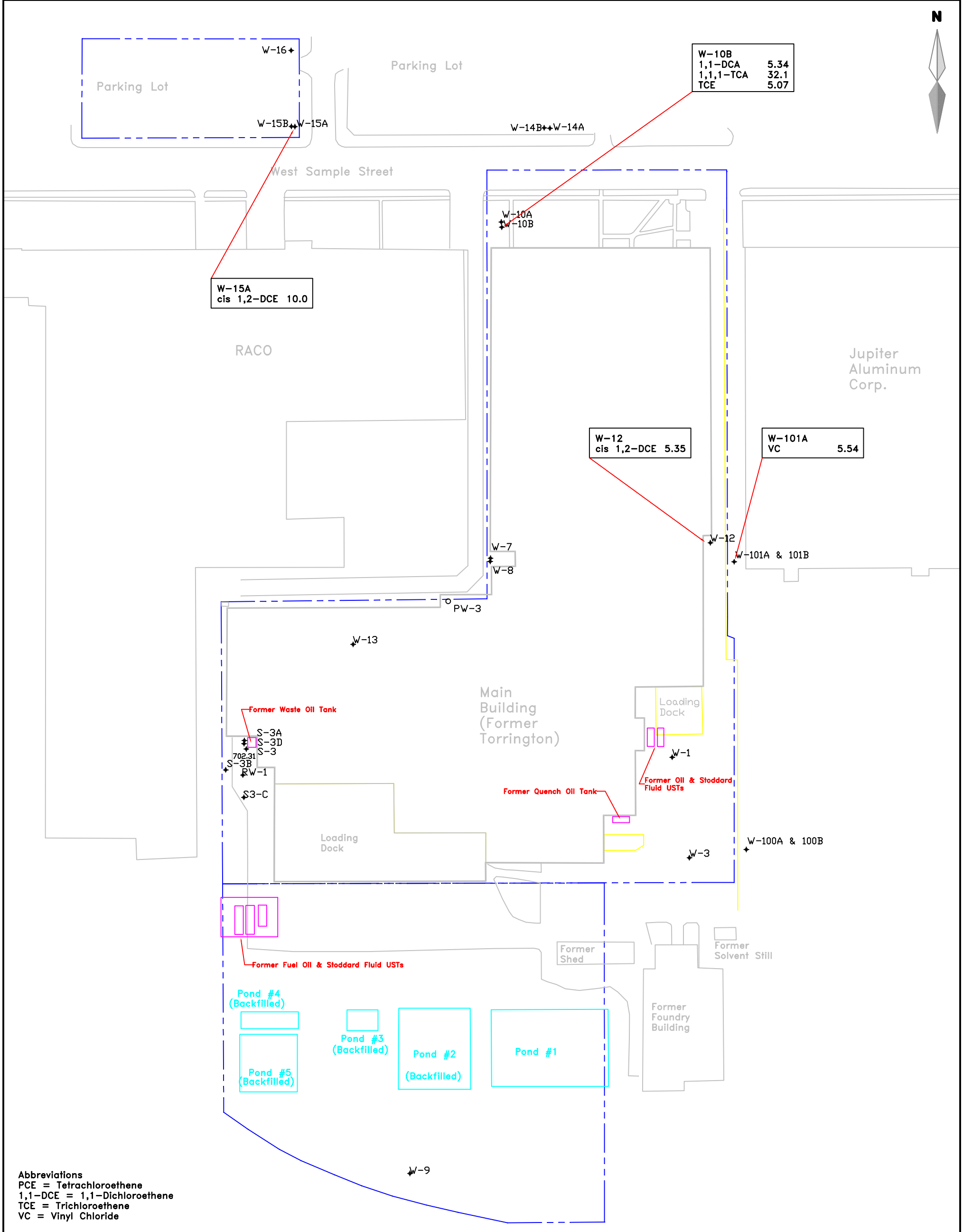
Heartland Environmental Associates, Inc.
3410 Mishawaka Avenue
South Bend, Indiana 46615
888.289.1191

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

Client:
Urban Enterprise
Association
of South Bend, Inc.

Date: 4/24/2014

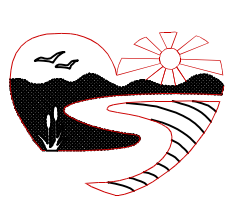
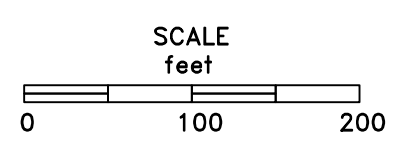
Drawn by: JRB



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

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



Heartland Environmental Associates, Inc.
3410 Mishawaka Avenue
South Bend, Indiana 46615
888.289.1191

Figure 4
Groundwater Analytical Results
Collected 3/24 - 3/26/2014

Sample Street Business Complex
3702 West Sample Street
South Bend, Indiana

Client:
Urban Enterprise Association
of South Bend, Inc.

Date: 4/23/2014

Drawn by: JRB

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

APPENDIX C

Historic Analytical Data Summary Tables

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	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	24	7	15	0.05	600	5	5	87	75	4900	12,000	5	80	5	21000	70	700	390	5	NA	1.4	780	530	5	1,000	100	5	1,100	2.00	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		<10		ND
W-7	Oct-84	72	<10	NA	97	28				ND					NA		ND		ND	NA			ND	510				ND	<10	<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		<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		<0.5		ND
S-3	Apr-86	510	NA	NA	ND	<50				1000					ND		NA		<100	NA			ND	NA				ND	ND	220	ND	ND	ND		
S-3	Apr-86	580	NA	NA	ND	<50				1200					ND		NA		<100	NA			ND	NA				ND	ND	260	ND	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	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	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				NA				ND	ND	ND	ND		ND		
W-2	1/29/1991	ND			ND	ND										ND	NA	ND	ND	ND				NA				ND	ND	ND	ND		ND		
W-3	1/29/1991	ND			ND	ND										ND	NA	ND	ND	ND				NA				ND	ND	ND	ND		ND		
W-4	1/29/1991	110			87	ND									ND	NA	ND	ND	ND	ND				NA				ND	ND	ND	ND		ND		
W-5	1/29/1991	ND			ND	ND									ND	NA	ND	ND	ND	ND				NA				ND	ND	ND	ND		ND		
W-7	1/30/1991	7			10	10									ND	NA	ND	ND	62					NA				ND	ND	ND	ND		ND		
W-8	1/30/1991	ND			ND	ND									ND	NA	ND	ND	ND	ND				NA				ND	ND	ND	ND		ND		
W-9	2/7/1991	ND			ND	ND									ND	NA	ND	ND	ND	ND				NA				ND	ND	ND	ND		ND		
W-10A	2/7/1991	ND			ND	ND									ND	NA	ND	ND	14					NA				ND	ND	ND	ND		ND		
W-10B	2/7/1991	130			29	12									ND	NA	ND	ND	7					NA				ND	ND	ND	19		ND		
W-11A	2/7/1991	ND			ND	ND									ND	NA	ND	ND	38					NA				ND	ND	ND	ND		ND		
W-11B	2/7/1991	ND			ND	ND									ND	NA	ND	ND	28					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					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	<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	<5	<100	<100	<5	<5	<5	<10																

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	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	24	7	15	0.05	600	5	5	87	75	4900	12,000	5	80	5	21000	70	700	390	5	NA	1.4	780	530	5	1,000	100	5	1,100	2.00	10,000	
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			
W-2	3/4/1992	ND			ND	ND											NA	ND					NA					ND	ND	ND		ND			
W-3	3/4/1992	ND			ND	ND											NA	ND					NA					ND	ND	BEQL		ND			
W-4	3/4/1992	81			82	7											NA	7					NA				ND	ND	ND		ND				
W-5	3/4/1992	ND			BEQL	ND											NA	ND					NA				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				
W-8	3/4/1992	ND			BEQL	ND											NA	ND					NA				ND	ND	ND		ND				
W-9	3/4/1992	ND			ND	ND											NA	ND					NA				ND	ND	ND		ND				
W-10A	3/4/1992	ND			ND	ND											NA	ND					NA				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				
W-11B	3/4/1992	ND			ND	5											NA	ND					NA				ND	ND	ND		ND				
W-12	3/4/1992	ND			ND	14											NA	ND					NA				ND	ND	ND		5				
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				
W-14A DUP	3/4/1992	ND			BEQL	ND											NA	ND					NA				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				
S-3	May-94	1000	ND	ND	1200	ND				ND				ND			ND	120	BEQL			ND	NA				ND	ND	ND		ND				
S3-A	May-94	17000	ND	ND	13000	610				ND				ND			ND	1200	<125			ND	NA				ND	ND	<125		ND				
S3-D	May-94	130	ND	ND	48	6.1				ND				ND			ND	2.6	BEQL			ND	NA				ND	ND	ND		BEQL				
W-1	Jun-94	ND	ND	ND	ND	ND				ND				ND			ND	ND	ND	ND			ND	NA			ND	ND	ND		ND				
W-2	Jun-94	ND	ND	ND	ND	ND				3.3				ND			NA	ND	ND	ND			ND	NA			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				
W-5	Jun-94	ND	ND	ND	BEQL	ND				BEQL				ND			ND	ND	ND	ND			ND	NA			ND	ND	ND		BEQL				
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				
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				
W-10A	Jun-94	130	ND	ND	BEQL	ND				ND				<10			ND	ND	4.1			ND	NA				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				
W-11A	Jun-94	ND	ND	ND	BEQL	ND				ND				ND			NA	ND	BEQL			ND	NA				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				
W-12	Jun-94	18	ND	52	29	46				310				ND			ND	16	16			ND	NA				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				
W-14A DUP	Jun-94	29	ND	ND	52	40				ND				ND			ND	6.3	3.8			ND	NA				ND	ND	BEQL		BEQL				
W-15A	Jun-94	ND	ND	ND	ND	ND				ND				ND			ND	ND	ND			ND	NA				ND	ND	ND		ND				
W-15B	Jun-94	ND	ND	ND	ND	ND				ND				ND			ND	ND	ND			ND	NA				ND	ND	ND		ND				
W-16	Jun-94	ND	ND	ND	BEQL	ND				ND				ND			ND	ND	ND			ND	NA				ND	ND	ND		BEQL				
S3-B	Jan-95	ND	ND	ND	490	ND				ND				ND			ND	830	2000			ND	NA				ND	ND	<125		ND				

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	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	24	7	15	0.05	600	5	5	87	75	4900	12,000	5	80	5	21000	70	700	390	5	NA	1.4	780	530	5	1,000	100	5	1,100	2.00	10,000	
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		
W-3	Dec-96	<5	<5	<5	<5	<5				<5					<10		<5		<5	<5			<5	NA				<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		
S-3	Dec-96	960	<125	<125	1500	<125				<125					<250		<125		400	<125			<125	NA				<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		
S3-A	Dec-96	970	<125	<125	1300	<125				<125					<250		<125		470	2200			<125	NA				<125	<125	ND	<125		<125		
S3-B	Dec-96	<125	<125	<125	1000	<125				<125					<250		<125		320	6			<125	NA				<125	<125	<5	<125		<125		
S3-C	Dec-96	14	<5	<5	230	<5				<5					61		<5		81				<5	NA				<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		
W-7	Dec-96	36	<5	<5	30	<5				<5					<10		<5		<5	<5			<5	NA				<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		
W-9	Dec-96	ND	<5	<5	<5	<5				<5					ND		<5		<5	<5			<5	NA				<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		
W-10B	Dec-96	170	<5	<5	23	23				<5					<10		<5		6	<5			<5	NA				<5	<5	<5	11		<5		
W-11A	Dec-96	<5	<5	<5	<5	<5				<5					<10		<5		<5	<5			<5	NA				<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		
W-12	Dec-96	<5	<5	<5	<5	74				<5					<10		<5		<5	<5			7	NA				<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		
W-14A	Dec-96	<5	<5	<5	<5	<5				<5					<10		<5		<5	<5			<5	NA				<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		
W-15A	Dec-96	<5	<5	<5	<5	<5				<5					<10		<5		<5	18			<5	NA				<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		
W-16	Dec-96	<5	<5	<5	<5	<5				<5					<10		<5		<5	<5			<5	NA				<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		
EV-8	Dec-96	10	<5	<5	180	<5				<5				<10	<10		<5		39	<5			<5	NA				<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		
EV-10	Dec-96	<5	<5	<5	9	<5				<5					<10		<5		<5	<5			<5	NA				<5	<5	<5	<5		<5		
EV-13	Dec-96	15	<5	<5	7	<5				<5					<10		<5		<5	28			<5	NA				21	<5	<5	13		<5		
S-3	Mar-97	8900	<5	<5	3700	49				<5				14	<10		<5		210	7			<5	NA				<5	<5	<5	8		<5		
S-3(DL)	Mar-97	12000	<50	<50	4600	<50				<50				<100	<100		<50		290	<50			<50	NA				<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		
EV-8	Mar-97	<5	<5	<5	34	6				<5				<10	<10		<5		11	<5			<5	NA				<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		
W-13	Mar-97	<5	<5	<5	7	<5				<5					<10		<5		<5	<5			<5	NA				<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		
EV-13	Mar-97	12	<5	<5	6	<5				<5					<10		<5		<5	21			<5	NA				27	<5	<5	18		<5		
S-3	Jun-97	11000	<500	<500	4400	<500				<500				<1000	<1000		<500		280	<500			<500	NA				<500	<500	<500	<500		<500		
W-7	Jun-97	23	<5	<5	61	<5				<5					<10	<10		<5	<5	12			<5	NA				<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		
W-10B	Jun-97	170	<5	<5	35	18				<5					<10	<10		<5	8	<5			<5	NA				<5	<5	<5	17		<5		
W-13	Jun-97	<5	<5	<5	10	<5				<5					<10	<10		<5	<5	<5			<5	NA				<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	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	24	7	15	0.05	600	5	5	87	75	4900	12,000	5	80	5	21000	70	700	390	5	NA	1.4	780	530	5	1,000	100	5	1,100	2.00	10,000	
W-14A	11/27/13	<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-14B	11/27/13	<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-10B	11/27/13	13.5	<0.66	<5	<5	<5	<5	<1	<5	<5	<5	<5	<5	<10	<100	<5	<5	<5	<5	7.91	<5	<5	<5	NA	<1.4	<5	<5	<5	<5	<5	<5	5.18	<5	<2	<10
W-10A	11/27/13	<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-13	11/27/13	<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	
TRIP BLANK	11/25/13	<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-5	3/24/14	<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-9	3/24/14	<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	3/24/14	<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	3/24/14	<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	
S-3A	3/24/14	<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	
S-3	3/24/14	<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-12	3/25/14	<5	<0.66	<5	<5	<5	<5	<1	<5	<5	<5	<5	<5	<10	<100	<5	<5	<5	<5	5.35	<5	<5	<5	NA	<1.4	<5	<5	<5	<5	<5	<5	<5	<2	<10	
W-1	3/25/14	<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	3/25/14	<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-100A	3/25/14	<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-100B	3/25/14	<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-101A	3/25/14	<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	5.54	<10	
W-101B	3/25/14	<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-16	3/25/14	<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-15B	3/26/14	<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-15A	3/26/14	<5	<0.66	<5	<5	<5	<5	<1	<5	<5	<5	<5	<5	<10	<100	<5	<5	<5	<5	10	<5	<5	<5	NA	<1.4	<5	<5	<5	<5	<5	<5	<5	<2	<10	
W-14A	3/26/14	<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-14B	3/26/14	<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-10B	3/26/14	32.1	<0.66	<5	5.34	<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	5.07	<5	<2	<10
W-10A	3/26/14	<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-13	3/26/14	<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	
TRIP BLANK	3/24/14	<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	

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
 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.

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	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 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 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-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
<p><i>Notes:</i> 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 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</p>																

APPENDIX D

Laboratory Certificates of Analysis and Chain of Custody



ENVision Laboratories, Inc.
1439 Sadlier Circle West Drive
Indianapolis, IN 46239
Tel: 317.351.8632
Fax: 317.351.8639
www.envisionlaboratories.com

Mr. Nivas Vijay
Heartland Environmental
3410 Mishawaka Ave.
South Bend, IN 46615

April 7, 2014

ENVision Project Number: 2014-760
Client Project Name: UEA Sample Street

Dear Mr. Vijay,

Please find the attached analytical report for the samples received March 28, 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.

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:003





Analytical Report

Client Name: HEARTLAND ENVIRONMENTAL

Project ID: UEA SAMPLE STREET

Client Project Manager: NIVAS VIJAY

ENVision Project Number: 2014-760

Analytical Method: EPA 8260

Prep Method: EPA 5030B

Analytical Batch: 040314VW

Client Sample ID: W-5

Sample Collection Date/Time: 3/24/14 11:00

Envision Sample Number: 14-6099

Sample Received Date/Time: 3/28/14 10:00

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)	98%		
1,2-Dichloroethane-d4 (surrogate)	80%		
Toluene-d8 (surrogate)	96%		
4-bromofluorobenzene (surrogate)	94%		
Analysis Date/Time:	04-03-14/18:20		
Analyst Initials	tjg		



Analytical Report

Client Name: HEARTLAND ENVIRONMENTAL

Project ID: UEA SAMPLE STREET

Client Project Manager: NIVAS VIJAY

ENVision Project Number: 2014-760

Analytical Method: EPA 8260

Prep Method: EPA 5030B

Analytical Batch: 040314VW

Client Sample ID: W-9

Sample Collection Date/Time: 3/24/14 12:35

Envision Sample Number: 14-6100

Sample Received Date/Time: 3/28/14 10:00

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)	97%		
1,2-Dichloroethane-d4 (surrogate)	81%		
Toluene-d8 (surrogate)	96%		
4-bromofluorobenzene (surrogate)	95%		
Analysis Date/Time:	04-03-14/18:40		
Analyst Initials	tjg		



Analytical Report

Client Name: HEARTLAND ENVIRONMENTAL

Project ID: UEA SAMPLE STREET

Client Project Manager: NIVAS VIJAY

ENVision Project Number: 2014-760

Analytical Method: EPA 8260

Prep Method: EPA 5030B

Analytical Batch: 040314VW

Client Sample ID: W-7

Sample Collection Date/Time: 3/24/14 14:10

Envision Sample Number: 14-6101

Sample Received Date/Time: 3/28/14 10:00

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)	99%		
1,2-Dichloroethane-d4 (surrogate)	82%		
Toluene-d8 (surrogate)	97%		
4-bromofluorobenzene (surrogate)	94%		
Analysis Date/Time:	04-03-14/18:59		
Analyst Initials	tjg		



Analytical Report

Client Name: HEARTLAND ENVIRONMENTAL

Project ID: UEA SAMPLE STREET

Client Project Manager: NIVAS VIJAY

ENVision Project Number: 2014-760

Analytical Method: EPA 8260

Prep Method: EPA 5030B

Analytical Batch: 040314VW

Client Sample ID: W-8

Sample Collection Date/Time: 3/24/14 14:45

Envision Sample Number: 14-6102

Sample Received Date/Time: 3/28/14 10:00

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)	98%		
1,2-Dichloroethane-d4 (surrogate)	80%		
Toluene-d8 (surrogate)	96%		
4-bromofluorobenzene (surrogate)	93%		
Analysis Date/Time:	04-03-14/19:18		
Analyst Initials	tjg		



Analytical Report

Client Name: HEARTLAND ENVIRONMENTAL

Project ID: UEA SAMPLE STREET

Client Project Manager: NIVAS VIJAY

ENVision Project Number: 2014-760

Analytical Method: EPA 8260

Prep Method: EPA 5030B

Analytical Batch: 040314VW

Client Sample ID: S-3A

Sample Collection Date/Time: 3/24/14 16:15

Envision Sample Number: 14-6103

Sample Received Date/Time: 3/28/14 10:00

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)	99%		
1,2-Dichloroethane-d4 (surrogate)	81%		
Toluene-d8 (surrogate)	97%		
4-bromofluorobenzene (surrogate)	94%		
Analysis Date/Time:	04-03-14/19:37		
Analyst Initials	tjg		



Analytical Report

Client Name: HEARTLAND ENVIRONMENTAL

Project ID: UEA SAMPLE STREET

Client Project Manager: NIVAS VIJAY

ENVision Project Number: 2014-760

Analytical Method: EPA 8260

Prep Method: EPA 5030B

Analytical Batch: 040314VW

Client Sample ID: S-3

Sample Collection Date/Time: 3/24/14 17:05

Envision Sample Number: 14-6104

Sample Received Date/Time: 3/28/14 10:00

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)	83%		
Toluene-d8 (surrogate)	96%		
4-bromofluorobenzene (surrogate)	94%		
Analysis Date/Time:	04-03-14/19:57		
Analyst Initials	tjg		



Analytical Report

Client Name: HEARTLAND ENVIRONMENTAL

Project ID: UEA SAMPLE STREET

Client Project Manager: NIVAS VIJAY

ENVision Project Number: 2014-760

Analytical Method: EPA 8260

Prep Method: EPA 5030B

Analytical Batch: 040314VW

Client Sample ID: W-12

Sample Collection Date/Time: 3/25/14 10:05

Envision Sample Number: 14-6105

Sample Received Date/Time: 3/28/14 10:00

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	5.35	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)	98%		
1,2-Dichloroethane-d4 (surrogate)	82%		
Toluene-d8 (surrogate)	96%		
4-bromofluorobenzene (surrogate)	97%		
Analysis Date/Time:	04-03-14/20:16		
Analyst Initials	tjg		



Analytical Report

Client Name: HEARTLAND ENVIRONMENTAL

Project ID: UEA SAMPLE STREET

Client Project Manager: NIVAS VIJAY

ENVision Project Number: 2014-760

Analytical Method: EPA 8260

Prep Method: EPA 5030B

Analytical Batch: 040314VW

Client Sample ID: W-1

Sample Collection Date/Time: 3/25/14 11:20

Envision Sample Number: 14-6106

Sample Received Date/Time: 3/28/14 10:00

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)	99%		
1,2-Dichloroethane-d4 (surrogate)	80%		
Toluene-d8 (surrogate)	97%		
4-bromofluorobenzene (surrogate)	95%		
Analysis Date/Time:	04-03-14/20:35		
Analyst Initials	tjg		



Analytical Report

Client Name: HEARTLAND ENVIRONMENTAL

Project ID: UEA SAMPLE STREET

Client Project Manager: NIVAS VIJAY

ENVision Project Number: 2014-760

Analytical Method: EPA 8260

Prep Method: EPA 5030B

Analytical Batch: 040314VW

Client Sample ID: W-3

Sample Collection Date/Time: 3/25/14 12:20

Envision Sample Number: 14-6107

Sample Received Date/Time: 3/28/14 10:00

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)	99%		
1,2-Dichloroethane-d4 (surrogate)	80%		
Toluene-d8 (surrogate)	95%		
4-bromofluorobenzene (surrogate)	95%		
Analysis Date/Time:	04-03-14/20:54		
Analyst Initials	tjg		



Analytical Report

Client Name: HEARTLAND ENVIRONMENTAL

Project ID: UEA SAMPLE STREET

Client Project Manager: NIVAS VIJAY

ENVision Project Number: 2014-760

Analytical Method: EPA 8260

Prep Method: EPA 5030B

Analytical Batch: 040314VW

Client Sample ID: W-100A

Sample Collection Date/Time: 3/25/14 13:30

Envision Sample Number: 14-6108

Sample Received Date/Time: 3/28/14 10:00

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)	99%		
1,2-Dichloroethane-d4 (surrogate)	80%		
Toluene-d8 (surrogate)	96%		
4-bromofluorobenzene (surrogate)	94%		
Analysis Date/Time:	04-03-14/21:14		
Analyst Initials	tjg		



Analytical Report

Client Name: HEARTLAND ENVIRONMENTAL

Project ID: UEA SAMPLE STREET

Client Project Manager: NIVAS VIJAY

ENVision Project Number: 2014-760

Analytical Method: EPA 8260

Prep Method: EPA 5030B

Analytical Batch: 040314VW

Client Sample ID: W-100B

Sample Collection Date/Time: 3/25/14 14:15

Envision Sample Number: 14-6109

Sample Received Date/Time: 3/28/14 10:00

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)	99%		
1,2-Dichloroethane-d4 (surrogate)	82%		
Toluene-d8 (surrogate)	96%		
4-bromofluorobenzene (surrogate)	94%		
Analysis Date/Time:	04-03-14/21:33		
Analyst Initials	tjg		



Analytical Report

Client Name: HEARTLAND ENVIRONMENTAL

Project ID: UEA SAMPLE STREET

Client Project Manager: NIVAS VIJAY

ENVision Project Number: 2014-760

Analytical Method: EPA 8260

Prep Method: EPA 5030B

Analytical Batch: 040314VW

Client Sample ID: W-101A

Sample Collection Date/Time: 3/25/14 15:30

Envision Sample Number: 14-6110

Sample Received Date/Time: 3/28/14 10:00

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	5.54	2	
Xylene, M&P	< 5	5	
Xylene, Ortho	< 5	5	
Xylene (Total)	< 10	10	
Dibromofluoromethane (surrogate)	99%		
1,2-Dichloroethane-d4 (surrogate)	83%		
Toluene-d8 (surrogate)	97%		
4-bromofluorobenzene (surrogate)	95%		
Analysis Date/Time:	04-03-14/21:52		
Analyst Initials	tjg		



Analytical Report

Client Name: HEARTLAND ENVIRONMENTAL

Project ID: UEA SAMPLE STREET

Client Project Manager: NIVAS VIJAY

ENVision Project Number: 2014-760

Analytical Method: EPA 8260

Prep Method: EPA 5030B

Analytical Batch: 040314VW

Client Sample ID: W-101B

Sample Collection Date/Time: 3/25/14 16:20

Envision Sample Number: 14-6111

Sample Received Date/Time: 3/28/14 10:00

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)	98%		
1,2-Dichloroethane-d4 (surrogate)	82%		
Toluene-d8 (surrogate)	97%		
4-bromofluorobenzene (surrogate)	95%		
Analysis Date/Time:	04-03-14/22:11		
Analyst Initials	tjg		



Analytical Report

Client Name: HEARTLAND ENVIRONMENTAL

Project ID: UEA SAMPLE STREET

Client Project Manager: NIVAS VIJAY

ENVision Project Number: 2014-760

Analytical Method: EPA 8260

Prep Method: EPA 5030B

Analytical Batch: 040314VW

Client Sample ID: W-16

Sample Collection Date/Time: 3/25/14 17:20

Envision Sample Number: 14-6112

Sample Received Date/Time: 3/28/14 10:00

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)	99%		
1,2-Dichloroethane-d4 (surrogate)	82%		
Toluene-d8 (surrogate)	96%		
4-bromofluorobenzene (surrogate)	93%		
Analysis Date/Time:	04-03-14/22:31		
Analyst Initials	tjg		



Analytical Report

Client Name: HEARTLAND ENVIRONMENTAL

Project ID: UEA SAMPLE STREET

Client Project Manager: NIVAS VIJAY

ENVision Project Number: 2014-760

Analytical Method: EPA 8260

Prep Method: EPA 5030B

Analytical Batch: 040314VW

Client Sample ID: W-15B

Sample Collection Date/Time: 3/26/14 10:05

Envision Sample Number: 14-6113

Sample Received Date/Time: 3/28/14 10:00

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)	96%		
1,2-Dichloroethane-d4 (surrogate)	79%		
Toluene-d8 (surrogate)	95%		
4-bromofluorobenzene (surrogate)	95%		
Analysis Date/Time:	04-04-14/00:26		
Analyst Initials	tjg		



Analytical Report

Client Name: HEARTLAND ENVIRONMENTAL

Project ID: UEA SAMPLE STREET

Client Project Manager: NIVAS VIJAY

ENVision Project Number: 2014-760

Analytical Method: EPA 8260

Prep Method: EPA 5030B

Analytical Batch: 040314VW

Client Sample ID: W-15A

Sample Collection Date/Time: 3/26/14 10:50

Envision Sample Number: 14-6114

Sample Received Date/Time: 3/28/14 10:00

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	10.0	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)	98%		
1,2-Dichloroethane-d4 (surrogate)	82%		
Toluene-d8 (surrogate)	98%		
4-bromofluorobenzene (surrogate)	93%		
Analysis Date/Time:	04-04-14/00:45		
Analyst Initials	tjg		



Analytical Report

Client Name: HEARTLAND ENVIRONMENTAL

Project ID: UEA SAMPLE STREET

Client Project Manager: NIVAS VIJAY

ENVision Project Number: 2014-760

Analytical Method: EPA 8260

Prep Method: EPA 5030B

Analytical Batch: 040314VW

Client Sample ID: W-14A

Sample Collection Date/Time: 3/26/14 11:40

Envision Sample Number: 14-6115

Sample Received Date/Time: 3/28/14 10:00

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)	100%		
1,2-Dichloroethane-d4 (surrogate)	81%		
Toluene-d8 (surrogate)	97%		
4-bromofluorobenzene (surrogate)	96%		
Analysis Date/Time:	04-04-14/01:04		
Analyst Initials	tjg		



Analytical Report

Client Name: HEARTLAND ENVIRONMENTAL

Project ID: UEA SAMPLE STREET

Client Project Manager: NIVAS VIJAY

ENVision Project Number: 2014-760

Analytical Method: EPA 8260

Prep Method: EPA 5030B

Analytical Batch: 040314VW

Client Sample ID: W-14B

Sample Collection Date/Time: 3/26/14 12:20

Envision Sample Number: 14-6116

Sample Received Date/Time: 3/28/14 10:00

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)	99%		
1,2-Dichloroethane-d4 (surrogate)	81%		
Toluene-d8 (surrogate)	95%		
4-bromofluorobenzene (surrogate)	94%		
Analysis Date/Time:	04-04-14/01:24		
Analyst Initials	tjg		



Analytical Report

Client Name: HEARTLAND ENVIRONMENTAL

Project ID: UEA SAMPLE STREET

Client Project Manager: NIVAS VIJAY

ENVision Project Number: 2014-760

Analytical Method: EPA 8260

Prep Method: EPA 5030B

Analytical Batch: 040314VW

Client Sample ID: W-10B

Sample Collection Date/Time: 3/26/14 13:40

Envision Sample Number: 14-6117

Sample Received Date/Time: 3/28/14 10:00

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	5.34	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	32.1	5	
1,1,2-Trichloroethane	< 5	5	
Trichloroethene	5.07	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)	82%		
Toluene-d8 (surrogate)	100%		
4-bromofluorobenzene (surrogate)	95%		
Analysis Date/Time:	04-04-14/01:43		
Analyst Initials	tjg		



Analytical Report

Client Name: HEARTLAND ENVIRONMENTAL

Project ID: UEA SAMPLE STREET

Client Project Manager: NIVAS VIJAY

ENVision Project Number: 2014-760

Analytical Method: EPA 8260

Prep Method: EPA 5030B

Analytical Batch: 040314VW

Client Sample ID: W-10A

Sample Collection Date/Time: 3/26/14 14:35

Envision Sample Number: 14-6118

Sample Received Date/Time: 3/28/14 10:00

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)	99%		
1,2-Dichloroethane-d4 (surrogate)	82%		
Toluene-d8 (surrogate)	97%		
4-bromofluorobenzene (surrogate)	95%		
Analysis Date/Time:	04-04-14/02:02		
Analyst Initials	tjg		



Analytical Report

Client Name: HEARTLAND ENVIRONMENTAL

Project ID: UEA SAMPLE STREET

Client Project Manager: NIVAS VIJAY

ENVision Project Number: 2014-760

Analytical Method: EPA 8260

Prep Method: EPA 5030B

Analytical Batch: 040314VW

Client Sample ID: W-13

Sample Collection Date/Time: 3/26/14 16:05

Envision Sample Number: 14-6119

Sample Received Date/Time: 3/28/14 10:00

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)	98%		
1,2-Dichloroethane-d4 (surrogate)	85%		
Toluene-d8 (surrogate)	97%		
4-bromofluorobenzene (surrogate)	94%		
Analysis Date/Time:	04-04-14/02:21		
Analyst Initials	tjg		



Analytical Report

Client Name: HEARTLAND ENVIRONMENTAL

Project ID: UEA SAMPLE STREET

Client Project Manager: NIVAS VIJAY

ENVision Project Number: 2014-760

Analytical Method: EPA 8260

Prep Method: EPA 5030B

Analytical Batch: 040314VW

Client Sample ID: TRIP BLANK

Envision Sample Number: 14-6120

Sample Matrix: water

Sample Collection Date/Time: 3/24/14

Sample Received Date/Time: 3/28/14 10:00

<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)	100%		
1,2-Dichloroethane-d4 (surrogate)	81%		
Toluene-d8 (surrogate)	96%		
4-bromofluorobenzene (surrogate)	93%		
Analysis Date/Time:	04-04-14/02:41		
Analyst Initials	tjg		



**First
Environmental
Laboratories, Inc.**

IL ELAP / NELAC Accreditation # 100292

1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

April 03, 2014

Mr. David Norris
ENVISION LABORATORIES, INC.
1439 Sandler Circle W. Drive
Indianapolis, IN 46239

Project ID: 2014-760
First Environmental File ID: 14-1512
Date Received: March 31, 2014

Dear Mr. David Norris:

The above referenced project was analyzed as directed on the enclosed chain of custody record.

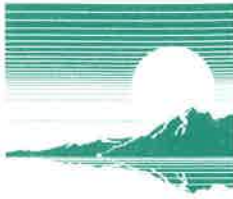
All Quality Control criteria as outlined in the methods and current IL ELAP/NELAP have been met unless otherwise noted. QA/QC documentation and raw data will remain on file for future reference. Our accreditation number is 100292 and our current certificate is number 003363: effective 02/18/2014 through 02/28/2015.

I thank you for the opportunity to be of service to you and look forward to working with you again in the future. Should you have any questions regarding any of the enclosed analytical data or need additional information, please contact me at (630) 778-1200.

Sincerely,



Stan Zaworski
Project Manager



Case Narrative

ENVISION LABORATORIES, INC.

Lab File ID: **14-1512**

Project ID: **2014-760**

Date Received: **March 31, 2014**

All quality control criteria, as outlined in the methods, have been met except as noted below or on the following analytical report.

The results in this report apply to the samples in the following table:

Laboratory Sample ID	Client Sample Identifier	Date/Time Collected
14-1512-001	14-6099/W-5	03/24/14 11:00
14-1512-002	14-6100/W-9	03/24/14 12:35
14-1512-003	14-6101/W-7	03/24/14 14:10
14-1512-004	14-6102/W-8	03/24/14 14:45
14-1512-005	14-6103/S-3A	03/24/14 16:15
14-1512-006	14-6104/S-3	03/24/14 17:05
14-1512-007	14-6105/W-12	03/25/14 10:05
14-1512-008	14-6106/W-1	03/25/14 11:20
14-1512-009	14-6107/W-3	03/25/14 12:20
14-1512-010	14-6108/W-100A	03/25/14 13:30
14-1512-011	14-6109/W-100B	03/25/14 14:15
14-1512-012	14-6110/W-101A	03/25/14 15:30
14-1512-013	14-6111/W-101B	03/25/14 16:20
14-1512-014	14-6112/W-16	03/25/14 17:20
14-1512-015	14-6113/W-15B	03/25/14 10:05
14-1512-016	14-6114/W-15A	03/26/14 10:50
14-1512-017	14-6115/W-14A	03/26/14 11:40
14-1512-018	14-6116/W-14B	03/26/14 12:20
14-1512-019	14-6117/W-10B	03/26/14 13:40
14-1512-020	14-6118/W-10A	03/26/14 14:35
14-1512-021	14-6119/W-13	03/26/14 16:05

Sample Batch Comments:

Sample acceptance criteria were met.



Case Narrative

ENVISION LABORATORIES, INC.

Lab File ID: **14-1512**

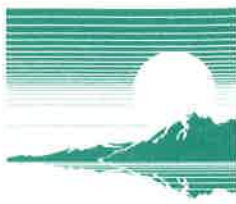
Project ID: **2014-760**

Date Received: **March 31, 2014**

All quality control criteria, as outlined in the methods, have been met except as noted below or on the following analytical report.

The following is a definition of flags that may be used in this report:

Flag	Description	Flag	Description
<	Analyte not detected at or above the reporting limit.	L	LCS recovery outside control limits.
C	Sample received in an improper container for this test.	M	MS recovery outside control limits; LCS acceptable.
D	Surrogates diluted out; recovery not available.	N	Analyte is not part of our NELAC accreditation.
E	Estimated result; concentration exceeds calib range.	P	Chemical preservation pH adjusted in lab.
G	Surrogate recovery outside control limits.	Q	Result was determined by a GC/MS database search.
H	Analysis or extraction holding time exceeded.	S	Analysis was subcontracted to another laboratory.
J	Estimated result; concentration is less than routine RL but greater than MDL.	W	Reporting limit elevated due to sample matrix.
RL	Routine Reporting Limit (Lowest amount that can be detected when routine weights/volumes are used without dilution.)	ND	Analyte was not detected using a library search routine; No calibration standard was analyzed.



Analytical Report

Client: ENVISION LABORATORIES, INC.
Project ID: 2014-760

Date Received: 03/31/14
Date Reported: 04/03/14

Lab No:	Sample ID:	Analyte	Result	R.L.	Units	Flags
Total Metals		Method: 6010C	Preparation Method 3010A			
14-1512-001	14-6099/W-5		Date Collected: 03/24/14	Time Collected: 11:00		
	Analysis Date: 04/02/14			Preparation Date: 04/02/14		
		Lead	< 5	5	ug/L	
14-1512-002	14-6100/W-9		Date Collected: 03/24/14	Time Collected: 12:35		
	Analysis Date: 04/02/14			Preparation Date: 04/02/14		
		Lead	< 5	5	ug/L	
14-1512-003	14-6101/W-7		Date Collected: 03/24/14	Time Collected: 14:10		
	Analysis Date: 04/02/14			Preparation Date: 04/02/14		
		Lead	< 5	5	ug/L	
14-1512-004	14-6102/W-8		Date Collected: 03/24/14	Time Collected: 14:45		
	Analysis Date: 04/02/14			Preparation Date: 04/02/14		
		Lead	< 5	5	ug/L	
14-1512-005	14-6103/S-3A		Date Collected: 03/24/14	Time Collected: 16:15		
	Analysis Date: 04/02/14			Preparation Date: 04/02/14		
		Lead	< 5	5	ug/L	
14-1512-006	14-6104/S-3		Date Collected: 03/24/14	Time Collected: 17:05		
	Analysis Date: 04/02/14			Preparation Date: 04/02/14		
		Lead	< 5	5	ug/L	
14-1512-007	14-6105/W-12		Date Collected: 03/25/14	Time Collected: 10:05		
	Analysis Date: 04/02/14			Preparation Date: 04/02/14		
		Lead	< 5	5	ug/L	
14-1512-008	14-6106/W-1		Date Collected: 03/25/14	Time Collected: 11:20		
	Analysis Date: 04/02/14			Preparation Date: 04/02/14		
		Lead	< 5	5	ug/L	
14-1512-009	14-6107/W-3		Date Collected: 03/25/14	Time Collected: 12:20		
	Analysis Date: 04/02/14			Preparation Date: 04/02/14		
		Lead	< 5	5	ug/L	
14-1512-010	14-6108/W-100A		Date Collected: 03/25/14	Time Collected: 13:30		
	Analysis Date: 04/02/14			Preparation Date: 04/02/14		
		Lead	< 5	5	ug/L	

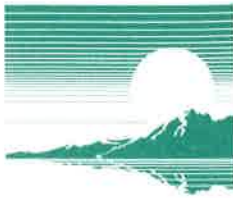


Analytical Report

Client: ENVISION LABORATORIES, INC.
Project ID: 2014-760

Date Received: 03/31/14
Date Reported: 04/03/14

Lab No:	Sample ID:	Analyte	Result	R.L.	Units	Flags
14-1512-011	14-6109/W-100B		Date Collected: 03/25/14	Time Collected: 14:15		
	Analysis Date: 04/02/14			Preparation Date: 04/02/14		
		Lead	< 5	5	ug/L	
14-1512-012	14-6110/W-101A		Date Collected: 03/25/14	Time Collected: 15:30		
	Analysis Date: 04/02/14			Preparation Date: 04/02/14		
		Lead	< 5	5	ug/L	
14-1512-013	14-6111/W-101B		Date Collected: 03/25/14	Time Collected: 16:20		
	Analysis Date: 04/02/14			Preparation Date: 04/02/14		
		Lead	< 5	5	ug/L	
14-1512-014	14-6112/W-16		Date Collected: 03/25/14	Time Collected: 17:20		
	Analysis Date: 04/02/14			Preparation Date: 04/02/14		
		Lead	< 5	5	ug/L	
14-1512-015	14-6113/W-15B		Date Collected: 03/25/14	Time Collected: 10:05		
	Analysis Date: 04/02/14			Preparation Date: 04/02/14		
		Lead	< 5	5	ug/L	
14-1512-016	14-6114/W-15A		Date Collected: 03/26/14	Time Collected: 10:50		
	Analysis Date: 04/02/14			Preparation Date: 04/02/14		
		Lead	< 5	5	ug/L	
14-1512-017	14-6115/W-14A		Date Collected: 03/26/14	Time Collected: 11:40		
	Analysis Date: 04/02/14			Preparation Date: 04/02/14		
		Lead	< 5	5	ug/L	
14-1512-018	14-6116/W-14B		Date Collected: 03/26/14	Time Collected: 12:20		
	Analysis Date: 04/02/14			Preparation Date: 04/02/14		
		Lead	< 5	5	ug/L	
14-1512-019	14-6117/W-10B		Date Collected: 03/26/14	Time Collected: 13:40		
	Analysis Date: 04/02/14			Preparation Date: 04/02/14		
		Lead	< 5	5	ug/L	
14-1512-020	14-6118/W-10A		Date Collected: 03/26/14	Time Collected: 14:35		
	Analysis Date: 04/02/14			Preparation Date: 04/02/14		
		Lead	< 5	5	ug/L	



**First
Environmental
Laboratories, Inc.**

IL ELAP / NELAC Accreditation # 100292

1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: ENVISION LABORATORIES, INC.
Project ID: 2014-760

Date Received: 03/31/14
Date Reported: 04/03/14

Lab No:	Sample ID:	Analyte	Result	R.L.	Units	Flags
14-1512-021	14-6119/W-13		Date Collected: 03/26/14	Time Collected: 16:05		
	Analysis Date: 04/02/14			Preparation Date: 03/31/14		
		Lead	<5	5	ug/L	



CHAIN OF CUSTODY RECORD

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

Client: ENVISSION Lab	Invoice Address: See Above	REQUESTED PARAMETERS	
Report Address: See Above	Project Name: 2014-700	<div style="border: 1px solid black; padding: 5px; transform: rotate(-45deg); display: inline-block;">Lead</div>	
Report To: David Norio	Lab Contact:		
Phone: See Above	Sampled by:		
Fax:	P.O. Number:		
Desired TAT: (Please Circle One) 1-2 days 3-6 days 7-10 days	QA/QC Required: (circle if applicable) Level III Level IV		

Sample ID	Coll. Date	Coll. Time	Comp (C) Grab (G)	Matrix	HCl	HNO ₃	H ₂ SO ₄	NaOH	Other	ENVISSION Sample ID
14-6009 W-5	3/24/14	1100	G	WT	1					1512 - 001
14-6100 W-9		1235			1					002
14-6101 W-7		1410			1					003
14-6102 W-8		1445			1					004
14-6103 S-3A		1615			1					005
14-6104 S-3		1705			1					006
14-6105 W-12	3/25/14	1005			1					007
14-6106 W-1		1120			1					008
14-6107 W-3		1220			1					009
14-6108 W-100A		1330			1					010
14-6109 W-100B		1415			1					011

Comments: Please Report vlv PPB

Relinquished by: Chawson	Date: 3-28-14	Time: 15:00	Received by: [Signature]	Date: 3/31/14	Time: 1000
--------------------------	---------------	-------------	--------------------------	---------------	------------



CHAIN OF CUSTODY RECORD

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

Sample Integrity:
 Cooler Temp: _____ °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

Requested Parameters:

Invoice Address: See Above
 Project Name: 2014-760
 Lab Contact: _____
 Sampled by: _____
 P.O. Number: _____
 QA/QC Required: (circle if applicable)
 Level III Level IV

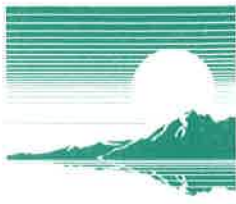
Please indicate number of containers per preservative below

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	
14-0110/W-101A	3/25/14	1530	G	WT	1						14-1512-012
14-0111/W-101B		1620			1						013
14-0112/W-16		1720			1						014
14-0113/W-15B	3/26/14	1005			1						015
14-0114/W-15A		1050			1						016
14-0115/W-14A		1140			1						017
14-0116/W-14B		1220			1						018
14-0117/W-10B		1340			1						019
14-0118/W-10A		1435			1						020
14-0119/W-13		1605			1						021

Comments: Please Report w/ PPB

Relinquished by: AWSON Date: 3-28-14 Time: 15:00

Received by: MA Date: 3/31/14 Time: 1000



Quality Control Summary

Client: ENVISION LABORATORIES, INC.
Project ID: 2014-760

Lab File ID: 14-1512
Date Received: 03/31/14

QC Lab#	QC Code	Parameter	Reported Result	Units	QC Result	%R Limits Low High	RPD Limit
Parameter:		Total Metals	Analytical Method: 6010C		Analytical WS #: 114795	Analysis Date:	
			Prep Method: 3010A		Prep WS#: 18564	Prep Date: 03/31/14	
14-1483-001MS	MS	Lead	75	ug/L	%R: 75.2	75 - 125	
14-1483-001MSD	MSD	Lead	80	ug/L	%R: 80.5	75 - 125	RPD: 7
LCS190313	LCS	Lead	93	ug/L	%R: 93.2	80 - 120	
PB190316	PB	Lead	< 2	ug/L	0	-	
Parameter:		Total Metals	Analytical Method: 6010C		Analytical WS #: 114796	Analysis Date:	
			Prep Method: 3010A		Prep WS#: 18585	Prep Date: 04/02/14	
14-1512-012MS	MS	Lead	97	ug/L	%R: 95	75 - 125	
14-1512-012MSD	MSD	Lead	95	ug/L	%R: 93	75 - 125	RPD: 2
LCS190333	LCS	Lead	96	ug/L	%R: 96.4	80 - 120	
PB190336	PB	Lead	< 0.0050	mg/L	0	-	

* The QC indicator is outside control limits. %R = percent recovery; RPD = Relative percent difference
 CB = Calibration Blank; CCVS = Continuing Calibration Verification Standard; MS = Matrix Spike;
 MSD = Matrix Spike Duplicate; LCS = Laboratory Control Spike; SURR = Surrogate Spiking Compound;
 PB = Procedure Blank; BLK = Method Blank





EPA 8260 Quality Control Data

ENVision Batch Number: 040214VW

<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	



ENVision Laboratories, Inc.
 1439 Sadlier Circle West Drive
 Indianapolis, IN 46239
 Tel: 317.351.8632
 Fax: 317.351.8639
 www.envisionlaboratories.com

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)	101%		
1,2-Dichloroethane-d4 (surrogate)	85%		
Toluene-d8 (surrogate)	97%		
4-bromofluorobenzene (surrogate)	97%		
Analysis Date/Time:	04-03-14/12:54		
Analyst Initials	tjg		



ENVision Laboratories, Inc.
 1439 Sadlier Circle West Drive
 Indianapolis, IN 46239
 Tel: 317.351.8632
 Fax: 317.351.8639
 www.envisionlaboratories.com

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	56.4	50	113%	
1,1-Dichloroethene	47.7	50	95%	
trans-1,2-Dichloroethene	50.4	50	101%	
Methyl-tert-butyl-ether	48.9	50	98%	
1,1-Dichloroethane	48.3	50	97%	
cis-1,2-Dichloroethene	52.1	50	104%	
Chloroform	49.5	50	99%	
1,1,1-Trichloroethane	47.5	50	95%	
Benzene	56.1	50	112%	
Trichloroethene	53.1	50	106%	
Toluene	55.0	50	110%	
1,1,1,2-Tetrachloroethane	52.1	50	104%	
Chlorobenzene	55.4	50	111%	
Ethylbenzene	54.2	50	108%	
o-Xylene	56.4	50	113%	
n-Propylbenzene	55.0	50	110%	
Dibromofluoromethane (surrogate)	90%			
1,2-Dichloroethane-d4 (surrogate)	88%			
Toluene-d8 (surrogate)	99%			
4-bromofluorobenzene (surrogate)	98%			
Analysis Date/Time:	04-03-14/11:58			
Analyst Initials	tjg			



EPA 8260 Quality Control Data

ENVision Batch Number: 040314VW

<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	



ENVision Laboratories, Inc.
 1439 Sadlier Circle West Drive
 Indianapolis, IN 46239
 Tel: 317.351.8632
 Fax: 317.351.8639
 www.envisionlaboratories.com

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)	98%		
1,2-Dichloroethane-d4 (surrogate)	84%		
Toluene-d8 (surrogate)	98%		
4-bromofluorobenzene (surrogate)	95%		
Analysis Date/Time:	04-04-14/00:07		
Analyst Initials	tjg		



ENVision Laboratories, Inc.
 1439 Sadlier Circle West Drive
 Indianapolis, IN 46239
 Tel: 317.351.8632
 Fax: 317.351.8639
 www.envisionlaboratories.com

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	55.4	50	111%	
1,1-Dichloroethene	49.1	50	98%	
trans-1,2-Dichloroethene	52.6	50	105%	
Methyl-tert-butyl-ether	47.8	50	96%	
1,1-Dichloroethane	49.5	50	99%	
cis-1,2-Dichloroethene	52.6	50	105%	
Chloroform	49.9	50	100%	
1,1,1-Trichloroethane	48.1	50	96%	
Benzene	57.4	50	115%	
Trichloroethene	54.0	50	108%	
Toluene	56.4	50	113%	
1,1,1,2-Tetrachloroethane	53.6	50	107%	
Chlorobenzene	57.5	50	115%	
Ethylbenzene	56.8	50	114%	
o-Xylene	59.3	50	119%	
n-Propylbenzene	58.5	50	117%	
Dibromofluoromethane (surrogate)	87%			
1,2-Dichloroethane-d4 (surrogate)	84%			
Toluene-d8 (surrogate)	100%			
4-bromofluorobenzene (surrogate)	99%			
Analysis Date/Time:	04-03-14/23:09			
Analyst Initials	tjg			



ENVision Laboratories, Inc.
1439 Sadlier Circle West Drive
Indianapolis, IN 46239
Tel: 317.351.8632
Fax: 317.351.8639
www.envisionlaboratories.com

Flag Number

1

Comments

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



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: Same

Report Address: 3410 Mishawaka Ave South Bend, IN 46615 Project Name: USA Sample Street

Report To: Nivas Vijay Lab Contact:

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

Fax: 574-289-7480 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

Sample Integrity:

Cooler Temp: 2 °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

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

REQUESTED PARAMETERS

VOC	Pb	826a
-----	----	------

Sample ID	Coll. Date	Coll. Time	Comp (C) Grab (G)	Matrix	H ₂ O	H ₂ SO ₄	NaOH	Other	ENVISSION Sample ID
W-5	3-24-14	11:00	G	W	2				14-6099
W-9		12:35			2				14-6100
W-7		14:10			2				14-6101
W-8		14:45			2				14-6102
S-3A		16:15			2				14-6103
S-3		17:05			2				14-6104
W-12	3-25-14	10:05			2				14-6105
W-1		11:20			2				14-6106
W-3		12:20			2				14-6107
W-100A		13:30			2				14-6108
W-100B		14:15			2				14-6109

Comments:

Relinquished by: <u>David Nye</u>	Date: <u>3-27-14</u>	Time: <u>11:00</u>	Received by: <u>John Brown</u>	Date: <u>3-27-14</u>	Time: <u>11:00</u>



CHAIN OF CUSTODY RECORD

ENVISSION Laboratories, Inc. | 1439 Sadlier Circle West Drive | Indianapolis, IN 46239 | Phone: (317) 351-8632 | Fax: (317) 351-8633

Client: Heartland Environmental Invoice Address: Same

Report Address: 3410 N. Shaker, Avon, IN 46705 Project Name: UEA Sample Street

Report To: Nivas Vijay Lab Contact: _____

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

Fax: 574-289-7480 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

Sample Integrity:

Cooler Temp: 5 °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 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

REQUESTED PARAMETERS

VOC																					
8260																					
Pb																					

Sample ID	Coll. Date	Coll. Time	Comp (C) Grab (G)	Matrix	HCl	HNO ₃	H ₂ SO ₄	NaOH	Other	None	ENVISSION Sample ID
W-101 A	3-25-14	15:30	G	W	2	1					14-6110
W-101 B		16:20			2	1					14-6111
W-16		17:20			2	1					14-6112
W-15 B	3-26-14	10:05			2	1					14-6113
W-15 A		10:50			2	1					14-6114
W-14 A		11:40			2	1					14-6115
W-14 B		12:20			2	1					14-6116
W-10 B		13:40			2	1					14-6117
W-10 A		14:35			2	1					14-6118
W-13		16:05			2	1					14-6119
T.P. blank	3-24-14	-			2						14-6120

Comments:

Relinquished by: <u>David Nye</u>	Date: <u>3-27-14</u>	Time: <u>11:00</u>	Received by: <u>Fed Ex</u>	Date: <u>3-27-14</u>	Time: <u>11:00</u>
			<u>Andrewson</u>	<u>3-28-14</u>	<u>10:00</u>

APPENDIX E
Sampling Data Sheets



LOW-FLOW GROUNDWATER SAMPLING DATA SHEET

Sample ID: 5-3 Boring or Well ID: 3-24-14
Lab No.: 17:05

Boring or Well Location: Sample Street Complex
Sample Date & Time: 5093-12-01:05

Sampling Personnel: David Nye Client: UEA
Weather: Sky: clear Ground: Asphalt Wind: 12-15 mph Precipitation: None
Temp.: 32°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® SP-16 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): 6.24 Ft SWL Elevation (prior to purge): _____ Ft
 Well / Sampler Depth from TOC: 50.10 Ft TOC to Grade: (-0.25) Ft
 Volume/Foot Casing (d²x0.04079): _____ Gal/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: 45 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: _____ Pore: _____ Size: _____
 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 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*		
1645	12.54	0.156	NA	12.36	NA	5.13	NA	5.5	NA	95	NA	158	6.24
1651	9.02	0.183		9.48		5.94		4.9		4		164	6.24
1654	9.02	0.183	0	4.32	1.7	5.92	0.02	5.02	2.0	-1	5	170	6.24
1657	9.02	0.183	0	9.23	1.0	5.91	0.01	5.1	2.0	-6	5	172	6.24
1700	9.00	0.183	0	9.14	1.0	5.93	0.02	5.3	3.9	-10	4	174	6.24

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.

Heartland Environmental Associates, Inc. • 3410 Mishawaka Ave. • South Bend, Indiana 46615 • (574) 289-1191



LOW-FLOW GROUNDWATER SAMPLING DATA SHEET

Sample ID: W-1 Boring or Well ID: _____ Sample Date & Time: 3-25-14 11:20
 Lab No.: _____ Boring or Well Location: Sample Street Complex Client: UEA
 Sampling Personnel: David Nye Project No.: 5093-12-01-05
 Weather: Sky mostly cloudy Ground Surface covered Wind: 15-20 mph Site Location: 3702 West Sample St., South Bend, IN
 Temp.: 28°F Humidity: Moderate / Low / _____ % Laboratory: Envision Laboratories, Indianapolis, IN

Sample Type: (circle) Permanent Monitoring Well / Temporary Monitoring Well / Geoprobe® SP-16 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): 9.13 Ft SWL Elevation (prior to purge): _____ Ft
 Well / Sampler Depth from TOC: 62.9 Ft TOC to Grade: (-0.3) Ft
 Volume/Foot Casing (d²x0.04079): 1.2 Gallons Volume of Water Column: _____ Gallons
 Volume of Water Purged: _____ 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: 5.5 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 / 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 Pore Size: _____ (Color: Gray / Brown / Tan /)
 Filter: (Cartridge / Paper) Type: _____ Were Samples Iced after Collection? YES NO /

TIME	PUMPING RATE (ml/min)	DEPTH TO WATER (ft. below TOC)	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)	
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*
1102	200	9.13	8.31	0.503	14.43	NA	5.26	17.1	NA	82	NA	200	9.13	
1106	200	9.13	9.54	0.197	9.98	1.3	5.70	4.8	8.3	53	4	200	9.13	
1109	200	9.13	9.66	0.192	9.85	1.1	5.71	4.4	2.3	59	2	200	9.13	
1112	200	9.13	9.70	0.4	9.74	0.1	5.71	4.3	2.3	61	4	200	9.13	
1115	200	9.13	9.60	1.0	9.67	0.7	5.72	4.2	2.3	65	4	200	9.13	

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.

Heartland Environmental Associates, Inc. • 3410 Mishawaka Ave. • South Bend, Indiana 46615 • (574) 289-1191



LOW-FLOW GROUNDWATER SAMPLING DATA SHEET

Sample ID: W-100 A Boring or Well ID: _____ Sample Date & Time: 3-25-14 13:30
 Lab No.: _____ Boring or Well Location: Sample Street Complex Client: UEA
 Sampling Personnel: David Nye Project No.: 5093-12-01:05
 Weather: Sky: overcast Ground: Small concrete Wind: AS 22 mph Precipitation: Very light snow Site Location: 3702 West Sample St., South Bend, IN
 Temp.: 27F Humidity: High Moderate / Low / _____ % Laboratory: Envision Laboratories, Indianapolis, IN

Sample Type: (circle) Permanent Monitoring Well / Temporary Monitoring Well / Geoprobe® SP-16 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): 8.86 Ft SWL Elevation (prior to purge): _____ Ft
 Well / Sampler Depth from TOC: 33.98 Ft TOC to Grade: 60.45 Ft Well Depth from Grade: _____ Ft
 Volume/Foot Casing (d²x0.04079): _____ Gall/Ft Volume of Water Column: _____ Gallons
 Volume of Water Purged: _____ 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
 Filtration Method: (Gravity / Vacuum / Pressure) None
 Filter: (Cartridge / Paper) Type: _____ Size: _____ Pore: _____
 Water Sample Appearance: (Circle) 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*	READING	CHANGE*	READING	CHANGE*		
1316		7.27	NA	0.241	NA	16.81	NA	5.11	NA	8.5	NA	137	NA	196	
1316		9.39		0.886		12.06		5.94		8.8		-151		188	
1319		9.67	3.0	0.889	0.3	11.21	7.0	5.95	0.01	7.9	10	-154	3	186	
1322		9.79	1.2	0.888	0.1	10.53	6.1	5.95	0	8.0	1.3	-157	3	186	
1325		9.94	1.5	0.894	0.5	9.88	6.2	5.95	0	8.1	1.3	-158	1	180	

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.

Heartland Environmental Associates, Inc. • 3410 Mishawaka Ave. • South Bend, Indiana 46615 • (574) 289-1191

LOW-FLOW GROUNDWATER SAMPLING DATA SHEET



Sample ID: W-101A Boring or Well ID: _____ Sample Date & Time: 3-25-14 15:30
 Lab No.: _____ Boring or Well Location: Sample Street Complex Client: UEA
 Sampling Personnel: David Nye Project No.: 5093-12-01-06
 Weather: Sky 20-65 mph Precipitation: Very light snow Site Location: 3702 West Sample St., South Bend, IN
 Temp.: 25.0 F Humidity: High Laboratory: Envision Laboratories, Indianapolis, IN

Sample Type: (circle) Permanent Monitoring Well / Temporary Monitoring Well / Geoprobe® SP-16 Sampler / Other: _____
 Well / Sampler Material: (circle) PVC / Stainless / Galvanized / Other: _____
 Screen / Casing Inside Diameter: _____ Inches Screened / Open Interval: _____ Ft Screen Slot Size: _____ Ft
 Elevation Top of Casing (TOC): _____ Ft Grade Elevation: _____ Ft Survey Info: _____
 SWL Depth from TOC (prior to purge): 9.57 Ft SWL Elevation (prior to purge): _____ Ft
 Well / Sampler Depth from TOC: 34.64 Ft TOC to Grade: (-0.27) Ft Well Depth from Grade: _____ Ft
 Volume/Foot Casing (d²x0.0479): _____ Gallons Volume of Water Column: _____ Gallons
 Volume of Water Purged: _____ 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 / 0.31 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*		
1500	7.37	0.329	NA	16.73	NA	5.08	NA	13.5	NA	-31	NA	188	
1506	8.32	1.24		1.84		5.87		27.7		-120		184	
1509	8.46	1.28		1.35		5.91		10.0		-137		180	
1512	8.95	1.26		1.12		5.93		10.2		-143		176	
1515	9.48	1.24		0.95		5.95		9.0		-146		160	
1518	9.42	0.6		0.89	6.3	5.96	0.01	8.5	2.2	-148	2	154	
1521	9.41	0.1		0.85	4.5	5.96	0	8.0	9.1	-149	1	140	
1524	9.45	0.4		0.80	5.9	5.96	0	7.3	8.8	-149	0	126	

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-101 B Boring or Well ID: _____ Sample Date & Time: 3-25-14 / 16:20
 Lab No.: _____ Boring or Well Location: Sample Street Complex Client: UEA
 Sampling Personnel: David Nye Project No.: 5093-12-01:05
 Weather: Sky: overcast Ground: wet Wind: 15-20 mph Precipitation: Very light snow
 Temp.: 23°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: _____ Inches Screened / Open Interval: _____ Ft
 Elevation Top of Casing (TOC): _____ Ft Grade Elevation: _____ Ft
 SWL Depth from TOC (prior to purge): 9.56 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: 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: 4.5 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 0.44 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*		
1535	7.63	0.127	NA	16.14	NA	5.03	NA	94.3	NA	-3	NA	180	
1604	11.73	1.07		1.48		5.89		8.8		-54		184	
1607	11.95	1.00		1.02		5.92		7.3		-61		182	
1610	12.22	1.11		0.86	15.7	5.93		6.8		-69		186	
1613	12.42	1.12	0.9	0.79	8.1	5.94	0.01	6.2	8.8	-74	5	194	
1616	12.33	1.12	0	0.72	8.9	5.94	0	5.7	8.1	-80	6	198	
1616	12.52	1.12	0	0.66	8.3	5.94	0	5.4	5.3	-86	6	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.

Heartland Environmental Associates, Inc. • 3410 Mishawaka Ave. • South Bend, Indiana 46615 • (574) 289-1191



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 Street Complex _____
 Weather: Sky: Partly Cloudy Wind: 5-10 mph Precipitation: None
 Temp.: 33°F Humidity: High / Moderate / Low %

Sample Date & Time: 3-26-14 14:35
 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® SP-16 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): _____ Ft SWL Elevation (prior to purge): _____ Ft
 Well / Sampler Depth from TOC: 11.12 Ft TOC to Grade: 2.3 Ft Well Depth from Grade: _____ Ft
 Volume/Foot Casing (d²x0.04079): 62.1 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: 5.8 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 / 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 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*	READING	CHANGE*	READING	CHANGE*		
1415		11.35	NA	0.250	NA	17.25	NA	5.60	NA	9.8	NA	75	NA	176	11.12
1420		12.21		1.43		11.29		5.93		9.5		-145		194	11.12
1424		12.42	1.7	1.43	0	10.37	8.1	5.92	0.01	8.7	8.4	-149	4	196	11.12
1427		12.56	1.1	1.43	0	9.55	7.9	5.91	0.01	8.1	6.9	-151	2	200	11.12
1430		12.71	1.2	1.42	0.7	8.79	8.0	5.92	0.01	7.4	8.6	-153	2	200	11.12

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-10B Boring or Well ID: _____
 Lab No.: _____ Boring or Well Location: Sample Street Complex
 Sampling Personnel: David Nye Client: UEA
 Weather: Sky partly cloudy Ground: wet Wind: 10-15 mph Precipitation: None
 Temp.: 31.1 Humidity: High / Moderate / Low Low %

Sample Date & Time: 3-26-14 13:40
 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): 11.19 Ft SWL Elevation (prior to purge): _____ Ft
 Well / Sampler Depth from TOC: 31.31 Ft TOC to Grade: 2.5 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: 30 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 / 0.125 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 Water Sample Appearance: Clear / Slightly Turbid / Moderately Turbid / Very Turbid)
 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*		
1315	8.69	0.899	NA	13.59	NA	5.87	NA	3.6	NA	76	NA	200	11.19
1321	10.96	0.855		10.71		5.88		2.7		76		200	11.19
1324	10.73	2.1	0.855	10.09	5.8	5.88	0	2.4		73	3	200	11.19
1327	11.15	3.9	0.854	9.20		5.88		2.2		70		200	11.19
1330	11.20	0.4	0.853	8.71	5.3	5.88		2.0	9.1	69	1	200	11.19
1333	11.30	0.9	0.852	8.10	7.0	5.88	0	1.9	5.0	68	1	200	11.19
1336	11.55	2.2	0.849	7.53	7.0	5.89	0.0	1.9	0	67	1	200	11.19

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: 3-25-14 Sample Date & Time: 10:05
 Lab No.: _____ Boring or Well Location: Sample Street Complex Client: UEA
 Sampling Personnel: David Nye Project No.: 5093-12-01-05
 Weather: Snow covered Ground: 10-15 cm Precipitation: None Site Location: 3702 West Sample St., South Bend, IN
 Temp: 27°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): 8.96 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): _____ Gal/Ft 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: 28 Ft below TOC
 Pump Make / Model: Geopump 2 Tubing Type (circle): Teflon® FEP (inner)-HDPE (outer) / Teflon® FEP / LDPE / Other: Horiba U-52
 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
 Filtration Method: (Gravity / Vacuum / Pressure) None Water Sample Appearance: Clear / Slightly Turbid / Moderately Turbid / Very Turbid ()
 Filter: (Cartridge / Paper) Type: _____ Size: _____ Pore: _____ (Color: Gray / Brown / Tan / 194h / tan)
 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*		
0940	15.18	1.07	NA	13.57	NA	6.65	NA	182	NA	96	NA	200	8.96
0946	13.28	1.49		1.29		6.14		127		-97		196	8.96
0949	13.24	1.49		1.14	11.6	6.07		112		-101		194	8.96
0952	13.22	1.49	0	1.11	2.6	6.04	0.03	101	9.8	-103	2	198	8.96
0955	13.20	1.49	0	1.04	6.3	6.01	0.03	92.1	8.8	-108	5	198	8.96
0958	13.13	1.49	0	0.97	6.7	5.98	0.03	84.5	8.3	-111	3	200	8.96

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-13 Boring or Well ID: _____
 Lab No.: _____ Boring or Well Location: Sample Street Complex
 Sampling Personnel: David Nye Client: UEA
 Sky: 58°F Ground: dry Wind: _____ Precipitation: None
 Temp.: 58°F Humidity: High / Moderate / Low / _____ % inside Laboratory: Envision Laboratories, Indianapolis, IN

Sample Date & Time: 3-26-14
 16:05

Sample Type: (circle) Permanent Monitoring Well / Temporary Monitoring Well / Geoprobe® SP-16 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): 10.00 Ft SWL Elevation (prior to purge): _____ Ft
 Well / Sampler Depth from TOC: 35.48 Ft TOC to Grade: (-0.24) Ft
 Volume/Foot Casing (d²x0.04079): _____ Gallons 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: 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: Clear / Slightly Turbid / Moderately Turbid / Very Turbid)
 Filtration Method: (Gravity / Vacuum / Pressure) None (Color: Gray / Brown / Tan /)
 Filter: (Cartridge / Paper) Type: _____ 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*		
1535	12.60	NA	0.639	NA	13.67	NA	5.86	NA	10.2	NA	17	NA	178	10.00
1541	14.49		1.00		0.86		5.85		12.6		-166		178	10.00
1544	14.53	0.3	1.00	0	0.83	3.5	5.85	0	11.4	9.5	-168	2	180	10.00
1547	14.80	1.9	1.00	0	0.76	8.4	5.85	0	10.3	9.6	-170	2	172	10.00
1550	14.96	0.9	0.999		0.68	10.5	5.85		9.9		-172		160	10.00
1553	15.10	0.9	0.996	0.3	0.62	8.8	5.85	0	9.7	2.0	-173	1	158	10.00
1556	15.18	0.5	0.995	0.4	0.60	3.3	5.85	0	9.4	3.1	-174	1	162	10.00
1559	15.23	0.3	0.994	0.1	0.56	6.7	5.86	0.01	9.8	4.3	-175	1	166	10.00

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-14A Boring or Well ID: _____
 Lab No.: _____ Boring or Well Location: Sample Street Complex
 Sampling Personnel: David Nye Client: UEA
 Weather: Sky overcast Ground: Wet Wind: 5.0 mph Project No.: 5093-12-01:05
 Temp.: 26°C 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: 4 Inches Screened / Open Interval: _____ Ft
 Elevation Top of Casing (TOC): _____ Ft Grade Elevation: _____ Ft
 SWL Depth from TOC (prior to purge): 11.58 Ft SWL Elevation (prior to purge): _____ Ft
 Well / Sampler Depth from TOC: 60.95 Ft TOC to Grade: 2.5 Ft
 Volume/Foot Casing (d²x0.04079): 0.8 Gall/Ft Volume of Water Column: _____ Gallons
 Volume of Water Purged: _____ 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 Water Sample Appearance: Clear / Slightly Turbid / Moderately Turbid / Very Turbid)
 Filtration Method: (Gravity / Vacuum / Pressure) None Pore: _____ Were Samples Iced after Collection? (YES) / NO / _____
 Filter: (Cartridge / Paper) Type: _____ Size: _____

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*	READING	CHANGE*		
1120		8.23	1.02	NA	15.27	NA	5.64	NA	6.4	NA	22	NA	194	11.58
1126		11.19	1.13		12.87		5.77		2.3		22		196	11.58
1129		11.26	0.6	0	12.70	1.3	5.79	0.02	2.1	8.7	30	8	198	11.58
1132		11.33	0.6	0	12.53	1.3	5.80	0.01	2.0	0	36	6	198	11.58
1135		11.41	0.7	0	12.44	0.7	5.81	0.01	2.0	0	41	5	198	11.58

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.

Heartland Environmental Associates, Inc. • 3410 Mishawaka Ave. • South Bend, Indiana 46615 • (574) 289-1191



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: Sky partly cloudy Ground: well Wind: 5-10 mph Project No.: 5093-12-01-05
 Temp.: 32.0 F Humidity: High / Moderate / Low / _____ % Precipitation: None Site Location: 3702 West Sample St, South Bend, IN
 Laboratory: Envision Laboratories, Indianapolis, IN

Sample Date & Time: 3-26-14 12:20

Sample Type: (circle) Permanent Monitoring Well / Temporary Monitoring Well / Geoprobe® SP16 Sampler / Other: _____
 Well / Sampler Material: (circle) PVC / 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): 12.12 Ft SWL Elevation (prior to purge): _____ Ft
 Well / Sampler Depth from TOC: 44.13 Ft TOC to Grade: 2.9 Ft
 Volume/Foot Casing (d²x0.04079): _____ Gallons Volume of Water Column: _____ Ft
 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 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 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*		
1200	8.97	0.815	NA	15.77	NA	5.78	NA	3.1	NA	74	NA	200	12.12
1206	8.53	1.11		12.43		5.85		3.6		72		198	12.12
1209	8.79	1.01	0	11.46	7.8	5.85	0	3.4	5.6	73	1	200	12.12
1212	8.73	1.11	0	10.85	5.3	5.85	0	3.2	5.9	75	2	200	12.12
1215	8.95	1.11	0	10.05	7.4	5.85	0	2.9	9.4	77	2	200	12.12

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-15A Boring or Well ID: _____
 Lab No.: _____ Boring or Well Location: Sample Street Complex
 Sampling Personnel: David Nye Client: UEA
 Weather: Sky Partly Cloudy Ground Saturated Wind: 5-10 mph Project No.: 5093-12-01:05
 Temp.: 25.0F Humidity: High 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: 2 inches Screened / Open Interval: _____ Ft
 Elevation Top of Casing (TOC): _____ Ft Grade Elevation: _____ Ft
 SWL Depth from TOC (prior to purge): 11.05 Ft SWL Elevation (prior to purge): _____ Ft
 Well / Sampler Depth from TOC: 35.30 Ft TOC to Grade: 2.7 Ft
 Volume/Foot Casing (d²x0.04079): _____ Gallons Volume of Water Column: _____ Gallons
 Volume of Water Purged: 11 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
 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 / light tan)
 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*		
1030	9.78	1.10	NA	14.18	NA	5.48	NA	231	NA	71	NA	197	11.05
1036	11.50	1.65		11.27		5.87		105.4		-117		196	11.05
1039	11.60	0.9	0	10.42	7.5	5.87	0	98.7		-121	4	196	11.05
1042	11.65	0.4	0	9.64	7.5	5.87	0	92.1		-124	3	198	11.05
1045	11.57	0.7	0	8.97	7.0	5.86	0.01	87.2		-126	2	198	11.05

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.
 Heartland Environmental Associates, Inc. • 3410 Mishawaka Ave. • South Bend, Indiana 46615 • (574) 289-1191



LOW-FLOW GROUNDWATER SAMPLING DATA SHEET

Sample ID: W-15B Boring or Well ID: _____ Sample Date & Time: 3-26-14 10:05
 Lab No.: _____ Boring or Well Location: Sample Street Complex Client: UEA
 Sampling Personnel: David Nye Project No.: 5093-12-01:05
 Weather: Sky Partly Cloudy Ground Snow Covered Wind: 5-10 mph Site Location: 3702 West Sample St., South Bend, IN
 Temp.: 23°F Humidity: High Precipitation: None 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): 10.43 Ft SWL Elevation (prior to purge): _____ Ft
 Well / Sampler Depth from TOC: 11.58 Ft TOC to Grade: 2.0 Ft Well Depth from Grade: _____ Ft
 Volume/Foot Casing (d²x0.0479): _____ Gallons Volume of Water Column: _____ Gallons
 Volume of Water Purged: 1.3 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: _____ 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: Clear Slightly Turbid / Moderately Turbid / Very Turbid)
 Filtration Method: (Gravity / Vacuum / Pressure) None (Color: Gray / Brown / Tan /)
 Filter: (Cartridge / Paper) Type: _____ 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*		
0941	11.28	0.967	NA	11.98	NA	5.91	NA	3.6	NA	87	NA	200	10.43
0951	9.78	0.957	0.6	10.30	7.5	5.91	0.02	0.0	0.0	92	0	200	10.43
0954	9.82	0.963	1.3	9.53	7.0	5.89	0.01	0.0	0.0	92	0	200	10.43
0957	9.72	0.976	1.6	8.86	6.7	5.88	0.01	0.0	0.0	92	0	200	10.43
1000	9.69	0.992	1.6	8.27	6.7	5.87	0.01	0.0	0.0	91	0	200	10.43

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.

Heartland Environmental Associates, Inc. • 3410 Mishawaka Ave. • South Bend, Indiana 46615 • (574) 289-1191



LOW-FLOW GROUNDWATER SAMPLING DATA SHEET

Sample ID: W-16 Boring or Well ID: _____ Sample Date & Time: 3-25-14 / 17:20
 Lab No.: _____ Boring or Well Location: Sample Street Complex Client: UEA
 Sampling Personnel: David Nye Project No.: 5093-12-01:05
 Weather: Sky Partly Cloudy Ground: wet Precipitation: NO Site Location: 3702 West Sample St., South Bend, IN
 Temp.: 24.5 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 Screen Slot Size: _____ Ft
 Elevation Top of Casing (TOC): _____ Ft Grade Elevation: _____ Ft Survey Info: _____
 SWL Depth from TOC (prior to purge): 11.88 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): _____ Gal/Ft Volume of Water Colurnn: _____ 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: 5.6 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 0.44 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	9.81	1.34	NA	14.96	NA	5.92	NA	1.5	NA	11	NA	192	11.88
1706	10.43	1.32		9.88		5.93		1.0		32		198	11.88
1709	10.44	1.32	0	9.78	1.0	5.93	0	1.0	0	37	5	200	11.88
1712	10.54	1.32	0	9.75	0.3	5.93	0	0.9	10	41	4	200	11.88
1715	10.46	1.32	0	9.61	1.4	5.92	0.01	0.9	0	44	3	200	11.88

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.

Heartland Environmental Associates, Inc. • 3410 Mishawaka Ave. • South Bend, Indiana 46615 • (574) 289-1191



LOW-FLOW GROUNDWATER SAMPLING DATA SHEET

Sample ID: W-3 Boring or Well ID: _____ Sample Date & Time: 3-25-14 / 1220
 Lab No.: _____ Boring or Well Location: Sample Street Complex Client: UEA
 Sampling Personnel: David Nye Project No.: 5093-12-01-05
 Weather: Sky overcast Ground: wet Wind: 15-20 mph Precipitation: None Site Location: 3702 West Sample St., South Bend, IN
 Temp.: 27°C 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): 7.89 Ft SWL Elevation (prior to purge): _____ Ft
 Well / Sampler Depth from TOC: 58.03 Ft TOC to Grade: 6-1.0 Ft Well Depth from Grade: _____ Ft
 Volume/Foot Casing (d²x0.04079): _____ Gallons 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: 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 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: _____ 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*	READING	CHANGE*	READING	CHANGE*		
1200		9.4	NA	0.669	NA	10.02	NA	5.81	NA	6.0	NA	95	NA	200	7.89
1206		10.60		0.677		9.26		5.85		0.6		110		200	7.89
1209		10.57	0.3	0.677	0	9.29	0.3	5.85	0	0.5	0	113	3	200	7.89
1212		10.67	0.9	0.675	0.3	9.10	2.0	5.86	0.01	0.5	0	115	2	198	7.89
1215		10.66	0.1	0.675	0	9.09	0.17	5.87	0.01	0.4	0	116	1	198	7.89

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-5 Boring or Well ID: _____ Sample Date & Time: 3-24-14 1100
 Lab No.: _____ Boring or Well Location: Sample Street Complex Client: UEA
 Sampling Personnel: David Nye Project No.: 5093-12-01:05
 Weather: Slightly cloudy Ground: damp Wind: 10-15 mph Precipitation: None
 Temp: 27.0 Humidity: High / Moderate / Low %

Sample Type: (circle) Permanent Monitoring Well / Temporary Monitoring Well / Geoprobe® SP-16 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): 9.31 Ft SWL Elevation (prior to purge): _____ Ft
 Well / Sampler Depth from TOC: 26.37 Ft TOC to Grade: 3.1 Ft Well Depth from Grade: _____ Ft
 Volume/Foot Casing (d²x0.04079): _____ Gall/Ft 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: 32 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 / 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 Pore: _____ Size: _____
 Filter: (Cartridge / Paper) Type: _____ Were Samples Iced after Collection? YES / NO /

TIME	PUMPING	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*		
10:35		15.00	0.407	NA	14.96	NA	5.89	NA	1.1	NA	61	NA	200	9.31
10:41		7.85	0.434		1.56		6.04		1.2		5		200	9.31
10:44		7.60	0.437	0.7	1.42	9.0	6.02		1.1		11		200	9.31
10:47		7.39	0.441	0.9	1.36	4.2	6.00	0.02	1.2	8.3	13	2	200	9.31
10:50		7.21	0.443	0.5	1.30	4.4	5.99	0.01	1.1	8.3	16	3	200	9.31
10:53		7.02	0.445	0.5	1.24	4.6	5.92	0.01	1.2	8.3	17	1	200	9.31

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.

Heartland Environmental Associates, Inc. • 3410 Mishawaka Ave. • South Bend, Indiana 46615 • (574) 289-1191



LOW-FLOW GROUNDWATER SAMPLING DATA SHEET

Sample ID: W-7 Boring or Well ID: _____
 Lab No.: _____ Boring or Well Location: Sample Street Complex
 Sampling Personnel: David Nye Client: UEA
 Weather: Sky partly cloudy Groundwater Wind: 10-15 mph Precipitation: None
 Temp.: 30°C 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® SP-16 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): 6.71 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: 1.2 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-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: 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*		
1350	6.28	0.545	NA	15.06	NA	5.41	NA	0.4	NA	76	NA	200	6.71
1356	9.22	0.918		6.77		5.95		0.5		59		200	6.71
1359	9.20	0.920	0.2	6.64	1.9	5.95	0	0.4		62	3	200	6.91
1402	9.20	0.919	0.1	6.63	0.2	5.96	0.01	0.4	0	64	2	200	6.71
1405	9.29	0.919	0	6.50	2.0	5.96	0	0.3		65	1	200	6.71

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.
 Heartland Environmental Associates, Inc. • 3410 Mishawaka Ave. • South Bend, Indiana 46615 • (574) 289-1191



LOW-FLOW GROUNDWATER SAMPLING DATA SHEET

Sample ID: W-8 Boring or Well ID: _____
 Lab No.: _____ Boring or Well Location: Sample Street Complex
 Sampling Personnel: David Nye Sample Date & Time: 3-24-14
 Weather: Sky Partly Cloudy Ground: Hard Wind: 10-15 mph Precipitation: None
 Temp.: 31°F Humidity: Moderate Low / Moderate / High

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): 9.94 Ft SWL Elevation (prior to purge): _____ Ft
 Well / Sampler Depth from TOC: 54.92 Ft TOC to Grade: _____ Ft
 Volume/Foot Casing (d²x0.04079): _____ Gallons 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: 5.5 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: Clear / Slightly Turbid / Moderately Turbid / Very Turbid)
 Filtration Method: (Gravity / Vacuum / Pressure) None Color: Gray / Brown / Tan /
 Filter: (Cartridge / Paper) Type: _____ 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*		
1425	7.20	0.261	NA	19.35	NA	5.12	NA	0.0	NA	113	NA	178	9.94
1431	8.65	0.929		11.63		5.97		0.0		66		192	9.94
1434	8.75	0.927	0.2	11.50	1.1	5.98	0.01	0.0	0	66	0	200	9.94
1437	8.97	0.928	0.1	11.38	1.0	5.98	0	0.0	0	65	1	200	9.94
1440	9.25	0.921	0.8	11.24	1.2	5.97	0.01	0.0	0	67	2	200	9.94

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.

Heartland Environmental Associates, Inc. • 3410 Mishawaka Ave. • South Bend, Indiana 46615 • (574) 289-1191



LOW-FLOW GROUNDWATER SAMPLING DATA SHEET

Sample ID: W-9 Boring or Well ID: _____
 Lab No.: _____ Boring or Well Location: Sample Street Complex
 Sampling Personnel: David Nye Client: UEA
 Weather: Sky overcast Ground: Snow covered Wind: 10-15 mph Precipitation: N/A
 Temp.: 38°C Humidity: High / Moderate / Low / _____ %

Sample Date & Time: 3-24-14 12:35
 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): 10.48 Ft SWL Elevation (prior to purge): _____ Ft
 Well / Sampler Depth from TOC: 52.94 Ft TOC to Grade: 2.3 Ft Well Depth from Grade: _____ Ft
 Volume/Foot Casing (d²x0.04079): _____ Gallons Volume of Water Column: _____ Gallons
 Volume of Water Purged: 2.5 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: 48 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 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*		
1200	6.81	0.126	NA	16.89	NA	5.73	NA	48.1	NA	69	NA	176	10.48
1206	8.13	0.766		10.75		6.00		6.0		67		190	10.48
1209	8.32	2.3	0.5	10.69	0.6	6.01	0.01	1.0		47	20	196	10.48
1212	8.58	3.1	0	10.53		6.02	0.01	0.0		57	20	200	10.48
1215	8.81	2.7	0	10.48	1.4	6.02	0	0.0		69	2	194	10.48
1218	8.96	0.04	36.5	1.80		6.02		0.0		76		198	10.48
1221	9.19	1.05		1.22		6.02	0	0.0		51		200	10.48
1224	9.24	1.06		1.01		6.02		0.0		-96		200	10.48
1227	9.42	1.9	0	0.93	7.9	6.01	0.01	0.0		-106	10	200	10.48
1230	9.56	0.4	0.9	0.90	3.2	6.01	0	0.0		-115	9	196	10.48
1233	9.44	0.2	0	0.84	6.7	6.01	0	0.0		-125	10	200	10.48

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: S-3A 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: 10-15 mph Precipitation: None
 Temp.: 32°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): 6.25 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
 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
 Filtration Method: (Gravity / Vacuum / Pressure) None
 Filter: (Cartridge / Paper) Type: _____ Pore Size: _____

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*		
1550	7.50	0.113	NA	16.27	NA	5.24	NA	24.5	NA	115	NA	200	6.25
1556	8.07	0.195		1.23		5.96		4.9		44		200	6.25
1559	8.14	0.194	1	1.08	12.2	5.96		2.4		37		200	6.25
1602	8.27	0.194		0.96	11.1	5.96		2.3		32		200	6.25
1605	8.22	0.193	0.5	0.88	8.3	5.95	0.01	2.4	4.3	26	6	200	6.25
1608	8.42	0.193	0	0.81	8.0	5.96	0.01	2.4	0	22	4	200	6.25
1611	8.45	0.194	0.5	0.77	4.9	5.96	0	2.6	8.3	19	3	200	6.25

Water Sample Appearance: Clear / Slightly Turbid / Moderately Turbid / Very Turbid)
 (Color: Gray / Brown / Tan /)
 Were Samples Iced after Collection? YES / NO /

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.

Heartland Environmental Associates, Inc. • 3410 Mishawaka Ave. • South Bend, Indiana 46615 • (574) 289-1191