



Landmark Environmental, LLC

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December 19, 2016

Sent via Email

Mr. Allan Timm and Ed Olson
MPCA VIC Program
520 Lafayette Road
St. Paul, MN 55155-4194

**Re: Soil Vapor, Groundwater, Active VMS and DPE System Monitoring Report
MN Bio Business Center, Rochester, MN**

Dear Mr. Timm and Mr. Olson:

On behalf of the City of Rochester (City), Landmark Environmental, LLC (Landmark) has prepared this letter report (Report) to present quarterly groundwater and soil vapor monitoring results, and monthly dual phase extraction (DPE) system monitoring from the above referenced property (Property), shown in **Figure 1**. This Report documents quarterly groundwater and soil vapor monitoring results from the August 10, 2016, sampling event; and monthly DPE system monitoring events on July 28 and August 10, 2016. Bioremediation implementation events on July 28, September 12 through 17 and October 20, 2016 will be documented under a separate cover.

DPE System Status: After approximately two years of monitoring the groundwater and soil vapor following shut off of the DPE system, Landmark re-started the DPE system on December 14, 2015. DPE system maintenance, monitoring, and/or sampling events were completed through August 10, 2016. The DPE system was shut down on July 22, 2016 to allow the groundwater to equilibrate prior to SiREM microbial groundwater collection event on July 28, 2016. The DPE system was re-started following DPE system maintenance, monitoring and sample event on August 10, 2016. Then, the DPE system was shut down on September 8, 2016 to allow groundwater levels to stabilize prior to the bioremediation/bioaugmentation chemical injection activities. The DPE system remains off indefinitely with groundwater being monitored on a quarterly basis to assess the effectiveness of the bioremediation event.

VMS System Status: After observing some rebound in soil vapor concentrations while the DPE system was not operating, the vapor mitigation system (VMS) was converted from a passive to an active system in 2015. The active VMS first began operating on September 8, 2015, and operated until December 15, 2015, when the DPE system was restarted. The active VMS began operating again on May 17, 2016 and it remains operational.

Background

The Minnesota Pollution Control Agency (MPCA) has requested groundwater monitoring at the Property since 2009, to evaluate the effectiveness of the DPE system, which originally started up on June 29, 2009. During its operation, the configuration of the DPE system was adjusted based on groundwater volatile organic compound (VOC) concentrations in the DPE wells, DPE VOC emissions concentrations, and

DPE well photoionization detector (PID) readings collected during monthly monitoring and sampling events. In its Quarterly Groundwater Monitoring and Dual Phase Extraction System Effectiveness Report dated July 31, 2013, Landmark recommended shutdown of the DPE system. The MPCA approved DPE system shut down in an email dated October 7, 2013 with some modifications including maintaining the DPE system so that it can be restarted if necessary, groundwater sampling the entire monitoring well network, and investigate alternative technologies to address the residual or source area contamination.

In the December 11, 2013 Quarterly Groundwater Monitoring and Dual Phase Extraction System Effectiveness Report, Landmark recommended decommissioning and removing the DPE system from the building, per MPCA's approval, if the soil vapor and groundwater concentrations do not exceed the following level after one year of monitoring with the DPE system off (through August 2014):

- Ten times (10X) the industrial intrusion screening value (IISV) of 600 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) at LSG-7 (the south monitoring location beneath Dooley's Pub); or,
- One hundred times (100X) the IISV of 6,000 $\mu\text{g}/\text{m}^3$ at LSG-8 (bordering the east sidewalk and street), LSG-9 (beneath the north slab-on-grade section of the building which has a vapor barrier and venting system), and LSG-10 (bordering the west alley); or,
- 10X the health risk limit (HRL) for tetrachloroethene (PCE) of 70 micrograms per liter ($\mu\text{g}/\text{L}$) at downgradient and side-gradient monitoring wells MW-14, MW-15, and MW-19.
- The City will continue quarterly groundwater sampling and semiannual soil gas sampling through August 2014.

In an email dated January 15, 2014, the MPCA approved these recommendations with the following comments:

- Approve the current report.
- The high concentrations of PCE in the groundwater in the area of the elevator shaft and sump SP-2 are a source of the PCE vapors in the sump and drain tile system. The PCE vapor concentrations are high enough that the sub-slab ventilation system may need to be active rather than passive.
- Continued vapor monitoring is needed in this area to determine if additional remediation of the source area is needed.
- Agree with Landmarks recommendation to monitor groundwater and soil gas for one year. After one year the MPCA will re-evaluate the groundwater and soil gas concentration trends and make a determination regarding:
 - Will natural attenuation and passive sub-slab vapor mitigation be adequate at the site?
 - Should the remediation system be restarted to further reduce concentration in the groundwater?

- Should alternative technologies such as in-situ enhanced bio-degradation or chemical oxidization be used to further reduce PCE concentrations in the source area? These may be used in conjunction with the DPE system.
- At this time the highest PCE concentration was 6,980 µg/l at DPE-3, which is approximately 1,400 times the HRL of 5 µg/l. (The report incorrectly states that the HRL is 7 µg/l.) There are no wells located to the north of DPE-3 to help define the extent of the groundwater contamination.
- Because the impacted groundwater is in a karst aquifer, it is difficult to determine where the impacted groundwater from the source area is migrating. Therefore the extent of the contamination may not be adequately determined and the contamination may have to be remediated to a lower level than it is currently at.
- The significant fluctuations in PCE concentrations when the groundwater elevations increased during the spring of 2013 indicate that significant contamination may be remaining in the fractures and pore spaces in the bedrock at the site.¹

A meeting with Landmark, MPCA, and the City was held on March 17, 2015, to discuss the next steps for the Property. MPCA requested additional groundwater response actions including repairing and restarting the DPE system, operating the DPE system for one to six months, and applying an in-situ groundwater injection remediation technology at select DPE wells to remediate residual VOC contamination in the fractured bedrock. In addition, the MPCA-requested additional soil vapor response actions, which included converting the passive venting system to an active VMS.²

Groundwater Monitoring Results

The DPE well groundwater hydrographs through August 10, 2016 (**Figure 2**) show a one to two foot fluctuation in groundwater elevation between the DPE system shut down in August 26, 2013 and DPE system restart on December 15, 2015. Similar groundwater elevation trends were observed in the monitoring well hydrographs shown in **Figure 3**. Groundwater flow interpretations are provided in

¹ On July 28, 2014, the MPCA implemented an interim ISV for PCE, which has lowered the applicable 10X IISV from 600 µg/m³ to 300 µg/m³. The Minnesota Department of Health (MDH) also recently lowered the HRL for PCE to from 7 µg/L to 5 µg/L. Therefore, the site specific screening values for PCE have changed to include 300 µg/m³ as the applicable 10X IISV for LSG-7, 3,000 µg/m³ as the applicable 100X IISV for LSG-8, LSG-9, and LSG-10, and 50 µg/L as the 10X HRL at downgradient and side-gradient monitoring wells MW-14, MW-15, and MW-19.

² On May 25, 2016, the MPCA adopted interim ISVs for select contaminants, including PCE. The interim ISV for PCE raised the applicable 10X IISV from 300 µg/m³ to 330 µg/m³. Therefore, the site specific screening values for PCE would be 330 µg/m³ as the applicable 10X IISV for LSG-7 and 3,300 µg/m³ as the applicable 100X IISV for LSG-8, LSG-9, and LSG-10. The applicable 10X HRL would stay the same at 50 µg/L for downgradient and side-gradient monitoring wells, including MW-14, MW-15, MW-19 and MW-20.

Figures 4 and 5. The groundwater elevation data is provided in **Table 1**. Well construction information is provided in **Table 2**.³

After approximately five years of DPE system operation, PCE concentrations decreased in all of the monitoring and DPE wells, as shown in **Table 5** and **Figures 6A and 6B**. Groundwater VOC concentrations also decreased significantly from historical highs observed April 1 through June 30, 2013, following a 25.6 inch precipitation event. Following shutdown of the DPE system on August 26, 2013, PCE concentrations rebounded to some degree in the DPE and monitoring wells. After restarting the DPE system on December 15, 2015, within a few months concentrations of PCE in the wells decreased. **Figure 7** shows the iso-concentration contour map for PCE during the August 10, 2016 monitoring event. The groundwater analytical results are included in **Tables 6A and 6B** and the groundwater analytical reports are included in **Attachment A**. Groundwater monitoring field data sheets are included in **Attachment B**.

Venting System and Soil Vapor Monitoring Results

As mentioned previously, the active VMS began operating on September 8, 2015, and was shut down on December 15, 2015, when the DPE system was restarted. After testing simultaneous operation of the active VMS and DPE system to show that both systems could operate effectively at the same time, the active VMS was re-started on May 17, 2016. Post-mitigation monitoring results to date are included in **Table 7** along with pre-mitigation diagnostic testing results from March 23, 2015, for comparison.

During the August 10, 2016 monitoring event, soil vapor samples were collected from LSG-7 through LSG-10. These soil vapor samples were collected with the DPE system running. Sampling ports LSG-7 through LSG-10 were installed on December 21, 2012, by coring 1-inch holes through the foundation walls near the basement ceiling.

- Locations LSG-7 and LSG-9 are representative of sub-slab soil vapor samples because they are collected within 1 foot below the bottom of the slab per MPCA requirements. LSG-7 near the former SG-1 sampling location is beneath Dooley's Pub south of the basement. LSG-9, is located beneath the slab on grade section of the Property building north of the basement. .
- Soil vapor samples not located beneath a building slab are collected at LSG-8 on the east side of the Property building beneath the sidewalk, and LSG-10 located on the west side of the Property building beneath the alley. LSG-8 samples are collected approximately 6 inches below the concrete surface of the sidewalk. LSG-10 samples are collected approximately 3 feet beneath the concrete surface of the alley.

In addition, grab headspace samples were collected from storm sewer sumps SP-1 and SP-2 located in the basement of the Property building on August 10, 2016.

³ Per the MPCA's approval in an email dated December 14, 2009, analysis of the following natural attenuation parameters has been discontinued: dissolved calcium, dissolved organic carbon, dissolved iron, dissolved magnesium, methane, nitrate as nitrogen, sulfate, and sulfide. The prior natural attenuation data is provided in **Table 3**. The following field parameter data is collected at each well on a quarterly basis and is provided in **Table 4**: temperature, conductivity, pH, oxidation reduction potential, and dissolved oxygen.

The soil vapor samples were collected in an evacuated, 1 liter Summa canister equipped with a dedicated pneumatic flow controller. Prior to collecting the soil gas samples, at a minimum, two volumes of air were purged from the sampling train using a hand-operated syringe. The sampling line (1/4-inch outer diameter [O.D.] Teflon tubing) was attached to the canister inlet using a Swagelok nut and set of stainless steel ferrules. The sampling line was attached to the tubing in the soil void created (approximately 1-inch O.D.) using new small length of inert tubing. The pneumatic flow controller was pre-set by the laboratory so that the canister fills at a rate in no less than 10 minutes. The Summa canister was equipped with a pressure gauge to monitor vacuum. The Summa canisters were submitted to Legend for analysis of VOCs using U.S. Environmental Protection Agency Method TO-15.

As shown in **Figure 8** and **Table 8**, all of the detected parameters from the August 10, 2016, sampling event were below the MPCA's applicable 10X IISVs. Field data, including PID readings, are included in **Table 9**. The analytical laboratory report from Legend Technical Services, Inc. (Legend) is included in **Attachment A**.

DPE System Operation and Maintenance

Monthly maintenance checks were completed during this reporting period from July through September 2016. The DPE system was shut down from July 22 through August 10, 2016, due to solenoid valve issues and to allow groundwater to equilibrate prior to the SiREM microbial groundwater sampling event. The DPE system was shut down indefinitely on September 8, 2016 to allow groundwater levels to stabilize prior to the bioremediation/bioaugmentation injection activities, and to monitor groundwater on a quarterly basis to assess the effectiveness of the bioremediation event. The DPE system operation and maintenance summary is provided in **Table 10**.

Groundwater influent and effluent samples for the air stripper collected on July 28 and August 10, 2016, verified that the groundwater discharge to the sanitary sewer was below the permit criteria. The effluent groundwater discharge concentrations were below the City's Water Reclamation Plant discharge criteria of 2,130 µg/L.

Acute emissions risk sampling was completed on August 10, 2016 for the 6-hour sampling period. The DPE system was operated at each well for 45 minutes for a total of six hours while a composite emissions air sample was collected from a Summa canister equipped with an 8-hour flow controller. The MPCA's Petroleum Remediation (PR) Program spreadsheet was used to evaluate the emissions rates from the DPE system and air stripper stacks on the Property during the DPE system sampling events. The site specific emissions rates for PCE from August 10, 2016, were below the MPCA screening emissions rate (SER) for chronic risk of 16,300 micrograms per second (µg/s), and for acute risk of 5,980,000 µg/s. The PR emissions rates are provided in **Table 13** and the PR spreadsheets are provided in **Attachment D**.

When comparing the August 10, 2016, emissions concentrations to the baseline emissions concentrations from April 9, 2009, the total volatile organic compound (VOC) concentration has decreased from 14,613,880 µg/m³ to 1,584 µg/m³, a decrease of 99.99 percent (See **Table 11** and **Figures 9A** and **9B**). PCE concentrations decreased from 11,600,000 µg/m³ to 15 µg/m³ during the August 10, 2016 sampling

event which is a decrease of 99.99 percent from the baseline concentration (See **Table 11** and **Figures 9A** and **9B**).

The DPE system removed approximately 1.25 pounds of total VOCs, including approximately 0.06 pounds of PCE, from May 17, 2016 through August 10, 2016 (see **Figure 10** and **Table 11**) and has reached the point of diminishing returns. Since it began operating and through August 10, 2016, the DPE system has removed a total of 3,710.17 pounds of total VOCs and 2,794.97 pounds of PCE. Emissions analytical data is provided in **Table 12** and system operational data tables and field data sheets are provided in **Attachment C**. The emissions analytical reports are included in **Attachment A**.

The cumulative total VOC mass removed from the DPE system groundwater discharge during air stripper operation from May 17, 2016 through August 10, 2016, was 0.64 pounds and has reached the point of diminishing returns. Mass removal data from the groundwater treatment system is provided in **Table 14** and the groundwater discharge analytical data is included in **Table 15**. The groundwater discharge analytical reports are provided in **Attachment A**.

Conclusions

After analyzing the soil vapor, groundwater, VMS, and DPE system data from this reporting period, the following conclusions can be made:

- The DPE and monitoring well groundwater hydrographs through August 10, 2016, show a one to two foot fluctuation in groundwater elevation based on whether the DPE system is operating or not.
- After restarting the DPE system on December 15, 2015, concentrations of PCE at the monitoring and DPE wells decreased significantly within a few months.
- All of the sampled parameters from the August 10, 2016 soil vapor sampling event were below the MPCA's applicable 10X IISVs.
- Through August 10, 2016, the DPE system has removed a total of 3,710.17 pounds of total VOCs and 2,794.97 pounds of PCE.
- The VOC and PCE mass removal from the DPE system emissions as shown in Figure 10 has reached asymptotic levels.
- The DPE system removed approximately 1.25 pounds of total VOCs, including approximately 0.06 pounds of PCE, from May 17, 2016 through August 10, 2016, and has reached the point of diminishing returns. The cumulative total VOC mass removed from the DPE system groundwater discharge during air stripper operation from May 17, 2016 through August 10, 2016, was 0.64 pounds and has reached the point of diminishing returns.

Recommendations

Landmark recommends continuous operation of the active VMS to help prevent vapor intrusion into the building and vapor migration from the Property.

Landmark recommends keeping the DPE system off while monitoring the groundwater VOC concentrations to evaluate the effectiveness of the bioremediation/bioaugmentation events.

Landmark recommends decommissioning the DPE system after approximately one year of monitoring the effectiveness of the bioremediation/bioaugmentation response action implementation because the DPE system emissions and groundwater removal of total VOCs and PCE has reached the point of diminishing returns as indicated by the removal of only 0.06 pounds of PCE from the emissions and 0.64 pounds of VOCs from the groundwater discharge from May 17, 2016 through August 10, 2016, and as shown by the asymptotic mass removal levels of total VOCs and PCE from the DPE system emissions.

Landmark recommends continuing quarterly groundwater monitoring and semiannual soil vapor sampling.

If you have any questions or require additional information, please feel free to contact me at jskramstad@landmarkenv.com and (952) 887-9601, extension 205.

Sincerely,



Jason D. Skramstad, P.E.

CC: Terry Spaeth, City of Rochester

Figures

Figure 1: Property Location Map

Figure 2: DPE Well Hydrographs

Figure 3: Monitoring Well and Sump Hydrographs

Figure 4: Groundwater Flow Interpretation-August 10, 2016

Figure 5: 3D Groundwater Flow Interpretation- August 10, 2016

Figure 6A: PCE Concentrations in Groundwater-December 2008 to Present

Figure 6B: PCE Concentrations in Groundwater- May 2010 to Present

Figure 7: Shallow PCE Groundwater Concentration Interpretation- August 10, 2016

Figure 8: Soil Vapor Sampling Locations and PCE Results-August 10, 2016

Figure 9A: DPE Emissions Concentrations-June 2009 to Present

Figure 9B: DPE Emissions Concentrations-July 2010 to Present

Figure 10: Cumulative Mass Removed

Tables

Table 1: Groundwater Elevations

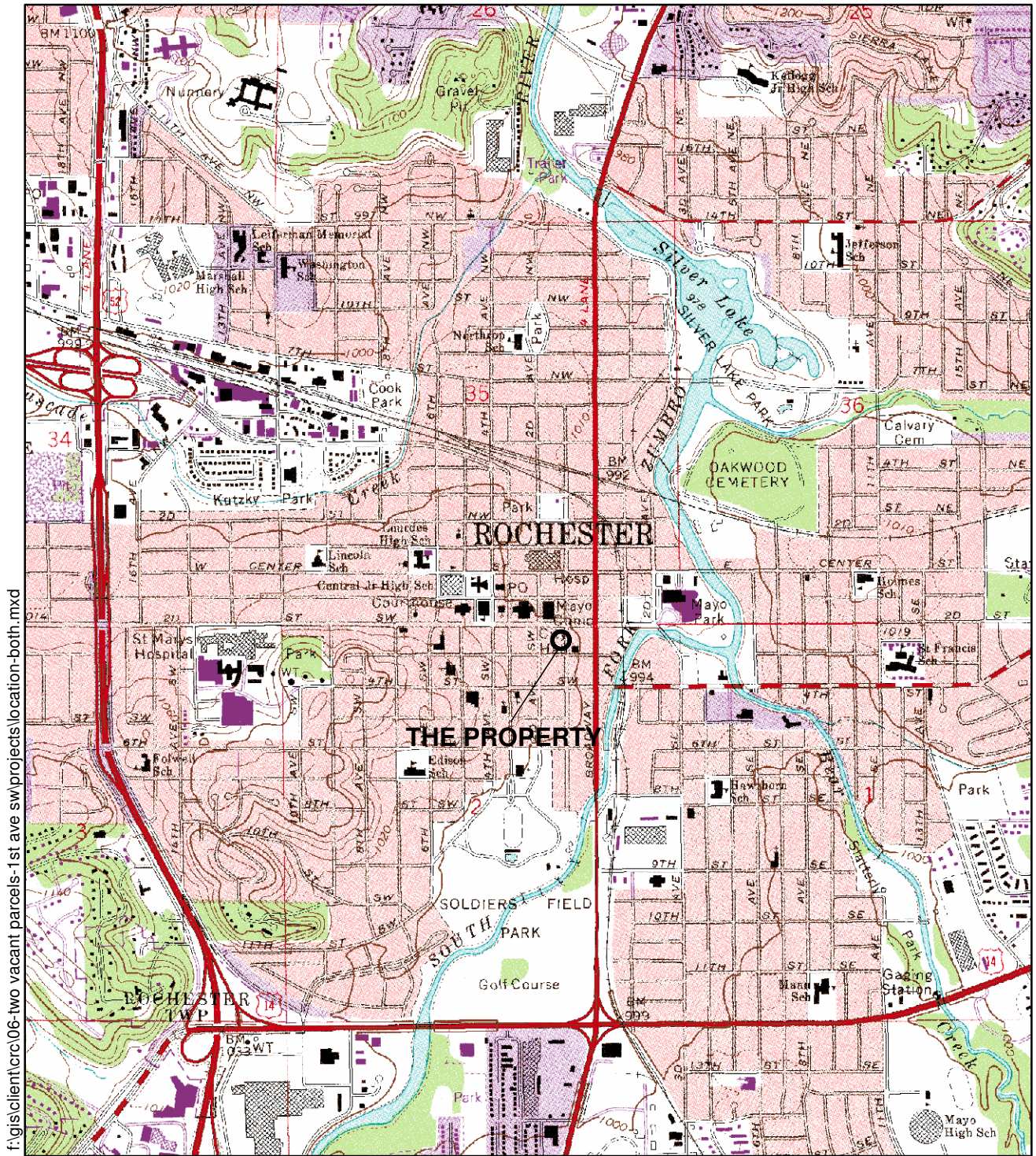
Table 2: Well Construction Summary
Table 3: Natural Attenuation Analytical Results
Table 4: Groundwater Field Data
Table 5: PCE Groundwater Concentration Data
Table 6A: DPE Well Groundwater Analytical Results
Table 6B: Monitoring Well Groundwater Analytical Results
Table 7: Vapor Mitigation System Monitoring Results
Table 8: Soil Vapor Sampling Results
Table 9: Soil Vapor and Venting System Monitoring Results
Table 10: System Operation and Maintenance Summary
Table 11: Mass Removal from DPE Exhaust
Table 12: Air Emissions Analytical Results
Table 13: Emissions Rate Summary
Table 14: Mass Removal from Groundwater Treatment System
Table 15: Groundwater Discharge Analytical Results

Attachments

Attachment A: Laboratory Analytical Reports
Attachment B: Groundwater Monitoring Field Data Sheets
Attachment C: System Operational Data Tables
Attachment D: PR Spreadsheets

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3rd_Quarter_Monitoring_Report.docx

Figures



f:\gisclient\c06-two vacant parcels-1st ave sw\projects\location-both.mxd

Source: Rochester, Minnesota Topographic Quadrangle, 7.5-Minute Series



2,000 1,000 0 2,000 Feet



FIGURE 1

PROPERTY LOCATION MAP
219 and 223 1ST Avenue Southwest
Rochester, Minnesota

FIGURE 2

DPE WELL HYDROGRAPHS
MN Bio Business Center
221 1st Avenue SW
Rochester, Minnesota

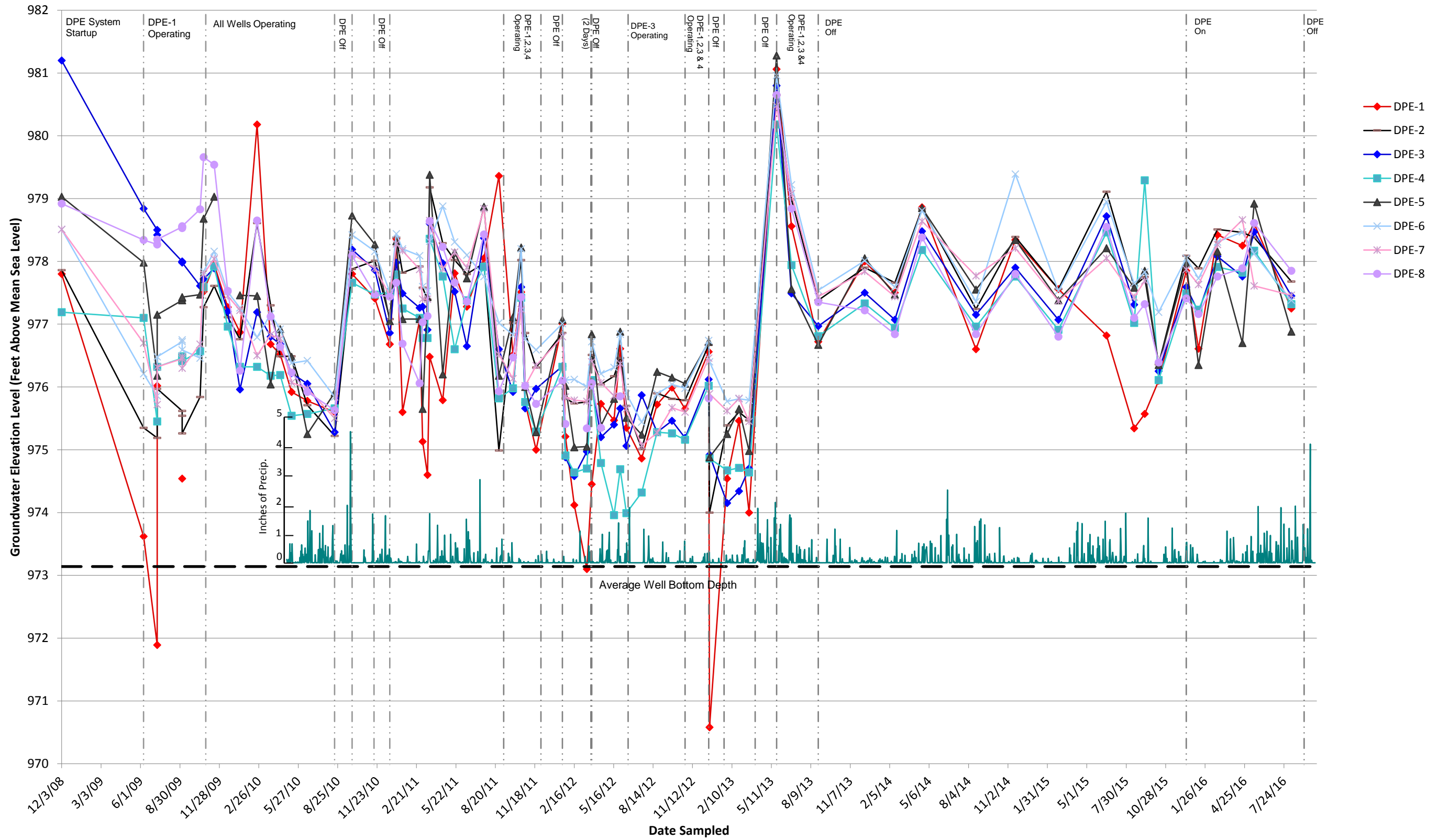
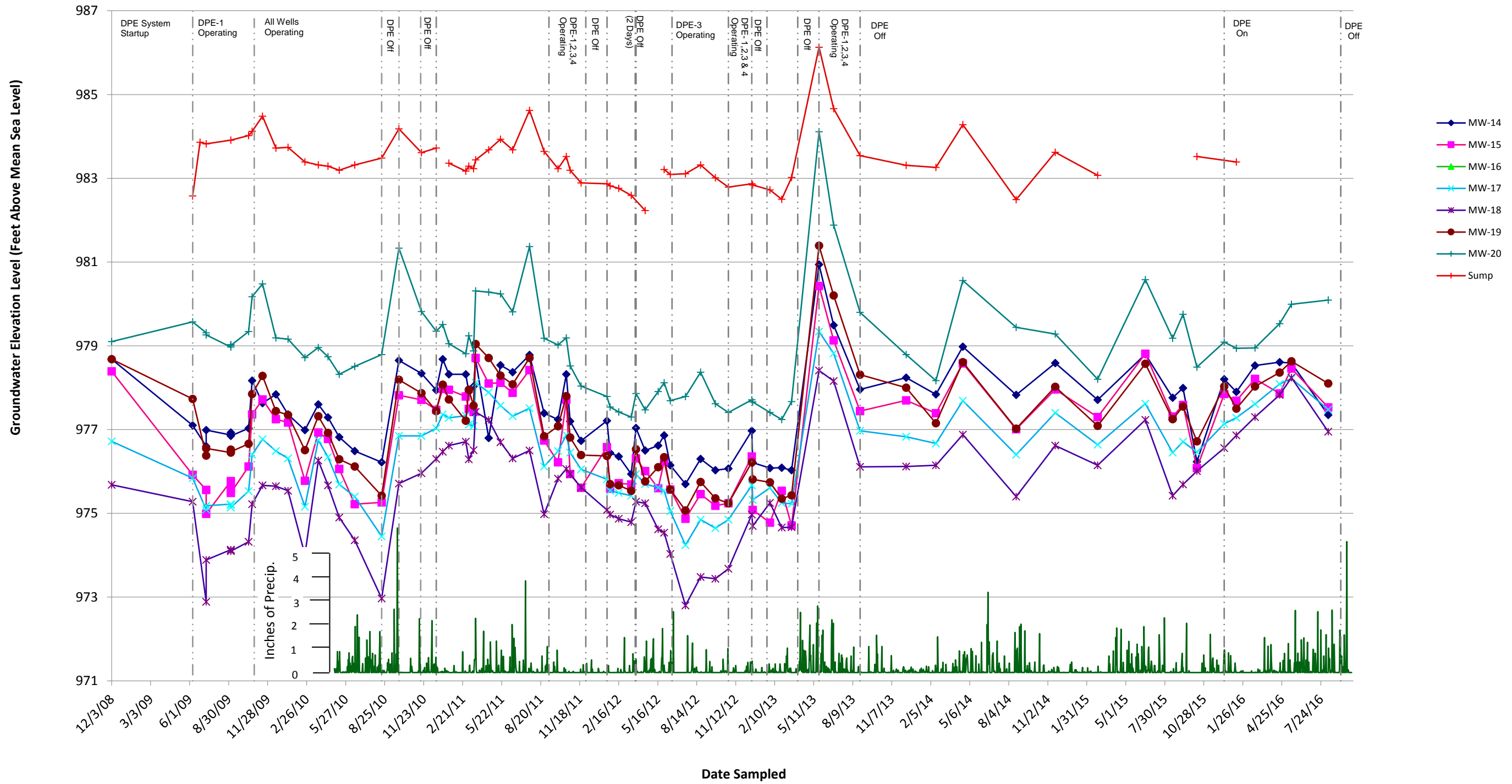
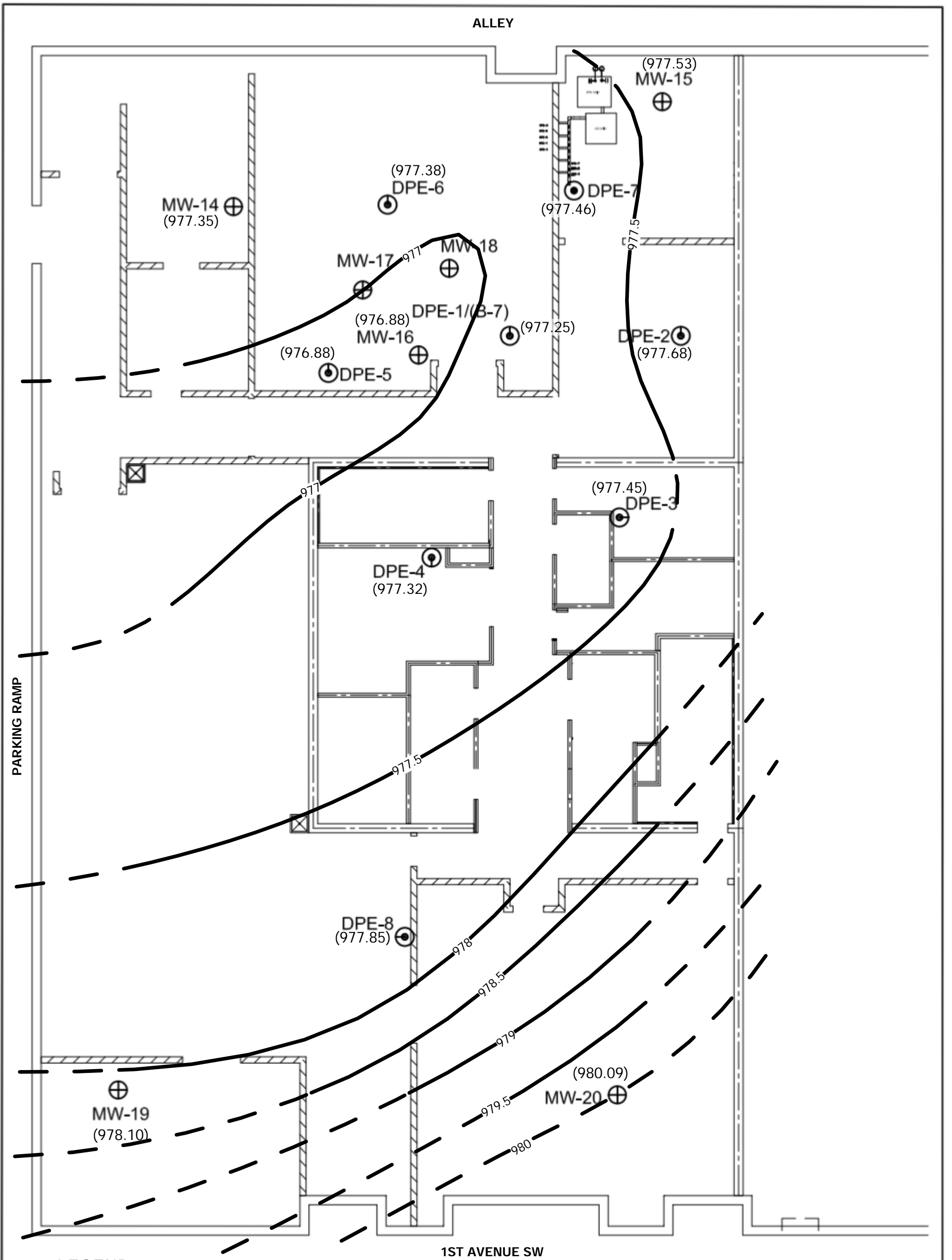


FIGURE 3
MONITORING WELL AND SUMP HYDROGRAPHS
MN Bio Business Center
221 1st Avenue SW
Rochester, Minnesota





LEGEND

- ⊙ DPE Well Location
- ⊕ Monitoring Well Location
- (976.92) Groundwater Elevation (feet above mean sea level)

NOTES:

1. MW-17 and 18 are not shallow wells; therefore, the data from these wells was not used in the contouring calculations.



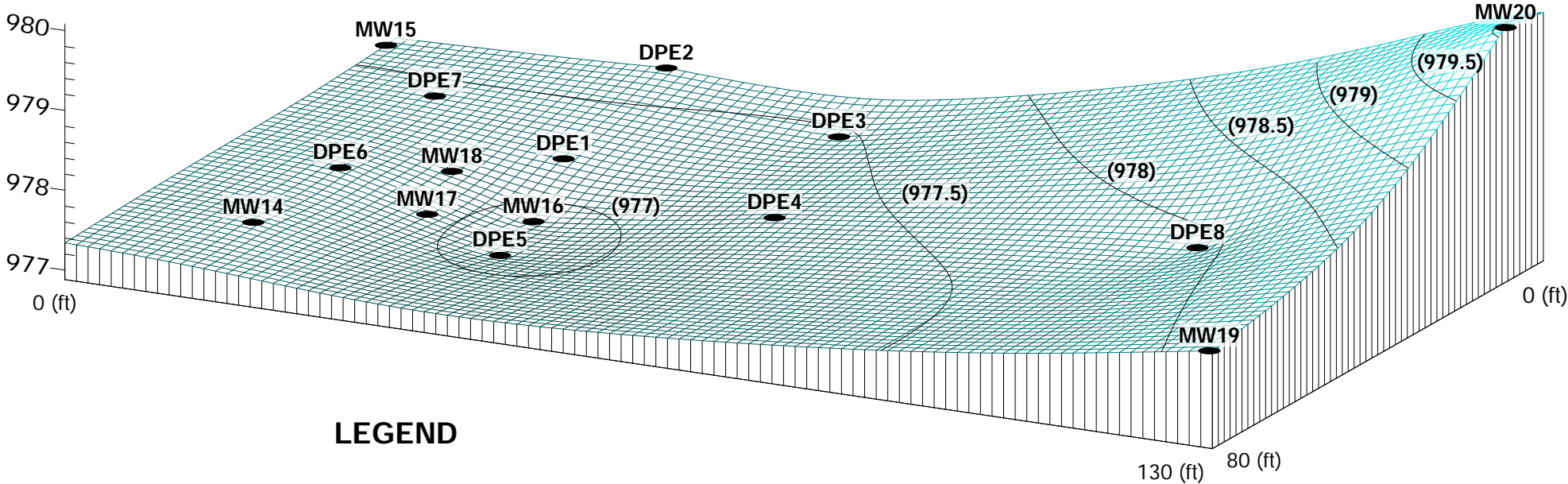
10 feet
SCALE

BASE DRAWING PROVIDED BY HGA

Rev	Date	By	Description	LANDMARK ENVIRONMENTAL, LLC 2042 West 98th Street Bloomington, MN 55431	FIGURE 4 GROUNDWATER FLOW INTERPRETATION August 10, 2016 221 FIRST AVENUE S.W. ROCHESTER, MINNESOTA	Landmark Project Number: CRC			
						Drawn: SMR	Checked: JDS	Designed: JDS	
						Scale: .	Date: .10/25/2016	Revision:	
						Drawing Number: .	Sheet	Of	Sheets

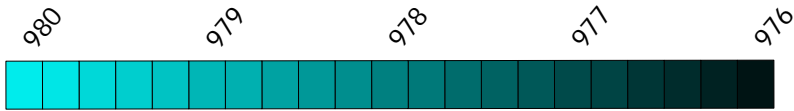
FIGURE 5
3D GROUNDWATER FLOW INTERPRETATION
 August 10, 2016

MN Bio Business Center
 221 First Avenue S.W.
 Rochester, Minnesota



LEGEND

- DPE and Monitoring Well Location
- (978) Groundwater Elevation (feet above mean sea level)



NOTES:

1. MW-17 and 18 are not shallow wells; therefore, the data from these wells was not used in the contouring calculations.

FIGURE 6A

PCE CONCENTRATIONS IN GROUNDWATER
December 2008 to Present
MN Bio Business Center
221 1st Avenue SW
Rochester, Minnesota

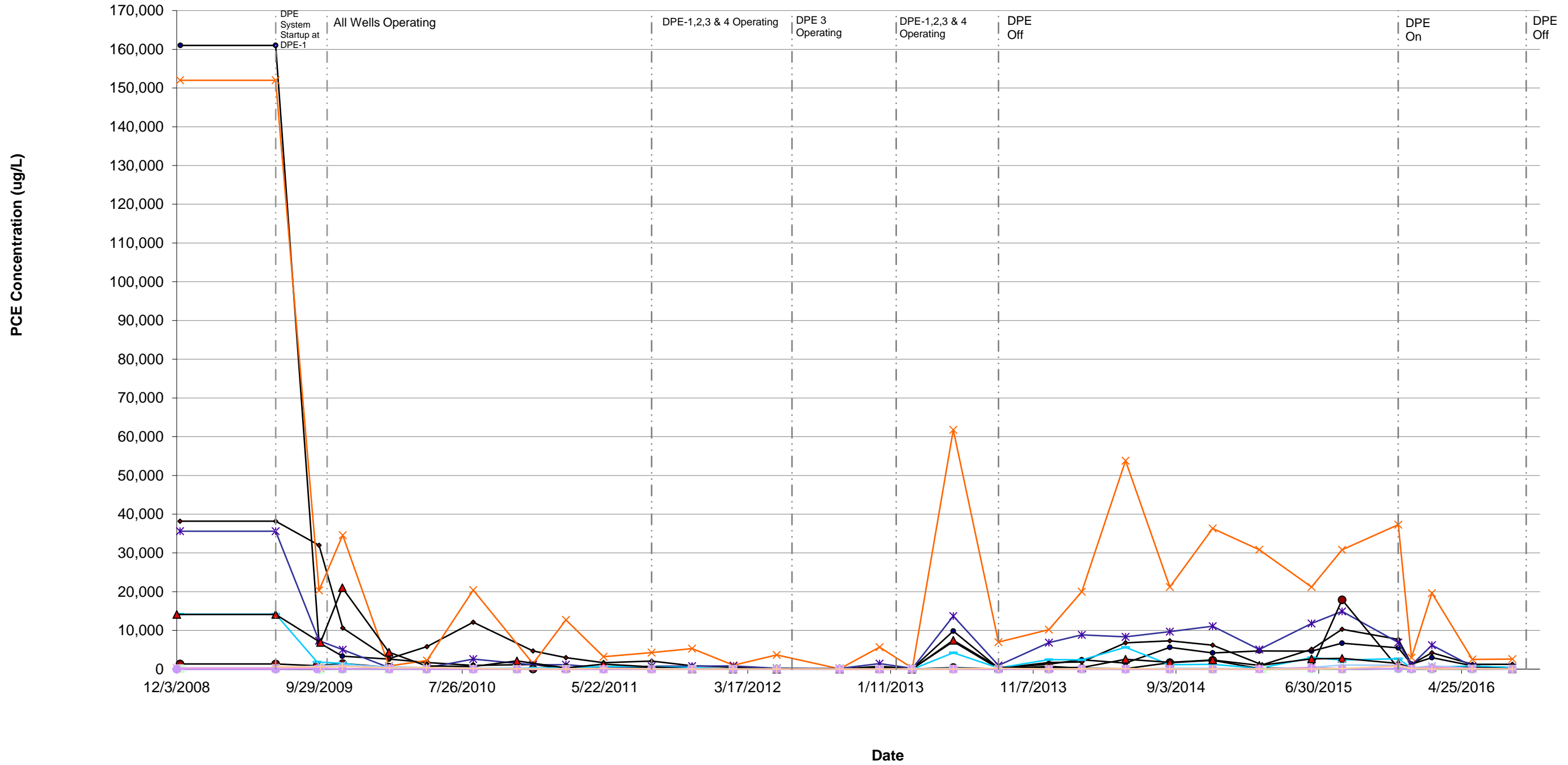
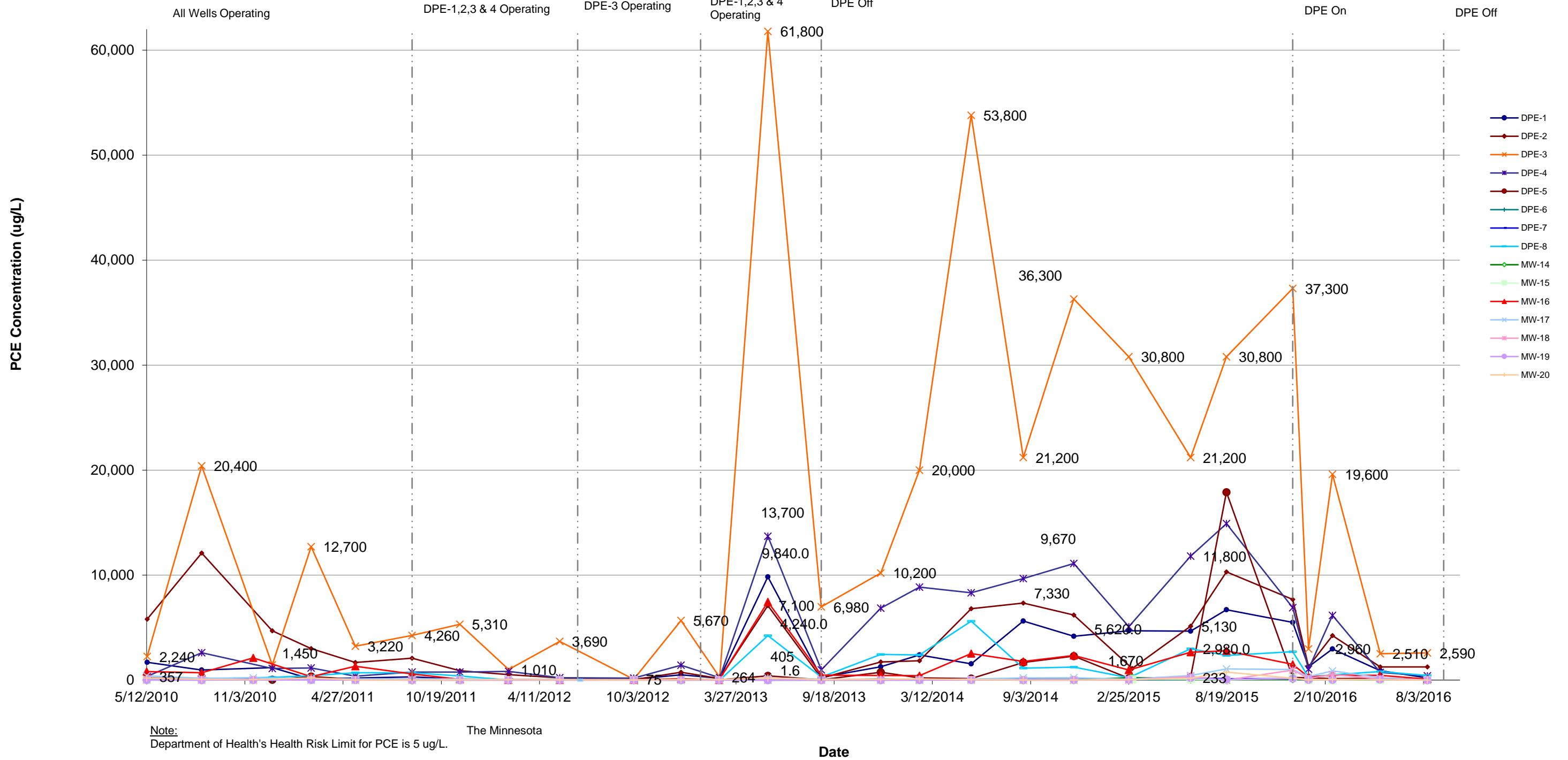
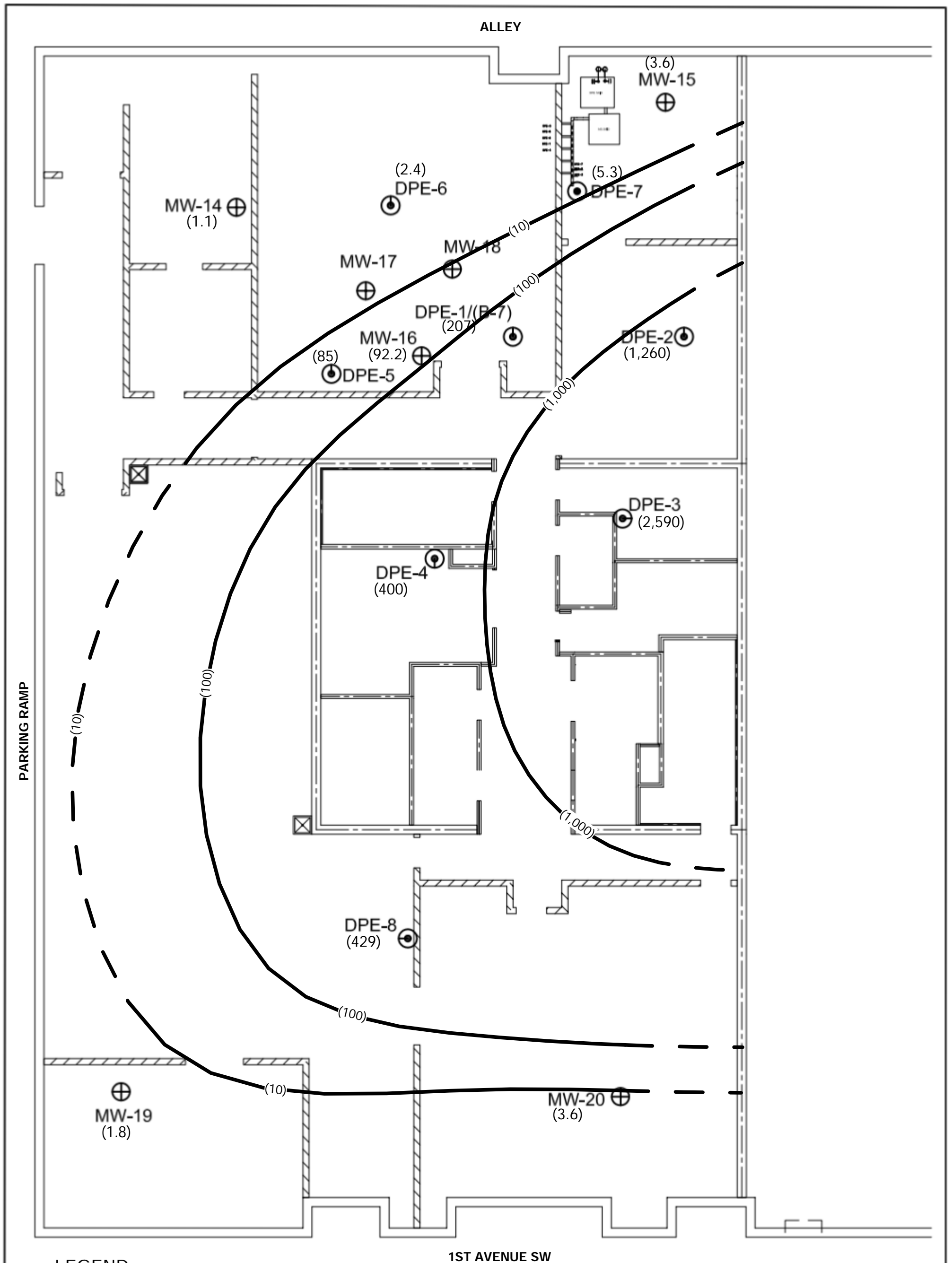


FIGURE 6B

PCE CONCENTRATIONS IN GROUNDWATER
 May 2010 to Present
 MN Bio Business Center
 221 1st Avenue SW
 Rochester, Minnesota





LEGEND

- ⊙ DPE Well Location
- ⊕ Monitoring Well Location
- (35.4) PCE Groundwater Concentration (micrograms per liter)

NOTES:

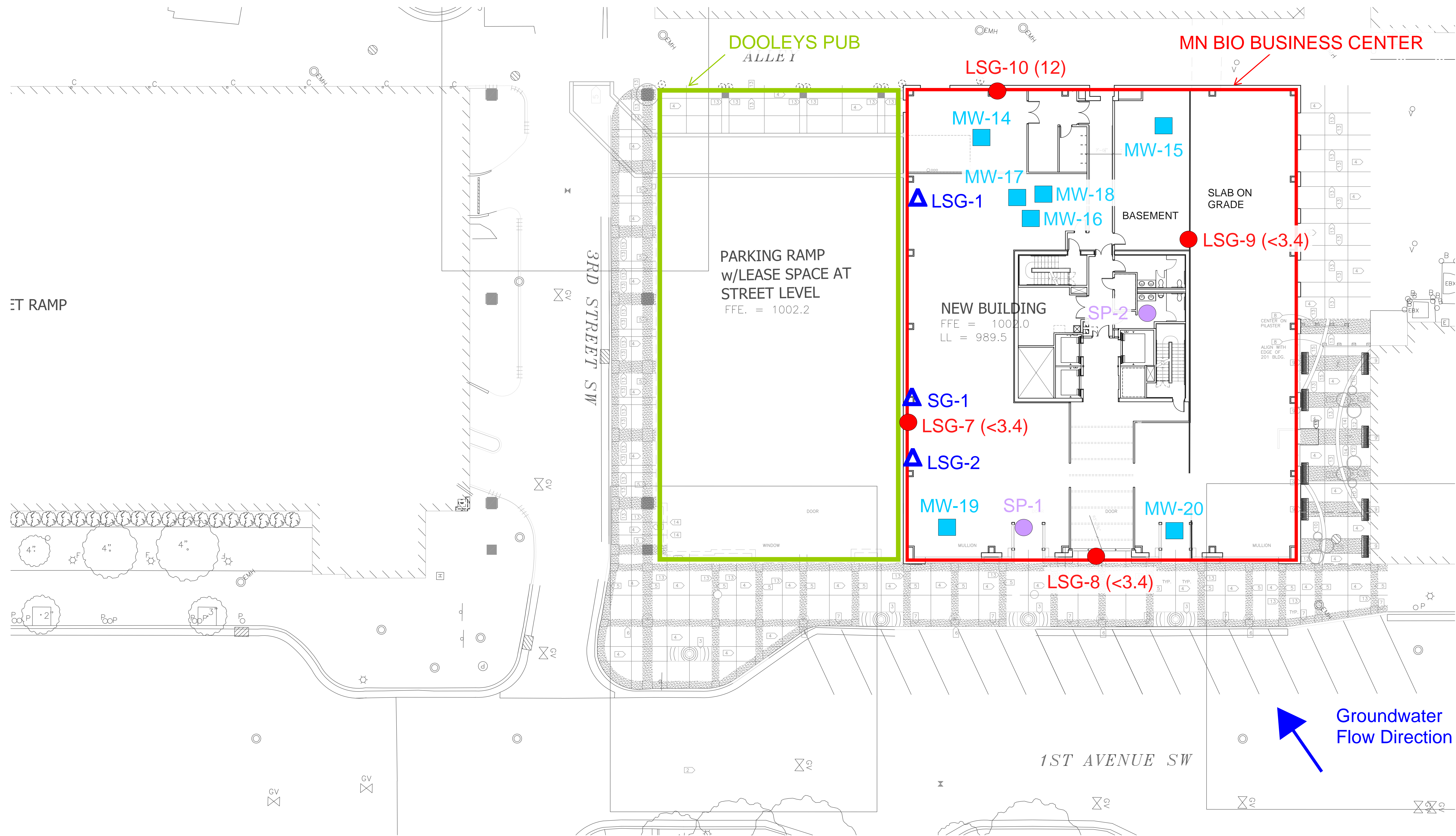
1. MW-17 and 18 are not shallow wells; therefore, the data from these wells was not used in the contouring calculations.



10 feet
SCALE

BASE DRAWING PROVIDED BY HGA

Rev	Date	By	Description	LANDMARK ENVIRONMENTAL, LLC 2042 West 98th Street Bloomington, MN 55431	FIGURE 7 SHALLOW PCE GROUNDWATER CONCENTRATION INTERPRETATION August 10, 2016 221 FIRST AVENUE S.W. ROCHESTER, MINNESOTA	Landmark Project Number: CRC		
						Drawn: SMR	Checked: JDS	Designed: JDS
						Scale: .	Date: 10/25/2016	Revision:
						Drawing Number: .	Sheet	Of Sheets



- SP-1 Sump Pit Vapor Sampling Location (ug/m3)
- LSG-7 Soil Vapor Sampling Locations (ug/m3)
- MW-19 Monitoring Well of Interest
- ▲ LSG-2 Previous Soil Vapor Sampling Location of Interest

Note: The Applicable Screening Criteria for PCE is the MPCA Interim 10X Industrial Intrusion Screening Value, which is 330 ug/m3

EXP. AGG. CONC. REFER TO SPEC. 321313	EXPOSED AGGREGATE CONCRETE CITY OF ROCHESTER STANDARD REFER TO SPEC. 321313
EXP. ADD. CONC. REFER TO SPEC. 321313	LUMINAIRE REFER TO E010 ELECTRICAL SITE PLAN
LUMINAIRE REFER TO E010 ELECTRICAL SITE PLAN	PARKING METER PROVIDED BY CITY OF ROCHESTER
PARKING METER PROVIDED BY CITY OF ROCHESTER	SCREEN WALL REFER TO 475201 & SPEC. 007100
SCREEN WALL REFER TO 475201 & SPEC. 007100	BENCH CITY OF ROCHESTER STANDARD, N.I.C.
BENCH CITY OF ROCHESTER STANDARD, N.I.C.	PRECAST CONCRETE PLANTER TYPE 1 REFER TO SPEC. 126300, N.I.C.
PRECAST CONCRETE PLANTER TYPE 1 REFER TO SPEC. 126300, N.I.C.	PRECAST CONCRETE PLANTER TYPE 2 REFER TO SPEC. 126300, N.I.C.
PRECAST CONCRETE PLANTER TYPE 2 REFER TO SPEC. 126300, N.I.C.	PRECAST CONCRETE PLANTER TYPE 3 REFER TO SPEC. 126300, N.I.C.
PRECAST CONCRETE PLANTER TYPE 3 REFER TO SPEC. 126300, N.I.C.	EXP. AGGREGATE CONCRETE CITY OF ROCHESTER STANDARD REFER TO SPEC. 321313
EXP. AGGREGATE CONCRETE CITY OF ROCHESTER STANDARD REFER TO SPEC. 321313	LUMINAIRE CITY OF ROCHESTER STANDARD REFER TO ELEC.
LUMINAIRE CITY OF ROCHESTER STANDARD REFER TO ELEC.	TREE GRATE REFER TO SPEC. 126300
TREE GRATE REFER TO SPEC. 126300	PARKING METER PROVIDED BY CITY OF ROCHESTER

FIGURE 8 - August 10, 2016 SOIL VAPOR SAMPLING LOCATIONS AND PCE RESULTS

FIGURE 9A

DPE EMISSIONS CONCENTRATIONS-JUNE 2009 TO PRESENT
MN Bio Business Center
221 1st Avenue SW
Rochester, Minnesota

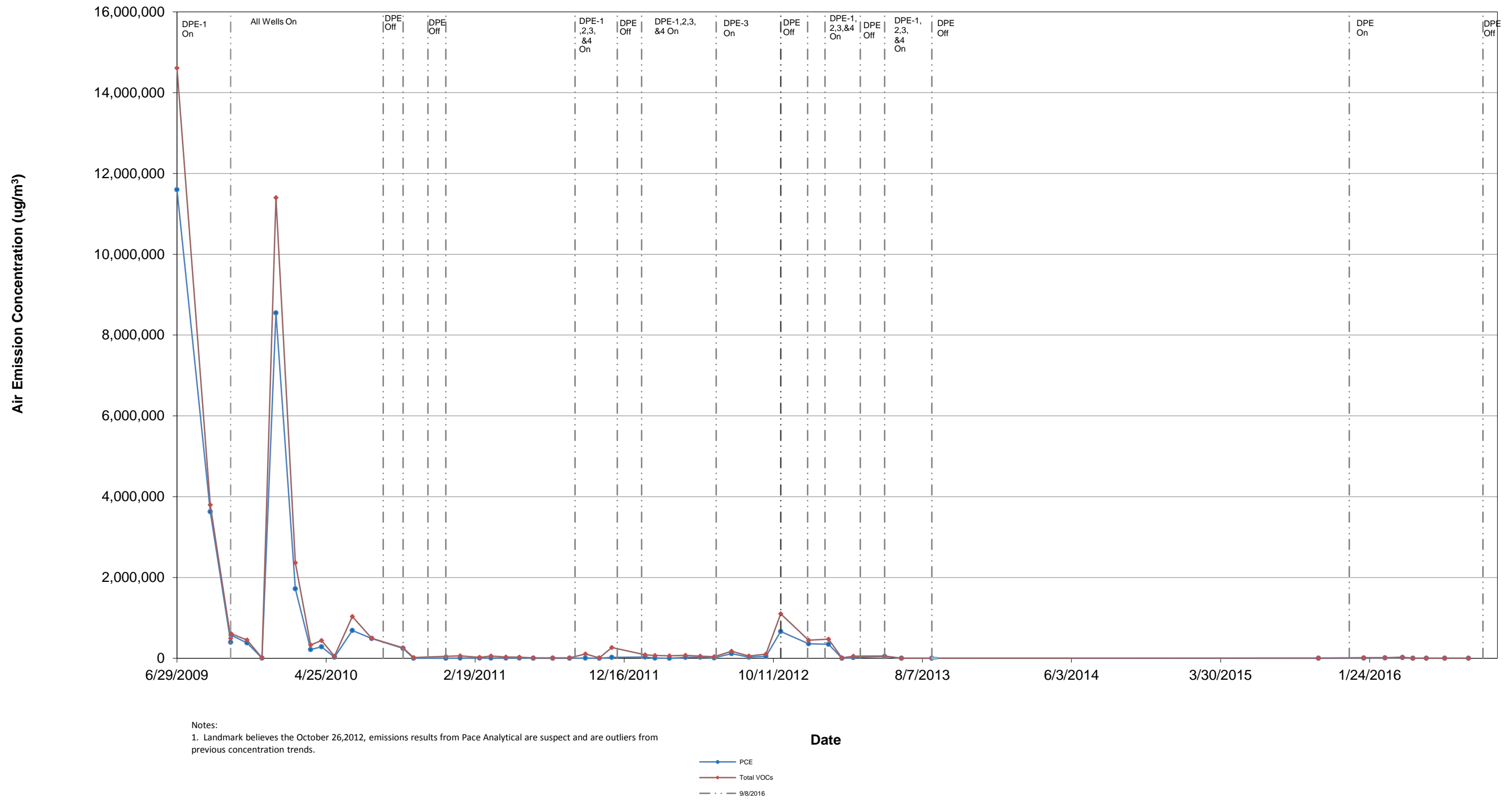


FIGURE 9B

DPE EMISSIONS CONCENTRATIONS - JULY 2010 TO PRESENT
MN Bio Business Center
221 1st Avenue SW
Rochester, Minnesota

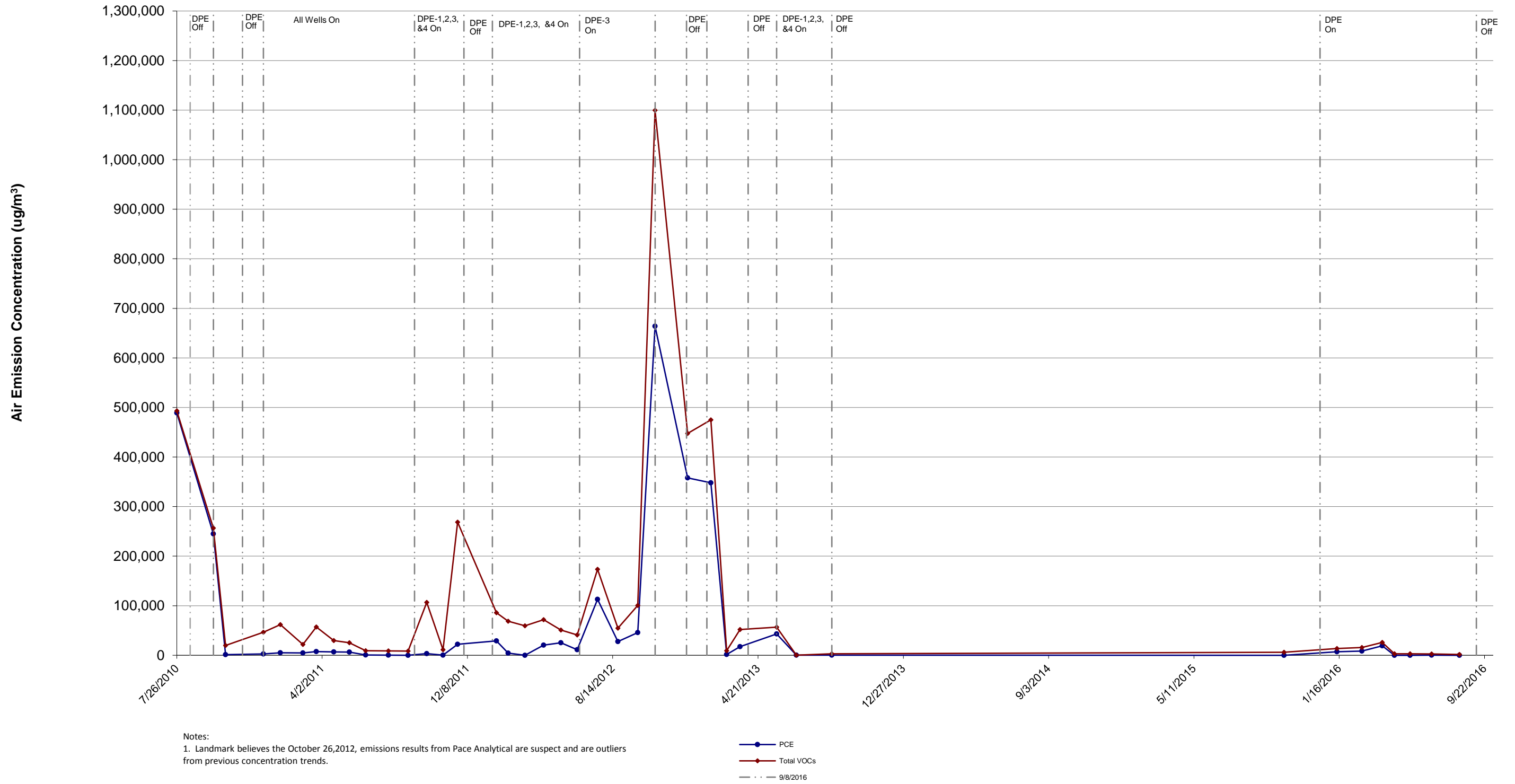
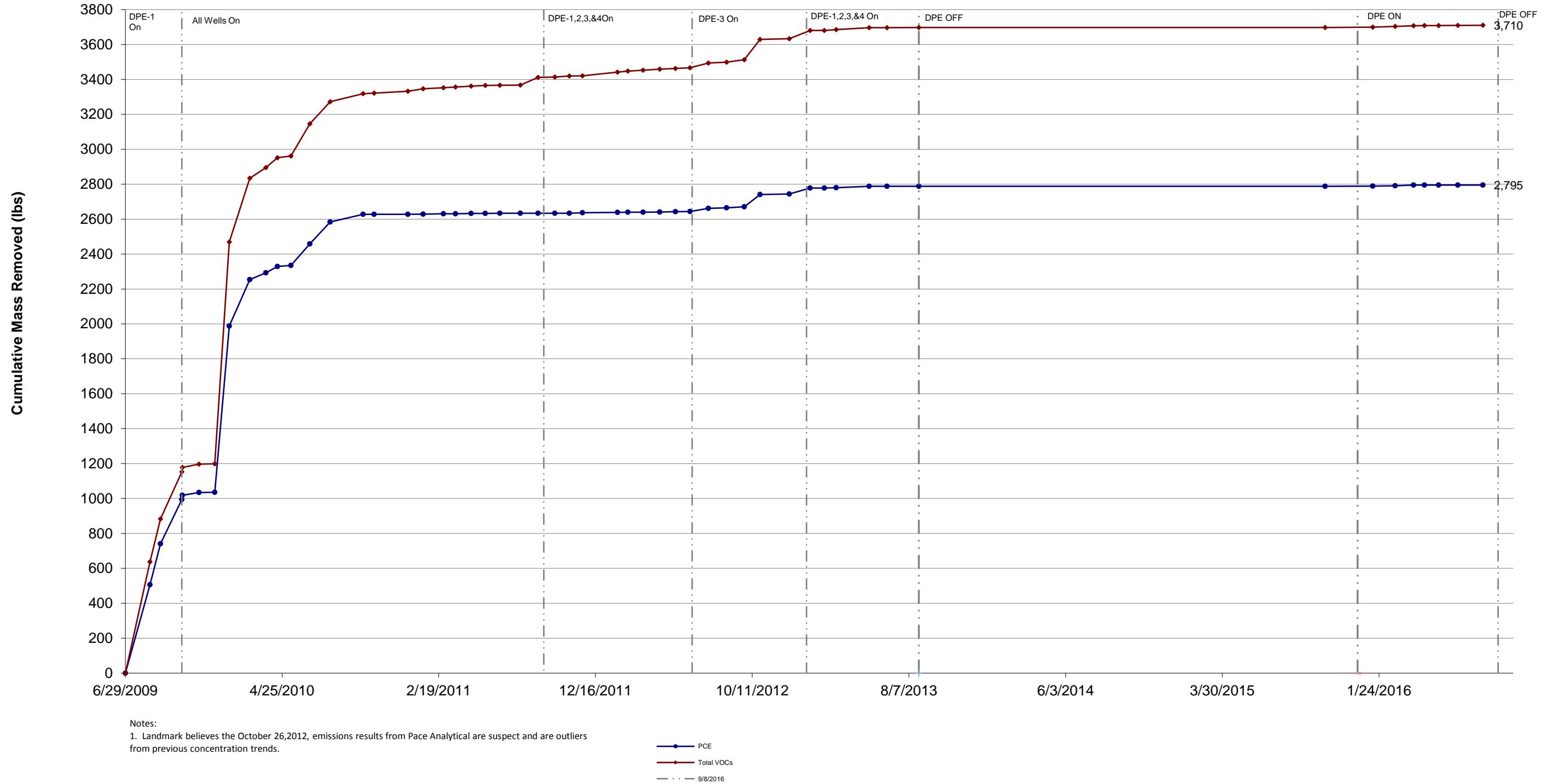


FIGURE 10

CUMULATIVE MASS REMOVED
MN Bio Business Center
221 1st Avenue SW
Rochester, Minnesota



Tables

TABLE 1
GROUNDWATER ELEVATIONS
MN Bio Business Center
221 First Avenue SW
Rochester, Minnesota

Well ID	Date Measured	Top of Casing Elevation ^{1,2}	Depth to Groundwater (feet)	Groundwater Elevation ³	System Status
MW-14	12/3/2008	989.50	10.82	978.68	pre-system installation
MW-14	6/8/2009	989.50	12.40	977.10	pre-system startup
MW-14	7/9/2009	989.50	12.90	976.60	DPE system on DPE-1
MW-14	7/9/2009	989.50	12.51	976.99	DPE system temporarily off
MW-14	9/4/2009	989.50	12.63	976.87	DPE system on
MW-14	9/4/2009	989.50	12.57	976.93	DPE system on after replacing inlet screen
MW-14	9/4/2009	989.50	12.65	976.85	DPE system on after replacing inlet filter
MW-14	10/15/2009	989.50	12.47	977.03	DPE system on DPE-1
MW-14	10/23/2009	989.50	11.33	978.17	DPE system off
MW-14	11/16/2009	989.50	11.87	977.63	DPE System on all wells
MW-14	12/17/2009	989.50	11.66	977.84	DPE System on all wells
MW-14	1/14/2010	989.50	12.14	977.36	DPE System on all wells
MW-14	2/22/2010	989.50	12.51	976.99	DPE System on all wells
MW-14	3/25/2010	989.50	11.90	977.60	DPE System on all wells
MW-14	4/16/2010	989.50	12.21	977.29	DPE System on all wells
MW-14	5/12/2010	989.50	12.68	976.82	DPE System on all wells
MW-14	6/17/2010	989.50	13.01	976.49	DPE System on all wells
MW-14	8/18/2010	989.50	13.28	976.22	DPE System on all wells
MW-14	9/27/2010	989.50	10.85	978.65	DPE System on all wells
MW-14	11/18/2010	989.50	11.16	978.34	DPE System not operating
MW-14	12/22/2010	989.50	11.56	977.94	DPE System restarted
MW-14	1/6/2011	989.50	10.82	978.68	DPE System on all wells
MW-14	1/20/2011	989.50	11.18	978.32	DPE System on all wells
MW-14	2/28/2011	989.50	11.18	978.32	DPE System on all wells
MW-14	3/7/2011	989.50	11.60	977.90	DPE System on all wells
MW-14	3/18/2011	989.50	11.47	978.03	DPE System on all wells
MW-14	3/23/2011	989.50	10.84	978.66	DPE System on all wells
MW-14	4/22/2011	989.50	12.70	976.80	DPE System on all wells
MW-14	5/19/2011	989.50	10.96	978.54	DPE System on all wells
MW-14	6/16/2011	989.50	11.13	978.37	DPE System on all wells
MW-14	7/25/2011	989.50	10.72	978.78	DPE System on all wells
MW-14	8/28/2011	989.50	12.11	977.39	DPE System on all wells
MW-14	9/29/2011	989.50	12.26	977.24	DPE-1,2,3,4
MW-14	10/18/2011	989.50	11.18	978.32	DPE-1,2,3,4
MW-14	10/27/2011	989.50	12.30	977.20	DPE-1,2,3,4
MW-14	11/21/2011	989.50	12.77	976.73	DPE-1,2,3,4
MW-14	1/20/2012	989.50	12.29	977.21	DPE-1,2,3,4
MW-14	1/27/2012	989.50	13.06	976.44	DPE-1,2,3,4
MW-14	2/16/2012	989.50	13.14	976.36	DPE-1,2,3,4
MW-14	3/16/2012	989.50	13.56	975.94	DPE-1,2,3,4
MW-14	3/27/2012	989.50	12.46	977.04	DPE-1,2,3,4
MW-14	4/17/2012	989.50	13.00	976.50	DPE-1,2,3,4
MW-14	5/17/2012	989.50	12.88	976.62	DPE-1,2,3,4
MW-14	5/31/2012	989.50	12.64	976.86	DPE-1,2,3,4
MW-14	6/14/2012	989.50	13.35	976.15	DPE-1,2,3,4
MW-14	7/19/2012	989.50	13.80	975.70	DPE-3
MW-14	8/23/2012	989.50	13.20	976.30	DPE-3
MW-14	9/26/2012	989.50	13.47	976.03	DPE-3
MW-14	10/26/2012	989.50	13.43	976.07	DPE-3
MW-14	12/19/2012	989.50	12.53	976.97	DPE-3; Before restarting the system
MW-14	12/21/2012	989.50	13.29	976.21	DPE-3; After restarting the system
MW-14	1/30/2013	989.50	13.42	976.08	DPE-1,2,3,4
MW-14	2/26/2013	989.50	13.41	976.09	DPE-1,2,3,4
MW-14	3/21/2013	989.50	13.47	976.03	DPE-1,2,3,4
MW-14	5/23/2013	989.50	8.56	980.94	DPE-1,2,3,4
MW-14	6/26/2013	989.50	10.01	979.49	DPE-1,2,3,4
MW-14	8/26/2013	989.50	11.54	977.96	DPE-1,2,3,4
MW-14	12/10/2013	989.50	11.26	978.24	System Off
MW-14	2/17/2014	989.50	11.66	977.84	System Off
MW-14	4/20/2014	989.50	10.52	978.98	System Off
MW-14	8/21/2014	989.50	11.67	977.83	System Off
MW-14	11/19/2014	989.50	10.91	978.59	System Off
MW-14	2/25/2015	989.50	11.79	977.71	System Off
MW-14	6/15/2015	989.50	10.70	978.80	System Off
MW-14	8/17/2015	989.50	11.74	977.76	System Off
MW-14	9/10/2015	989.50	11.51	977.99	System Off
MW-14	10/12/2015	989.50	13.27	976.23	System Off
MW-14	12/14/2015	989.50	11.30	978.20	DPE System on all wells
MW-14	1/11/2016	989.50	11.60	977.90	DPE System on all wells
MW-14	2/23/2016	989.50	10.97	978.53	DPE System on all wells
MW-14	4/20/2016	989.50	10.89	978.61	DPE System on all wells
MW-14	5/17/2016	989.50	10.91	978.59	DPE System on all wells
MW-14	8/10/2016	989.50	12.15	977.35	DPE System on all wells

TABLE 1
GROUNDWATER ELEVATIONS
MN Bio Business Center
221 First Avenue SW
Rochester, Minnesota

Well ID	Date Measured	Top of Casing Elevation ^{1,2}	Depth to Groundwater (feet)	Groundwater Elevation ³	System Status
MW-15	12/3/2008	991.50	13.11	978.39	pre-system installation
MW-15	6/8/2009	991.50	15.58	975.92	pre-system startup
MW-15	7/9/2009	991.50	15.94	975.56	DPE system on DPE-1
MW-15	7/9/2009	991.50	16.51	974.99	DPE system temporarily off
MW-15	9/4/2009	991.50	15.73	975.77	DPE system on
MW-15	9/4/2009	991.50	15.90	975.60	DPE system on after replacing inlet screen
MW-15	9/4/2009	991.50	16.01	975.49	DPE system on after replacing inlet filter
MW-15	10/15/2009	991.50	15.38	976.12	DPE system on DPE-1
MW-15	10/23/2009	991.50	14.14	977.36	DPE system off
MW-15	11/16/2009	991.50	13.78	977.72	DPE System on all wells
MW-15	12/17/2009	991.50	14.25	977.25	DPE System on all wells
MW-15	1/14/2010	991.50	14.33	977.17	DPE System on all wells
MW-15	2/22/2010	991.50	15.72	975.78	DPE System on all wells
MW-15	3/25/2010	991.50	14.57	976.93	DPE System on all wells
MW-15	4/16/2010	991.50	14.72	976.78	DPE System on all wells
MW-15	5/12/2010	991.50	15.44	976.06	DPE System on all wells
MW-15	6/17/2010	991.50	16.28	975.22	DPE System on all wells
MW-15	8/18/2010	991.50	16.24	975.26	DPE System on all wells
MW-15	9/27/2010	991.50	13.68	977.82	DPE System on all wells
MW-15	11/18/2010	991.50	13.79	977.71	DPE System not operating
MW-15	12/22/2010	991.50	14.03	977.47	DPE System restarted
MW-15	1/6/2011	991.50	13.53	977.97	DPE System on all wells
MW-15	1/20/2011	991.50	13.55	977.95	DPE System on all wells
MW-15	2/28/2011	991.50	13.71	977.79	DPE System on all wells
MW-15	3/7/2011	991.50	14.01	977.49	DPE System on all wells
MW-15	3/18/2011	991.50	14.08	977.42	DPE System on all wells
MW-15	3/23/2011	991.50	12.79	978.71	DPE System on all wells
MW-15	4/22/2011	991.50	13.40	978.10	DPE System on all wells
MW-15	5/19/2011	991.50	13.38	978.12	DPE System on all wells
MW-15	6/16/2011	991.50	13.62	977.88	DPE System on all wells
MW-15	7/25/2011	991.50	13.08	978.42	DPE System on all wells
MW-15	8/28/2011	991.50	14.76	976.74	DPE System on all wells
MW-15	9/29/2011	991.50	15.28	976.22	DPE-1,2,3,4
MW-15	10/18/2011	991.50	13.79	977.71	DPE-1,2,3,4
MW-15	10/27/2011	991.50	15.56	975.94	DPE-1,2,3,4
MW-15	11/21/2011	991.50	15.89	975.61	DPE-1,2,3,4
MW-15	1/20/2012	991.50	14.92	976.58	DPE-1,2,3,4
MW-15	1/27/2012	991.50	15.91	975.59	DPE-1,2,3,4
MW-15	2/16/2012	991.50	15.78	975.72	DPE-1,2,3,4
MW-15	3/16/2012	991.50	15.81	975.69	DPE-1,2,3,4
MW-15	3/27/2012	991.50	15.19	976.31	DPE-1,2,3,4
MW-15	4/17/2012	991.50	15.49	976.01	DPE-1,2,3,4
MW-15	5/17/2012	991.50	15.90	975.60	DPE-1,2,3,4
MW-15	5/31/2012	991.50	15.26	976.24	DPE-1,2,3,4
MW-15	6/14/2012	991.50	15.93	975.57	DPE-1,2,3,4
MW-15	7/19/2012	991.50	16.63	974.87	DPE-3
MW-15	8/23/2012	991.50	16.04	975.46	DPE-3
MW-15	9/26/2012	991.50	16.32	975.18	DPE-3
MW-15	10/26/2012	991.50	16.26	975.24	DPE-3
MW-15	12/19/2012	991.50	15.14	976.36	DPE-3; Before restarting the system
MW-15	12/21/2012	991.50	16.42	975.08	DPE-3; After restarting the system
MW-15	1/30/2013	991.50	16.72	974.78	DPE-1,2,3,4
MW-15	2/26/2013	991.50	15.96	975.54	DPE-1,2,3,4
MW-15	3/21/2013	991.50	16.79	974.71	DPE-1,2,3,4
MW-15	5/23/2013	991.50	11.07	980.43	DPE-1,2,3,4
MW-15	6/26/2013	991.50	12.37	979.13	DPE-1,2,3,4
MW-15	8/26/2013	991.50	14.06	977.44	DPE-1,2,3,4
MW-15	12/10/2013	991.50	13.80	977.70	System Off
MW-15	2/17/2014	991.50	14.11	977.39	System Off
MW-15	4/20/2014	991.50	12.92	978.58	System Off
MW-15	8/21/2014	991.50	14.49	977.01	System Off
MW-15	11/19/2014	991.50	13.54	977.96	System Off
MW-15	2/25/2015	991.50	14.20	977.30	System Off
MW-15	6/15/2015	991.50	12.69	978.81	System Off
MW-15	8/17/2015	991.50	14.19	977.31	System Off
MW-15	9/10/2015	991.50	13.91	977.59	System Off
MW-15	10/12/2015	991.50	15.42	976.08	System Off
MW-15	12/14/2015	991.50	13.65	977.85	DPE System on all wells
MW-15	1/11/2016	991.50	13.81	977.69	DPE System on all wells
MW-15	2/23/2016	991.50	13.29	978.21	DPE System on all wells
MW-15	4/20/2016	991.50	13.64	977.86	DPE System on all wells
MW-15	5/17/2016	991.50	13.04	978.46	DPE System on all wells
MW-15	8/10/2016	991.50	13.97	977.53	DPE System on all wells

TABLE 1
GROUNDWATER ELEVATIONS
MN Bio Business Center
221 First Avenue SW
Rochester, Minnesota

Well ID	Date Measured	Top of Casing Elevation ^{1,2}	Depth to Groundwater (feet)	Groundwater Elevation ³	System Status
MW-16	12/3/2008	989.44	12.32	977.12	pre-system installation
MW-16	6/8/2009	989.44	14.82	974.62	pre-system startup
MW-16	7/9/2009	989.44	14.23	975.21	DPE system on DPE-1
MW-16	7/9/2009	989.44	13.19	976.25	DPE system temporarily off
MW-16	9/4/2009	989.44	13.70	975.74	DPE system on
MW-16	9/4/2009	989.44	14.25	975.19	DPE system on after replacing inlet screen
MW-16	9/4/2009	989.44	14.58	974.86	DPE system on after replacing inlet filter
MW-16	10/15/2009	989.44	13.61	975.83	DPE system on DPE-1
MW-16	10/23/2009	989.44	11.89	977.55	DPE system off
MW-16	11/16/2009	989.44	11.44	978.00	DPE System on all wells
MW-16	12/17/2009	989.44	14.17	975.27	DPE System on all wells
MW-16	1/14/2010	989.44	12.57	976.87	DPE System on all wells
MW-16	2/22/2010	989.44	13.68	975.76	DPE System on all wells
MW-16	3/25/2010	989.44	12.50	976.94	DPE System on all wells
MW-16	4/16/2010	989.44	12.72	976.72	DPE System on all wells
MW-16	5/12/2010	989.44	13.41	976.03	DPE System on all wells
MW-16	6/17/2010	989.44	13.96	975.48	DPE System on all wells
MW-16	8/18/2010	989.44	13.91	975.53	DPE System on all wells
MW-16	9/27/2010	989.44	11.37	978.07	DPE System on all wells
MW-16	11/18/2010	989.44	11.61	977.83	DPE System not operating
MW-16	12/22/2010	989.44	12.63	976.81	DPE System restarted
MW-16	1/6/2011	989.44	11.30	978.14	DPE System on all wells
MW-16	1/20/2011	989.44	11.91	977.53	DPE System on all wells
MW-16	2/28/2011	989.44	11.77	977.67	DPE System on all wells
MW-16	3/7/2011	989.44	12.27	977.17	DPE System on all wells
MW-16	3/18/2011	989.44	12.38	977.06	DPE System on all wells
MW-16	3/23/2011	989.44	11.13	978.31	DPE System on all wells
MW-16	4/22/2011	989.44	11.92	977.52	DPE System on all wells
MW-16	5/19/2011	989.44	11.88	977.56	DPE System on all wells
MW-16	6/16/2011	989.44	11.97	977.47	DPE System on all wells
MW-16	7/25/2011	989.44	11.31	978.13	DPE System on all wells
MW-16	8/28/2011	989.44	12.59	976.85	DPE System on all wells
MW-16	9/29/2011	989.44	13.09	976.35	DPE-1,2,3,4
MW-16	10/18/2011	989.44	11.59	977.85	DPE-1,2,3,4
MW-16	10/27/2011	989.44	12.88	976.56	DPE-1,2,3,4
MW-16	11/21/2011	989.44	13.68	975.76	DPE-1,2,3,4
MW-16	1/20/2012	989.44	12.73	976.71	DPE-1,2,3,4
MW-16	1/27/2012	989.44	13.88	975.56	DPE-1,2,3,4
MW-16	2/16/2012	989.44	13.99	975.45	DPE-1,2,3,4
MW-16	3/16/2012	989.44	14.14	975.30	DPE-1,2,3,4
MW-16	3/27/2012	989.44	13.34	976.10	DPE-1,2,3,4
MW-16	4/17/2012	989.44	13.88	975.56	DPE-1,2,3,4
MW-16	5/17/2012	989.44	13.80	975.64	DPE-1,2,3,4
MW-16	5/31/2012	989.44	13.26	976.18	DPE-1,2,3,4
MW-16	6/14/2012	989.44	14.21	975.23	DPE-1,2,3,4
MW-16	7/19/2012	989.44	14.51	974.93	DPE-3
MW-16	8/23/2012	989.44	13.99	975.45	DPE-3
MW-16	9/26/2012	989.44	14.32	975.12	DPE-3
MW-16	10/26/2012	989.44	14.16	975.28	DPE-3
MW-16	12/19/2012	989.44	13.02	976.42	DPE-3; Before restarting the system
MW-16	12/21/2012	989.44	14.12	975.32	DPE-3; After restarting the system
MW-16	1/30/2013	989.44	14.46	974.98	DPE-1,2,3,4
MW-16	2/26/2013	989.44	14.04	975.40	DPE-1,2,3,4
MW-16	3/21/2013	989.44	14.69	974.75	DPE-1,2,3,4
MW-16	5/23/2013	989.44	8.92	980.52	DPE-1,2,3,4
MW-16	6/26/2013	989.44	10.91	978.53	DPE-1,2,3,4
MW-16	8/26/2013	989.44	12.54	976.90	DPE-1,2,3,4
MW-16	12/10/2013	989.44	11.73	977.71	System Off
MW-16	2/17/2014	989.44	12.09	977.35	System Off
MW-16	4/20/2014	989.44	10.86	978.58	System Off
MW-16	8/21/2014	989.44	11.94	977.50	System Off
MW-16	11/19/2014	989.44	11.29	978.15	System Off
MW-16	2/25/2015	989.44	12.13	977.31	System Off
MW-16	6/15/2015	989.44	10.88	978.56	System Off
MW-16	8/17/2015	989.44	12.06	977.38	System Off
MW-16	9/10/2015	989.44	11.83	977.61	System Off
MW-16	10/12/2015	989.44	13.21	976.23	System Off
MW-16	12/14/2015	989.44	11.64	977.80	DPE System on all wells
MW-16	1/11/2016	989.44	11.99	977.45	DPE System on all wells
MW-16	2/23/2016	989.44	11.27	978.17	DPE System on all wells
MW-16	4/20/2016	989.44	11.28	978.16	DPE System on all wells
MW-16	5/17/2016	989.44	11.38	978.06	DPE System on all wells
MW-16	8/10/2016	989.44	12.56	976.88	DPE System on all wells

TABLE 1

GROUNDWATER ELEVATIONS
MN Bio Business Center
221 First Avenue SW
Rochester, Minnesota

Well ID	Date Measured	Top of Casing Elevation ^{1,2}	Depth to Groundwater (feet)	Groundwater Elevation ³	System Status
MW-17	12/3/2008	989.53	12.81	976.72	pre-system installation
MW-17	6/8/2009	989.53	13.69	975.84	pre-system startup
MW-17	7/9/2009	989.53	14.44	975.09	DPE system on DPE-1
MW-17	7/9/2009	989.53	14.35	975.18	DPE system temporarily off
MW-17	9/4/2009	989.53	14.31	975.22	DPE system on
MW-17	9/4/2009	989.53	14.33	975.20	DPE system on after replacing inlet screen
MW-17	9/4/2009	989.53	14.39	975.14	DPE system on after replacing inlet filter
MW-17	10/15/2009	989.53	14.00	975.53	DPE system on DPE-1
MW-17	10/23/2009	989.53	13.13	976.40	DPE system off
MW-17	11/16/2009	989.53	12.76	976.77	DPE System on all wells
MW-17	12/17/2009	989.53	13.04	976.49	DPE System on all wells
MW-17	1/14/2010	989.53	13.22	976.31	DPE System on all wells
MW-17	2/22/2010	989.53	14.37	975.16	DPE System on all wells
MW-17	3/25/2010	989.53	12.78	976.75	DPE System on all wells
MW-17	4/16/2010	989.53	13.19	976.34	DPE System on all wells
MW-17	5/12/2010	989.53	13.84	975.69	DPE System on all wells
MW-17	6/17/2010	989.53	14.13	975.40	DPE System on all wells
MW-17	8/18/2010	989.53	15.08	974.45	DPE System on all wells
MW-17	9/27/2010	989.53	12.68	976.85	DPE System on all wells
MW-17	11/18/2010	989.53	12.68	976.85	DPE System not operating
MW-17	12/22/2010	989.53	12.50	977.03	DPE System restarted
MW-17	1/6/2011	989.53	12.17	977.36	DPE System on all wells
MW-17	1/20/2011	989.53	12.25	977.28	DPE System on all wells
MW-17	2/28/2011	989.53	12.20	977.33	DPE System on all wells
MW-17	3/7/2011	989.53	12.41	977.12	DPE System on all wells
MW-17	3/18/2011	989.53	12.44	977.09	DPE System on all wells
MW-17	3/23/2011	989.53	11.41	978.12	DPE System on all wells
MW-17	4/22/2011	989.53	11.64	977.89	DPE System on all wells
MW-17	5/19/2011	989.53	11.96	977.57	DPE System on all wells
MW-17	6/16/2011	989.53	12.21	977.32	DPE System on all wells
MW-17	7/25/2011	989.53	12.02	977.51	DPE System on all wells
MW-17	8/28/2011	989.53	13.41	976.12	DPE System on all wells
MW-17	9/29/2011	989.53	13.04	976.49	DPE-1,2,3,4
MW-17	10/18/2011	989.53	12.66	976.87	DPE-1,2,3,4
MW-17	10/27/2011	989.53	13.08	976.45	DPE-1,2,3,4
MW-17	11/21/2011	989.53	13.48	976.05	DPE-1,2,3,4
MW-17	1/20/2012	989.53	13.72	975.81	DPE-1,2,3,4
MW-17	1/27/2012	989.53	13.99	975.54	DPE-1,2,3,4
MW-17	2/16/2012	989.53	14.04	975.49	DPE-1,2,3,4
MW-17	3/16/2012	989.53	14.11	975.42	DPE-1,2,3,4
MW-17	3/27/2012	989.53	13.59	975.94	DPE-1,2,3,4
MW-17	4/17/2012	989.53	13.83	975.70	DPE-1,2,3,4
MW-17	5/17/2012	989.53	13.91	975.62	DPE-1,2,3,4
MW-17	5/31/2012	989.53	13.99	975.54	DPE-1,2,3,4
MW-17	6/14/2012	989.53	14.48	975.05	DPE-1,2,3,4
MW-17	7/19/2012	989.53	15.29	974.24	DPE-3
MW-17	8/23/2012	989.53	14.68	974.85	DPE-3
MW-17	9/26/2012	989.53	14.88	974.65	DPE-3
MW-17	10/26/2012	989.53	14.68	974.85	DPE-3
MW-17	12/19/2012	989.53	13.86	975.67	DPE-3; Before restarting the system
MW-17	12/21/2012	989.53	14.21	975.32	DPE-3; After restarting the system
MW-17	1/30/2013	989.53	13.92	975.61	DPE-1,2,3,4
MW-17	2/26/2013	989.53	14.28	975.25	DPE-1,2,3,4
MW-17	3/21/2013	989.53	14.30	975.23	DPE-1,2,3,4
MW-17	5/23/2013	989.53	10.19	979.34	DPE-1,2,3,4
MW-17	6/26/2013	989.53	10.71	978.82	DPE-1,2,3,4
MW-17	8/26/2013	989.53	12.56	976.97	DPE-1,2,3,4
MW-17	12/10/2013	989.53	12.70	976.83	System Off
MW-17	2/17/2014	989.53	12.86	976.67	System Off
MW-17	4/20/2014	989.53	11.84	977.69	System Off
MW-17	8/21/2014	989.53	13.13	976.40	System Off
MW-17	11/19/2014	989.53	12.13	977.40	System Off
MW-17	2/25/2015	989.53	12.89	976.64	System Off
MW-17	6/15/2015	989.53	11.91	977.62	System Off
MW-17	8/17/2015	989.53	13.08	976.45	System Off
MW-17	9/10/2015	989.53	12.82	976.71	System Off
MW-17	10/12/2015	989.53	13.07	976.46	System Off
MW-17	12/14/2015	989.53	12.39	977.14	DPE System on all wells
MW-17	1/11/2016	989.53	12.25	977.28	DPE System on all wells
MW-17	2/23/2016	989.53	11.92	977.61	DPE System on all wells
MW-17	4/20/2016	989.53	11.44	978.09	DPE System on all wells
MW-17	5/17/2016	989.53	11.31	978.22	DPE System on all wells
MW-17	8/10/2016	989.53	12.05	977.48	DPE System on all wells

TABLE 1
GROUNDWATER ELEVATIONS
MN Bio Business Center
221 First Avenue SW
Rochester, Minnesota

Well ID	Date Measured	Top of Casing Elevation ^{1,2}	Depth to Groundwater (feet)	Groundwater Elevation ³	System Status
MW-18	12/3/2008	989.50	13.82	975.68	pre-system installation
MW-18	6/8/2009	989.50	14.22	975.28	pre-system startup
MW-18	7/9/2009	989.50	16.61	972.89	DPE system on DPE-1
MW-18	7/9/2009	989.50	15.61	973.89	DPE system temporarily off
MW-18	9/4/2009	989.50	15.37	974.13	DPE system on
MW-18	9/4/2009	989.50	15.38	974.12	DPE system on after replacing inlet screen
MW-18	9/4/2009	989.50	15.40	974.10	DPE system on after replacing inlet filter
MW-18	10/15/2009	989.50	15.18	974.32	DPE system on DPE-1
MW-18	10/23/2009	989.50	14.28	975.22	DPE system off
MW-18	11/16/2009	989.50	13.83	975.67	DPE System on all wells
MW-18	12/17/2009	989.50	13.85	975.65	DPE System on all wells
MW-18	1/14/2010	989.50	13.96	975.54	DPE System on all wells
MW-18	2/22/2010	989.50	15.49	974.01	DPE System on all wells
MW-18	3/25/2010	989.50	13.24	976.26	DPE System on all wells
MW-18	4/16/2010	989.50	13.83	975.67	DPE System on all wells
MW-18	5/12/2010	989.50	14.60	974.90	DPE System on all wells
MW-18	6/17/2010	989.50	15.14	974.36	DPE System on all wells
MW-18	8/18/2010	989.50	16.53	972.97	DPE System on all wells
MW-18	9/27/2010	989.50	13.79	975.71	DPE System on all wells
MW-18	11/18/2010	989.50	13.54	975.96	DPE System not operating
MW-18	12/22/2010	989.50	13.20	976.30	DPE System restarted
MW-18	1/6/2011	989.50	13.03	976.47	DPE System on all wells
MW-18	1/20/2011	989.50	12.88	976.62	DPE System on all wells
MW-18	2/28/2011	989.50	12.79	976.71	DPE System on all wells
MW-18	3/7/2011	989.50	13.21	976.29	DPE System on all wells
MW-18	3/18/2011	989.50	12.99	976.51	DPE System on all wells
MW-18	3/23/2011	989.50	12.08	977.42	DPE System on all wells
MW-18	4/22/2011	989.50	12.27	977.23	DPE System on all wells
MW-18	5/19/2011	989.50	12.80	976.70	DPE System on all wells
MW-18	6/16/2011	989.50	13.19	976.31	DPE System on all wells
MW-18	7/25/2011	989.50	13.00	976.50	DPE System on all wells
MW-18	8/28/2011	989.50	14.52	974.98	DPE System on all wells
MW-18	9/29/2011	989.50	13.67	975.83	DPE-1,2,3,4
MW-18	10/18/2011	989.50	13.44	976.06	DPE-1,2,3,4
MW-18	10/27/2011	989.50	13.56	975.94	DPE-1,2,3,4
MW-18	11/21/2011	989.50	13.88	975.62	DPE-1,2,3,4
MW-18	1/20/2012	989.50	14.42	975.08	DPE-1,2,3,4
MW-18	1/27/2012	989.50	14.53	974.97	DPE-1,2,3,4
MW-18	2/16/2012	989.50	14.63	974.87	DPE-1,2,3,4
MW-18	3/16/2012	989.50	14.71	974.79	DPE-1,2,3,4
MW-18	3/27/2012	989.50	14.22	975.28	DPE-1,2,3,4
MW-18	4/17/2012	989.50	14.26	975.24	DPE-1,2,3,4
MW-18	5/17/2012	989.50	14.88	974.62	DPE-1,2,3,4
MW-18	5/31/2012	989.50	14.96	974.54	DPE-1,2,3,4
MW-18	6/14/2012	989.50	15.47	974.03	DPE-1,2,3,4
MW-18	7/19/2012	989.50	16.70	972.80	DPE-3
MW-18	8/23/2012	989.50	16.02	973.48	DPE-3
MW-18	9/26/2012	989.50	16.06	973.44	DPE-3
MW-18	10/26/2012	989.50	15.82	973.68	DPE-3
MW-18	12/19/2012	989.50	14.53	974.97	DPE-3; Before restarting the system
MW-18	12/21/2012	989.50	14.80	974.70	DPE-3; After restarting the system
MW-18	1/30/2013	989.50	14.25	975.25	DPE-1,2,3,4
MW-18	2/26/2013	989.50	14.84	974.66	DPE-1,2,3,4
MW-18	3/21/2013	989.50	14.83	974.67	DPE-1,2,3,4
MW-18	5/23/2013	989.50	11.09	978.41	DPE-1,2,3,4
MW-18	6/26/2013	989.50	11.34	978.16	DPE-1,2,3,4
MW-18	8/26/2013	989.50	13.39	976.11	DPE-1,2,3,4
MW-18	12/10/2013	989.50	13.38	976.12	System Off
MW-18	2/17/2014	989.50	13.35	976.15	System Off
MW-18	4/20/2014	989.50	12.62	976.88	System Off
MW-18	8/21/2014	989.50	14.10	975.40	System Off
MW-18	11/19/2014	989.50	12.88	976.62	System Off
MW-18	2/25/2015	989.50	13.35	976.15	System Off
MW-18	6/15/2015	989.50	12.27	977.23	System Off
MW-18	8/17/2015	989.50	14.08	975.42	System Off
MW-18	9/10/2015	989.50	13.81	975.69	System Off
MW-18	10/12/2015	989.50	13.49	976.01	System Off
MW-18	12/14/2015	989.50	12.94	976.56	DPE System on all wells
MW-18	1/11/2016	989.50	12.64	976.86	DPE System on all wells
MW-18	2/23/2016	989.50	12.20	977.30	DPE System on all wells
MW-18	4/20/2016	989.50	11.67	977.83	DPE System on all wells
MW-18	5/17/2016	989.50	11.26	978.24	DPE System on all wells
MW-18	8/10/2016	989.50	12.55	976.95	DPE System on all wells

TABLE 1

GROUNDWATER ELEVATIONS
MN Bio Business Center
221 First Avenue SW
Rochester, Minnesota

Well ID	Date Measured	Top of Casing Elevation ^{1,2}	Depth to Groundwater (feet)	Groundwater Elevation ³	System Status
MW-19	12/3/2008	991.13	12.45	978.68	pre-system installation
MW-19	6/8/2009	991.13	13.40	977.73	pre-system startup
MW-19	7/9/2009	991.13	14.75	976.38	DPE system on DPE-1
MW-19	7/9/2009	991.13	14.58	976.55	DPE system temporarily off
MW-19	9/4/2009	991.13	14.68	976.45	DPE system on
MW-19	9/4/2009	991.13	14.61	976.52	DPE system on after replacing inlet screen
MW-19	9/4/2009	991.13	14.66	976.47	DPE system on after replacing inlet filter
MW-19	10/15/2009	991.13	14.47	976.66	DPE system on DPE-1
MW-19	10/23/2009	991.13	13.28	977.85	DPE system off
MW-19	11/16/2009	991.13	12.85	978.28	DPE System on all wells
MW-19	12/17/2009	991.13	13.69	977.44	DPE System on all wells
MW-19	1/14/2010	991.13	13.78	977.35	DPE System on all wells
MW-19	2/22/2010	991.13	14.62	976.51	DPE System on all wells
MW-19	3/25/2010	991.13	13.81	977.32	DPE System on all wells
MW-19	4/16/2010	991.13	14.21	976.92	DPE System on all wells
MW-19	5/12/2010	991.13	14.84	976.29	DPE System on all wells
MW-19	6/17/2010	991.13	15.01	976.12	DPE System on all wells
MW-19	8/18/2010	991.13	15.71	975.42	DPE System on all wells
MW-19	9/27/2010	991.13	12.94	978.19	DPE System on all wells
MW-19	11/18/2010	991.13	13.26	977.87	DPE System not operating
MW-19	12/22/2010	991.13	13.69	977.44	DPE System restarted
MW-19	1/6/2011	991.13	13.06	978.07	DPE System on all wells
MW-19	1/20/2011	991.13	13.41	977.72	DPE System on all wells
MW-19	2/28/2011	991.13	13.92	977.21	DPE System on all wells
MW-19	3/7/2011	991.13	13.18	977.95	DPE System on all wells
MW-19	3/18/2011	991.13	13.56	977.57	DPE System on all wells
MW-19	3/23/2011	991.13	12.09	979.04	DPE System on all wells
MW-19	4/22/2011	991.13	12.42	978.71	DPE System on all wells
MW-19	5/19/2011	991.13	12.84	978.29	DPE System on all wells
MW-19	6/16/2011	991.13	13.05	978.08	DPE System on all wells
MW-19	7/25/2011	991.13	12.42	978.71	DPE System on all wells
MW-19	8/28/2011	991.13	14.29	976.84	DPE System on all wells
MW-19	9/29/2011	991.13	14.05	977.08	DPE-1,2,3,4
MW-19	10/18/2011	991.13	13.33	977.80	DPE-1,2,3,4
MW-19	10/27/2011	991.13	14.32	976.81	DPE-1,2,3,4
MW-19	11/21/2011	991.13	14.74	976.39	DPE-1,2,3,4
MW-19	1/20/2012	991.13	14.76	976.37	DPE-1,2,3,4
MW-19	1/27/2012	991.13	15.43	975.70	DPE-1,2,3,4
MW-19	2/16/2012	991.13	15.46	975.67	DPE-1,2,3,4
MW-19	3/16/2012	991.13	15.59	975.54	DPE-1,2,3,4
MW-19	3/27/2012	991.13	14.60	976.53	DPE-1,2,3,4
MW-19	4/17/2012	991.13	15.37	975.76	DPE-1,2,3,4
MW-19	5/17/2012	991.13	15.03	976.10	DPE-1,2,3,4
MW-19	5/31/2012	991.13	14.79	976.34	DPE-1,2,3,4
MW-19	6/14/2012	991.13	15.56	975.57	DPE-1,2,3,4
MW-19	7/19/2012	991.13	16.06	975.07	DPE-3
MW-19	8/23/2012	991.13	15.38	975.75	DPE-3
MW-19	9/26/2012	991.13	15.77	975.36	DPE-3
MW-19	10/26/2012	991.13	15.89	975.24	DPE-3
MW-19	12/19/2012	991.13	14.91	976.22	DPE-3; Before restarting the system
MW-19	12/21/2012	991.13	15.32	975.81	DPE-3; After restarting the system
MW-19	1/30/2013	991.13	15.39	975.74	DPE-1,2,3,4
MW-19	2/26/2013	991.13	15.78	975.35	DPE-1,2,3,4
MW-19	3/21/2013	991.13	15.70	975.43	DPE-1,2,3,4
MW-19	5/23/2013	991.13	9.74	981.39	DPE-1,2,3,4
MW-19	6/26/2013	991.13	10.93	980.20	DPE-1,2,3,4
MW-19	8/26/2013	991.13	12.82	978.31	DPE-1,2,3,4
MW-19	12/10/2013	991.13	13.13	978.00	System Off
MW-19	2/17/2014	991.13	13.98	977.15	System Off
MW-19	4/20/2014	991.13	12.52	978.61	System Off
MW-19	8/21/2014	991.13	14.11	977.02	System Off
MW-19	11/19/2014	991.13	13.11	978.02	System Off
MW-19	2/25/2015	991.13	14.04	977.09	System Off
MW-19	6/15/2015	991.13	12.56	978.57	System Off
MW-19	8/17/2015	991.13	13.88	977.25	System Off
MW-19	9/10/2015	991.13	13.58	977.55	System Off
MW-19	10/12/2015	991.13	14.41	976.72	System Off
MW-19	12/14/2015	991.13	13.10	978.03	DPE System on all wells
MW-19	1/11/2016	991.13	13.63	977.50	DPE System on all wells
MW-19	2/23/2016	991.13	13.10	978.03	DPE System on all wells
MW-19	4/20/2016	991.13	12.77	978.36	DPE System on all wells
MW-19	5/17/2016	991.13	12.50	978.63	DPE System on all wells
MW-19	8/10/2016	991.13	13.03	978.10	DPE System on all wells

TABLE 1
GROUNDWATER ELEVATIONS
MN Bio Business Center
221 First Avenue SW
Rochester, Minnesota

Well ID	Date Measured	Top of Casing Elevation ^{1,2}	Depth to Groundwater (feet)	Groundwater Elevation ³	System Status
MW-20	12/3/2008	991.50	12.40	979.10	pre-system installation
MW-20	6/8/2009	991.50	11.93	979.57	pre-system startup
MW-20	7/9/2009	991.50	12.19	979.31	DPE system on DPE-1
MW-20	7/9/2009	991.50	12.24	979.26	DPE system temporarily off
MW-20	9/4/2009	991.50	12.53	978.97	DPE system on
MW-20	9/4/2009	991.50	12.47	979.03	DPE system on after replacing inlet screen
MW-20	9/4/2009	991.50	12.49	979.01	DPE system on after replacing inlet filter
MW-20	10/15/2009	991.50	12.16	979.34	DPE system on DPE-1
MW-20	10/23/2009	991.50	11.33	980.17	DPE system off
MW-20	11/16/2009	991.50	11.02	980.48	DPE System on all wells
MW-20	12/17/2009	991.50	12.31	979.19	DPE System on all wells
MW-20	1/14/2010	991.50	12.34	979.16	DPE System on all wells
MW-20	2/22/2010	991.50	12.78	978.72	DPE System on all wells
MW-20	3/25/2010	991.50	12.54	978.96	DPE System on all wells
MW-20	4/16/2010	991.50	12.76	978.74	DPE System on all wells
MW-20	5/12/2010	991.50	13.18	978.32	DPE System on all wells
MW-20	6/17/2010	991.50	12.99	978.51	DPE System on all wells
MW-20	8/18/2010	991.50	12.71	978.79	DPE System on all wells
MW-20	9/27/2010	991.50	10.17	981.33	DPE System on all wells
MW-20	11/18/2010	991.50	11.68	979.82	DPE System not operating
MW-20	12/22/2010	991.50	12.15	979.35	DPE System restarted
MW-20	1/6/2011	991.50	11.99	979.51	DPE System on all wells
MW-20	1/20/2011	991.50	12.45	979.05	DPE System on all wells
MW-20	2/28/2011	991.50	12.69	978.81	DPE System on all wells
MW-20	3/7/2011	991.50	12.26	979.24	DPE System on all wells
MW-20	3/18/2011	991.50	12.62	978.88	DPE System on all wells
MW-20	3/23/2011	991.50	11.19	980.31	DPE System on all wells
MW-20	4/22/2011	991.50	11.22	980.28	DPE System on all wells
MW-20	5/19/2011	991.50	11.26	980.24	DPE System on all wells
MW-20	6/16/2011	991.50	11.69	979.81	DPE System on all wells
MW-20	7/25/2011	991.50	10.13	981.37	DPE System on all wells
MW-20	8/28/2011	991.50	12.32	979.18	DPE System on all wells
MW-20	9/29/2011	991.50	12.48	979.02	DPE-1,2,3,4
MW-20	10/18/2011	991.50	12.31	979.19	DPE-1,2,3,4
MW-20	10/27/2011	991.50	12.98	978.52	DPE-1,2,3,4
MW-20	11/21/2011	991.50	13.46	978.04	DPE-1,2,3,4
MW-20	1/20/2012	991.50	13.71	977.79	DPE-1,2,3,4
MW-20	1/27/2012	991.50	13.96	977.54	DPE-1,2,3,4
MW-20	2/16/2012	991.50	14.08	977.42	DPE-1,2,3,4
MW-20	3/16/2012	991.50	14.20	977.30	DPE-1,2,3,4
MW-20	3/27/2012	991.50	13.64	977.86	DPE-1,2,3,4
MW-20	4/17/2012	991.50	14.03	977.47	DPE-1,2,3,4
MW-20	5/17/2012	991.50	13.59	977.91	DPE-1,2,3,4
MW-20	5/31/2012	991.50	13.38	978.12	DPE-1,2,3,4
MW-20	6/14/2012	991.50	13.81	977.69	DPE-1,2,3,4
MW-20	7/19/2012	991.50	13.71	977.79	DPE-3
MW-20	8/23/2012	991.50	13.13	978.37	DPE-3
MW-20	9/26/2012	991.50	13.88	977.62	DPE-3
MW-20	10/26/2012	991.50	14.09	977.41	DPE-3
MW-20	12/19/2012	991.50	13.79	977.71	DPE-3; Before restarting the system
MW-20	12/21/2012	991.50	13.84	977.66	DPE-3; After restarting the system
MW-20	1/30/2013	991.50	14.09	977.41	DPE-1,2,3,4
MW-20	2/26/2013	991.50	14.26	977.24	DPE-1,2,3,4
MW-20	3/21/2013	991.50	13.83	977.67	DPE-1,2,3,4
MW-20	5/23/2013	991.50	7.39	984.11	DPE-1,2,3,4
MW-20	6/26/2013	991.50	9.62	981.88	DPE-1,2,3,4
MW-20	8/26/2013	991.50	11.70	979.80	DPE-1,2,3,4
MW-20	12/10/2013	991.50	12.71	978.79	System Off
MW-20	2/17/2014	991.50	13.33	978.17	System Off
MW-20	4/20/2014	991.50	10.94	980.56	System Off
MW-20	8/21/2014	991.50	12.06	979.44	System Off
MW-20	11/19/2014	991.50	12.22	979.28	System Off
MW-20	2/25/2015	991.50	13.30	978.20	System Off
MW-20	6/15/2015	991.50	10.92	980.58	System Off
MW-20	8/17/2015	991.50	12.32	979.18	System Off
MW-20	9/10/2015	991.50	11.75	979.75	System Off
MW-20	10/12/2015	991.50	13.01	978.49	System Off
MW-20	12/14/2015	991.50	12.41	979.09	DPE System on all wells
MW-20	1/11/2016	991.50	12.56	978.94	DPE System on all wells
MW-20	2/23/2016	991.50	12.55	978.95	DPE System on all wells
MW-20	4/20/2016	991.50	11.97	979.53	DPE System on all wells
MW-20	5/17/2016	991.50	11.51	979.99	DPE System on all wells
MW-20	8/10/2016	991.50	11.41	980.09	DPE System on all wells

TABLE 1

GROUNDWATER ELEVATIONS
MN Bio Business Center
221 First Avenue SW
Rochester, Minnesota

Well ID	Date Measured	Top of Casing Elevation ^{1,2}	Depth to Groundwater (feet)	Groundwater Elevation ³	System Status
DPE-1	12/3/2008	991.46	13.66	977.80	pre-system installation
DPE-1	6/8/2009	992.40	18.78	973.62	pre-system startup
DPE-1	7/9/2009	992.40	20.51	971.89	DPE system on DPE-1
DPE-1	7/9/2009	992.40	16.38	976.02	DPE system temporarily off
DPE-1	9/4/2009	992.40	NR		DPE system on DPE-1
DPE-1	9/4/2009	992.40	NR		DPE-1 on after replacing inlet screen
DPE-1	9/4/2009	992.40	17.86	974.54	DPE-1 on after replacing inlet filter
DPE-1	10/15/2009	992.40	NR		DPE system on DPE-1
DPE-1	10/23/2009	992.40	14.88	977.52	DPE system off
DPE-1	11/16/2009	992.40	14.45	977.95	DPE System on all wells
DPE-1	12/17/2009	992.40	15.13	977.27	DPE System on all wells
DPE-1	1/14/2010	992.40	15.53	976.87	DPE System on all wells
DPE-1	2/22/2010	992.40	12.22	980.18	DPE System on all wells
DPE-1	3/25/2010	992.40	15.72	976.68	DPE System on all wells
DPE-1	4/16/2010	992.40	15.88	976.52	DPE System on all wells
DPE-1	5/12/2010	992.40	16.48	975.92	DPE System on all wells
DPE-1	6/17/2010	992.40	16.62	975.78	DPE System on all wells
DPE-1	8/18/2010	992.40	16.80	975.60	DPE System on all wells
DPE-1	9/27/2010	992.40	14.60	977.80	DPE System on all wells
DPE-1	11/18/2010	992.40	14.99	977.41	DPE System not operating
DPE-1	12/22/2010	992.40	15.72	976.68	DPE System restarted
DPE-1	1/6/2011	992.40	14.04	978.36	DPE System on all wells
DPE-1	1/20/2011	992.40	16.80	975.60	DPE System on all wells
DPE-1	2/28/2011	992.40	15.33	977.07	DPE System on all wells
DPE-1	3/7/2011	992.40	17.27	975.13	DPE System on all wells
DPE-1	3/18/2011	992.40	17.80	974.60	DPE System on all wells
DPE-1	3/23/2011	992.40	15.92	976.48	DPE System on all wells
DPE-1	4/22/2011	992.40	16.61	975.79	DPE System on all wells
DPE-1	5/19/2011	992.40	14.59	977.81	DPE System on all wells
DPE-1	6/16/2011	992.40	15.12	977.28	DPE System on all wells
DPE-1	7/25/2011	992.40	14.35	978.05	DPE System on all wells
DPE-1	8/28/2011	992.40	13.04	979.36	DPE System on all wells. Appears to be a data outlier.
DPE-1	9/29/2011	992.40	15.89	976.51	DPE-1,2,3,4
DPE-1	10/18/2011	992.40	14.89	977.51	DPE-1,2,3,4
DPE-1	10/27/2011	992.40	16.65	975.75	DPE-1,2,3,4
DPE-1	11/21/2011	992.40	17.40	975.00	DPE-1,2,3,4
DPE-1	1/20/2012	992.40	15.39	977.01	DPE-1,2,3,4
DPE-1	1/27/2012	992.40	17.19	975.21	DPE-1,2,3,4
DPE-1	2/16/2012	992.40	18.28	974.12	DPE-1,2,3,4
DPE-1	3/16/2012	992.40	19.30	973.10	DPE-1,2,3,4
DPE-1	3/27/2012	992.40	17.95	974.45	DPE-1,2,3,4
DPE-1	4/17/2012	992.40	16.67	975.73	DPE-1,2,3,4
DPE-1	5/17/2012	992.40	16.93	975.47	DPE-1,2,3,4
DPE-1	5/31/2012	992.40	15.79	976.61	DPE-1,2,3,4
DPE-1	6/14/2012	992.40	17.05	975.35	DPE-1,2,3,4
DPE-1	7/19/2012	992.40	17.54	974.86	DPE-3
DPE-1	8/23/2012	992.40	16.68	975.72	DPE-3
DPE-1	9/26/2012	992.40	16.41	975.99	DPE-3
DPE-1	10/26/2012	992.40	16.75	975.65	DPE-3
DPE-1	12/19/2012	992.40	15.84	976.56	DPE-3; Before restarting the system
DPE-1	12/21/2012	992.40	21.82	970.58	DPE-3; After restarting the system
DPE-1	1/30/2013	992.40	17.86	974.54	DPE-1,2,3,4
DPE-1	2/26/2013	992.40	16.94	975.46	DPE-1,2,3,4
DPE-1	3/21/2013	992.40	18.40	974.00	DPE-1,2,3,4
DPE-1	5/23/2013	992.40	11.34	981.06	DPE-1,2,3,4
DPE-1	6/26/2013	992.40	13.84	978.56	DPE-1,2,3,4
DPE-1	8/26/2013	992.40	15.68	976.72	DPE-1,2,3,4
DPE-1	12/10/2013	992.40	14.40	978.00	System Off
DPE-1	2/17/2014	992.40	14.90	977.50	System Off
DPE-1	4/20/2014	992.40	13.54	978.86	System Off
DPE-1	8/21/2014	992.40	15.80	976.60	System Off
DPE-1	11/19/2014	992.40	14.06	978.34	System Off
DPE-1	2/25/2015	992.40	14.84	977.56	System Off
DPE-1	6/15/2015	992.40	15.58	976.82	System Off
DPE-1	8/17/2015	992.40	17.06	975.34	System Off
DPE-1	9/10/2015	992.40	16.83	975.57	System Off
DPE-1	10/12/2015	992.40	16.30	976.10	System Off
DPE-1	12/14/2015	992.40	14.55	977.85	DPE System on all wells
DPE-1	1/11/2016	992.40	15.79	976.61	DPE System on all wells
DPE-1	2/23/2016	992.40	13.98	978.42	DPE System on all wells
DPE-1	4/20/2016	992.40	14.15	978.25	DPE System on all wells
DPE-1	5/17/2016	992.40	13.80	978.60	DPE System on all wells
DPE-1	8/10/2016	992.40	15.15	977.25	DPE System on all wells

TABLE 1
GROUNDWATER ELEVATIONS
MN Bio Business Center
221 First Avenue SW
Rochester, Minnesota

Well ID	Date Measured	Top of Casing Elevation ^{1,2}	Depth to Groundwater (feet)	Groundwater Elevation ³	System Status
DPE-2	12/3/2008	991.46	13.60	977.86	pre-system installation
DPE-2	6/8/2009	992.80	17.45	975.35	pre-system startup
DPE-2	7/9/2009	992.80	17.61	975.19	DPE system on DPE-1
DPE-2	7/9/2009	992.80	16.83	975.97	DPE system temporarily off
DPE-2	9/4/2009	992.80	17.18	975.62	DPE system on DPE-1
DPE-2	9/4/2009	992.80	17.26	975.54	DPE-1 on after replacing inlet screen
DPE-2	9/4/2009	992.80	17.54	975.26	DPE-1 on after replacing inlet filter
DPE-2	10/15/2009	992.80	16.96	975.84	DPE system on DPE-1
DPE-2	10/23/2009	992.80	15.53	977.27	DPE system off
DPE-2	11/16/2009	992.80	15.19	977.61	DPE System on all wells
DPE-2	12/17/2009	992.80	15.69	977.11	DPE System on all wells
DPE-2	1/14/2010	992.80	16.04	976.76	DPE System on all wells
DPE-2	2/22/2010	992.80	14.19	978.61	DPE System on all wells
DPE-2	3/25/2010	992.80	15.50	977.30	DPE System on all wells
DPE-2	4/16/2010	992.80	16.31	976.49	DPE System on all wells
DPE-2	5/12/2010	992.80	16.31	976.49	DPE System on all wells
DPE-2	6/17/2010	992.80	17.09	975.71	DPE System on all wells
DPE-2	8/18/2010	992.80	17.58	975.22	DPE System on all wells
DPE-2	9/27/2010	992.80	14.92	977.88	DPE System on all wells
DPE-2	11/18/2010	992.80	14.79	978.01	DPE System not operating
DPE-2	12/22/2010	992.80	15.72	977.08	DPE System restarted
DPE-2	1/6/2011	992.80	14.42	978.38	DPE System on all wells
DPE-2	1/20/2011	992.80	14.98	977.82	DPE System on all wells
DPE-2	2/28/2011	992.80	14.88	977.92	DPE System on all wells
DPE-2	3/7/2011	992.80	15.22	977.58	DPE System on all wells
DPE-2	3/18/2011	992.80	15.41	977.39	DPE System on all wells
DPE-2	3/23/2011	992.80	13.62	979.18	DPE System on all wells
DPE-2	4/22/2011	992.80	14.51	978.29	DPE System on all wells
DPE-2	5/19/2011	992.80	14.78	978.02	DPE System on all wells
DPE-2	6/16/2011	992.80	15.00	977.80	DPE System on all wells
DPE-2	7/25/2011	992.80	14.83	977.97	DPE System on all wells
DPE-2	8/28/2011	992.80	17.81	974.99	DPE System on all wells
DPE-2	9/29/2011	992.80	15.78	977.02	DPE-1,2,3,4
DPE-2	10/18/2011	992.80	14.78	978.02	DPE-1,2,3,4
DPE-2	10/27/2011	992.80	15.94	976.86	DPE-1,2,3,4
DPE-2	11/21/2011	992.80	16.49	976.31	DPE-1,2,3,4
DPE-2	1/20/2012	992.80	15.94	976.86	DPE-1,2,3,4
DPE-2	1/27/2012	992.80	16.98	975.82	DPE-1,2,3,4
DPE-2	2/16/2012	992.80	17.06	975.74	DPE-1,2,3,4
DPE-2	3/16/2012	992.80	17.04	975.76	DPE-1,2,3,4
DPE-2	3/27/2012	992.80	16.29	976.51	DPE-1,2,3,4
DPE-2	4/17/2012	992.80	16.76	976.04	DPE-1,2,3,4
DPE-2	5/17/2012	992.80	16.63	976.17	DPE-1,2,3,4
DPE-2	5/31/2012	992.80	16.34	976.46	DPE-1,2,3,4
DPE-2	6/14/2012	992.80	17.10	975.70	DPE-1,2,3,4
DPE-2	7/19/2012	992.80	17.79	975.01	DPE-3
DPE-2	8/23/2012	992.80	16.90	975.90	DPE-3
DPE-2	9/26/2012	992.80	16.99	975.81	DPE-3
DPE-2	10/26/2012	992.80	17.01	975.79	DPE-3
DPE-2	12/19/2012	992.80	16.13	976.67	DPE-3; Before restarting the system
DPE-2	12/21/2012	992.80	18.80	974.00	DPE-3; After restarting the system
DPE-2	1/30/2013	992.80	17.41	975.39	DPE-1,2,3,4
DPE-2	2/26/2013	992.80	17.20	975.60	DPE-1,2,3,4
DPE-2	3/21/2013	992.80	17.33	975.47	DPE-1,2,3,4
DPE-2	5/23/2013	992.80	12.15	980.65	DPE-1,2,3,4
DPE-2	6/26/2013	992.80	13.81	978.99	DPE-1,2,3,4
DPE-2	8/26/2013	992.80	15.42	977.38	DPE-1,2,3,4
DPE-2	12/10/2013	992.80	14.90	977.90	System Off
DPE-2	2/17/2014	992.80	15.14	977.66	System Off
DPE-2	4/20/2014	992.80	13.96	978.84	System Off
DPE-2	8/21/2014	992.80	15.56	977.24	System Off
DPE-2	11/19/2014	992.80	14.41	978.39	System Off
DPE-2	2/25/2015	992.80	15.24	977.56	System Off
DPE-2	6/15/2015	992.80	13.69	979.11	System Off
DPE-2	8/17/2015	992.80	15.19	977.61	System Off
DPE-2	9/10/2015	992.80	15.05	977.75	System Off
DPE-2	10/12/2015	992.80	16.44	976.36	System Off
DPE-2	12/14/2015	992.80	14.71	978.09	DPE System on all wells
DPE-2	1/11/2016	992.80	14.91	977.89	DPE System on all wells
DPE-2	2/23/2016	992.80	14.29	978.51	DPE System on all wells
DPE-2	4/20/2016	992.80	14.34	978.46	DPE System on all wells
DPE-2	5/17/2016	992.80	14.42	978.38	DPE System on all wells
DPE-2	8/10/2016	992.80	15.12	977.68	DPE System on all wells

TABLE 1

GROUNDWATER ELEVATIONS
MN Bio Business Center
221 First Avenue SW
Rochester, Minnesota

Well ID	Date Measured	Top of Casing Elevation ^{1,2}	Depth to Groundwater (feet)	Groundwater Elevation ³	System Status
DPE-3	12/3/2008	991.50	10.30	981.20	pre-system installation
DPE-3	6/8/2009	992.48	13.64	978.84	pre-system startup
DPE-3	7/9/2009	992.48	13.98	978.50	DPE system on DPE-1
DPE-3	7/9/2009	992.48	14.06	978.42	DPE system temporarily off
DPE-3	9/4/2009	992.48	14.48	978.00	DPE system on DPE-1
DPE-3	9/4/2009	992.48	14.49	977.99	DPE-1 on after replacing inlet screen
DPE-3	9/4/2009	992.48	14.50	977.98	DPE-1 on after replacing inlet filter
DPE-3	10/15/2009	992.48	14.87	977.61	DPE system on DPE-1
DPE-3	10/23/2009	992.48	14.76	977.72	DPE system off
DPE-3	11/16/2009	992.48	14.59	977.89	DPE System on all wells
DPE-3	12/17/2009	992.48	15.28	977.20	DPE System on all wells
DPE-3	1/14/2010	992.48	16.52	975.96	DPE System on all wells
DPE-3	2/22/2010	992.48	15.29	977.19	DPE System on all wells
DPE-3	3/25/2010	992.48	15.68	976.80	DPE System on all wells
DPE-3	4/16/2010	992.48	15.80	976.68	DPE System on all wells
DPE-3	5/12/2010	992.48	16.26	976.22	DPE System on all wells
DPE-3	6/17/2010	992.48	16.43	976.05	DPE System on all wells
DPE-3	8/18/2010	992.48	17.20	975.28	DPE System on all wells
DPE-3	9/27/2010	992.48	14.29	978.19	DPE System on all wells
DPE-3	11/18/2010	992.48	14.62	977.86	DPE System not operating
DPE-3	12/22/2010	992.48	15.62	976.86	DPE System restarted
DPE-3	1/6/2011	992.48	14.50	977.98	DPE System on all wells
DPE-3	1/20/2011	992.48	14.99	977.49	DPE System on all wells
DPE-3	2/28/2011	992.48	15.22	977.26	DPE System on all wells
DPE-3	3/7/2011	992.48	15.20	977.28	DPE System on all wells
DPE-3	3/18/2011	992.48	15.57	976.91	DPE System on all wells
DPE-3	3/23/2011	992.48	13.88	978.60	DPE System on all wells
DPE-3	4/22/2011	992.48	14.51	977.97	DPE System on all wells
DPE-3	5/19/2011	992.48	14.96	977.52	DPE System on all wells
DPE-3	6/16/2011	992.48	15.83	976.65	DPE System on all wells
DPE-3	7/25/2011	992.48	14.11	978.37	DPE System on all wells
DPE-3	8/28/2011	992.48	15.88	976.60	DPE System on all wells
DPE-3	9/29/2011	992.48	16.56	975.92	DPE-1,2,3,4
DPE-3	10/18/2011	992.48	14.89	977.59	DPE-1,2,3,4
DPE-3	10/27/2011	992.48	16.82	975.66	DPE-1,2,3,4
DPE-3	11/21/2011	992.48	16.51	975.97	DPE-1,2,3,4
DPE-3	1/20/2012	992.48	16.15	976.33	DPE-1,2,3,4
DPE-3	1/27/2012	992.48	17.60	974.88	DPE-1,2,3,4
DPE-3	2/16/2012	992.48	17.90	974.58	DPE-1,2,3,4
DPE-3	3/16/2012	992.48	17.51	974.97	DPE-1,2,3,4
DPE-3	3/27/2012	992.48	16.38	976.10	DPE-1,2,3,4
DPE-3	4/17/2012	992.48	17.28	975.20	DPE-1,2,3,4
DPE-3	5/17/2012	992.48	17.08	975.40	DPE-1,2,3,4
DPE-3	5/31/2012	992.48	16.82	975.66	DPE-1,2,3,4
DPE-3	6/14/2012	992.48	17.42	975.06	DPE-1,2,3,4
DPE-3	7/19/2012	992.48	16.61	975.87	DPE-3
DPE-3	8/23/2012	992.48	17.20	975.28	DPE-3
DPE-3	9/26/2012	992.48	17.02	975.46	DPE-3
DPE-3	10/26/2012	992.48	17.29	975.19	DPE-3
DPE-3	12/19/2012	992.48	16.36	976.12	DPE-3; Before restarting the system
DPE-3	12/21/2012	992.48	17.56	974.92	DPE-3; After restarting the system
DPE-3	1/30/2013	992.48	18.33	974.15	DPE-1,2,3,4
DPE-3	2/26/2013	992.48	18.14	974.34	DPE-1,2,3,4
DPE-3	3/21/2013	992.48	17.78	974.70	DPE-1,2,3,4
DPE-3	5/23/2013	992.48	11.68	980.80	DPE-1,2,3,4
DPE-3	6/26/2013	992.48	14.99	977.49	DPE-1,2,3,4
DPE-3	8/26/2013	992.48	15.51	976.97	DPE-1,2,3,4
DPE-3	12/10/2013	992.48	14.98	977.50	System Off
DPE-3	2/17/2014	992.48	15.41	977.07	System Off
DPE-3	4/20/2014	992.48	14.00	978.48	System Off
DPE-3	8/21/2014	992.48	15.33	977.15	System Off
DPE-3	11/19/2014	992.48	14.58	977.90	System Off
DPE-3	2/25/2015	992.48	15.41	977.07	System Off
DPE-3	6/15/2015	992.48	13.76	978.72	System Off
DPE-3	8/17/2015	992.48	15.17	977.31	System Off
DPE-3	9/10/2015	992.48	NR		Well taken apart/being fixed
DPE-3	10/12/2015	992.48	16.23	976.25	System Off
DPE-3	12/14/2015	992.48	14.89	977.59	DPE System on all wells
DPE-3	1/11/2016	992.48	15.29	977.19	DPE System on all wells
DPE-3	2/23/2016	992.48	14.40	978.08	DPE System on all wells
DPE-3	4/20/2016	992.48	14.72	977.76	DPE System on all wells
DPE-3	5/17/2016	992.48	14.01	978.47	DPE System on all wells
DPE-3	8/10/2016	992.48	15.03	977.45	DPE System on all wells

TABLE 1

GROUNDWATER ELEVATIONS
MN Bio Business Center
221 First Avenue SW
Rochester, Minnesota

Well ID	Date Measured	Top of Casing Elevation ^{1,2}	Depth to Groundwater (feet)	Groundwater Elevation ³	System Status
DPE-4	12/3/2008	991.39	14.20	977.19	pre-system installation
DPE-4	6/8/2009	992.40	15.30	977.10	pre-system startup
DPE-4	7/9/2009	992.40	16.95	975.45	DPE system on DPE-1
DPE-4	7/9/2009	992.40	16.08	976.32	DPE system temporarily off
DPE-4	9/4/2009	992.40	15.94	976.46	DPE system on DPE-1
DPE-4	9/4/2009	992.40	15.91	976.49	DPE-1 on after replacing inlet screen
DPE-4	9/4/2009	992.40	15.99	976.41	DPE-1 on after replacing inlet filter
DPE-4	10/15/2009	992.40	15.83	976.57	DPE system on DPE-1
DPE-4	10/23/2009	992.40	14.81	977.59	DPE system off
DPE-4	11/16/2009	992.40	14.48	977.92	DPE System on all wells
DPE-4	12/17/2009	992.40	15.44	976.96	DPE System on all wells
DPE-4	1/14/2010	992.40	16.08	976.32	DPE System on all wells
DPE-4	2/22/2010	992.40	16.08	976.32	DPE System on all wells
DPE-4	3/25/2010	992.40	16.22	976.18	DPE System on all wells
DPE-4	4/16/2010	992.40	16.21	976.19	DPE System on all wells
DPE-4	5/12/2010	992.40	16.86	975.54	DPE System on all wells
DPE-4	6/17/2010	992.40	16.83	975.57	DPE System on all wells
DPE-4	8/18/2010	992.40	16.74	975.66	DPE System on all wells
DPE-4	9/27/2010	992.40	14.74	977.66	DPE System on all wells
DPE-4	11/18/2010	992.40	14.93	977.47	DPE System not operating
DPE-4	12/22/2010	992.40	14.89	977.51	DPE System restarted
DPE-4	1/6/2011	992.40	14.61	977.79	DPE System on all wells
DPE-4	1/20/2011	992.40	15.15	977.25	DPE System on all wells
DPE-4	2/28/2011	992.40	15.30	977.10	DPE System on all wells
DPE-4	3/7/2011	992.40	15.62	976.78	DPE System on all wells
DPE-4	3/18/2011	992.40	15.62	976.78	DPE System on all wells
DPE-4	3/23/2011	992.40	14.04	978.36	DPE System on all wells
DPE-4	4/22/2011	992.40	14.64	977.76	DPE System on all wells
DPE-4	5/19/2011	992.40	15.80	976.60	DPE System on all wells
DPE-4	6/16/2011	992.40	15.02	977.38	DPE System on all wells
DPE-4	7/25/2011	992.40	14.49	977.91	DPE System on all wells
DPE-4	8/28/2011	992.40	16.58	975.82	DPE System on all wells
DPE-4	9/29/2011	992.40	16.42	975.98	DPE-1,2,3,4
DPE-4	10/18/2011	992.40	14.98	977.42	DPE-1,2,3,4
DPE-4	10/27/2011	992.40	16.64	975.76	DPE-1,2,3,4
DPE-4	11/21/2011	992.40	17.11	975.29	DPE-1,2,3,4
DPE-4	1/20/2012	992.40	16.08	976.32	DPE-1,2,3,4
DPE-4	1/27/2012	992.40	17.49	974.91	DPE-1,2,3,4
DPE-4	2/16/2012	992.40	17.76	974.64	DPE-1,2,3,4
DPE-4	3/16/2012	992.40	17.70	974.70	DPE-1,2,3,4
DPE-4	3/27/2012	992.40	16.29	976.11	DPE-1,2,3,4
DPE-4	4/17/2012	992.40	17.61	974.79	DPE-1,2,3,4
DPE-4	5/17/2012	992.40	18.44	973.96	DPE-1,2,3,4
DPE-4	5/31/2012	992.40	17.71	974.69	DPE-1,2,3,4
DPE-4	6/14/2012	992.40	18.41	973.99	DPE-1,2,3,4
DPE-4	7/19/2012	992.40	18.08	974.32	DPE-3
DPE-4	8/23/2012	992.40	17.12	975.28	DPE-3
DPE-4	9/26/2012	992.40	17.14	975.26	DPE-3
DPE-4	10/26/2012	992.40	17.24	975.16	DPE-3
DPE-4	12/19/2012	992.40	16.38	976.02	DPE-3; Before restarting the system
DPE-4	12/21/2012	992.40	17.54	974.86	DPE-3; After restarting the system
DPE-4	1/30/2013	992.40	17.73	974.67	DPE-1,2,3,4
DPE-4	2/26/2013	992.40	17.69	974.71	DPE-1,2,3,4
DPE-4	3/21/2013	992.40	17.76	974.64	DPE-1,2,3,4
DPE-4	5/23/2013	992.40	12.22	980.18	DPE-1,2,3,4
DPE-4	6/26/2013	992.40	14.46	977.94	DPE-1,2,3,4
DPE-4	8/26/2013	992.40	15.59	976.81	DPE-1,2,3,4
DPE-4	12/10/2013	992.40	15.07	977.33	System Off
DPE-4	2/17/2014	992.40	15.46	976.94	System Off
DPE-4	4/20/2014	992.40	14.22	978.18	System Off
DPE-4	8/21/2014	992.40	15.44	976.96	System Off
DPE-4	11/19/2014	992.40	14.64	977.76	System Off
DPE-4	2/25/2015	992.40	15.49	976.91	System Off
DPE-4	6/15/2015	992.40	13.94	978.46	System Off
DPE-4	8/17/2015	992.40	15.38	977.02	System Off
DPE-4	9/10/2015	992.40	13.11	979.29	System Off
DPE-4	10/12/2015	992.40	16.29	976.11	System Off
DPE-4	12/14/2015	992.40	14.91	977.49	DPE System on all wells
DPE-4	1/11/2016	992.40	15.17	977.23	DPE System on all wells
DPE-4	2/23/2016	992.40	14.49	977.91	DPE System on all wells
DPE-4	4/20/2016	992.40	14.58	977.82	DPE System on all wells
DPE-4	5/17/2016	992.40	14.23	978.17	DPE System on all wells
DPE-4	8/10/2016	992.40	15.08	977.32	DPE System on all wells

TABLE 1
GROUNDWATER ELEVATIONS
MN Bio Business Center
221 First Avenue SW
Rochester, Minnesota

Well ID	Date Measured	Top of Casing Elevation ^{1,2}	Depth to Groundwater (feet)	Groundwater Elevation ³	System Status
DPE-5	12/3/2008	991.47	12.44	979.03	pre-system installation
DPE-5	6/8/2009	992.46	14.48	977.98	pre-system startup
DPE-5	7/9/2009	992.46	16.28	976.18	DPE system on DPE-1
DPE-5	7/9/2009	992.46	15.31	977.15	DPE system temporarily off
DPE-5	9/4/2009	992.46	15.08	977.38	DPE system on DPE-1
DPE-5	9/4/2009	992.46	15.04	977.42	DPE-1 on after replacing inlet screen
DPE-5	9/4/2009	992.46	15.03	977.43	DPE-1 on after replacing inlet filter
DPE-5	10/15/2009	992.46	14.99	977.47	DPE system on DPE-1
DPE-5	10/23/2009	992.46	13.78	978.68	DPE system off
DPE-5	11/16/2009	992.46	13.43	979.03	DPE System on all wells
DPE-5	12/17/2009	992.46	NR		DPE System on all wells
DPE-5	1/14/2010	992.46	15.00	977.46	DPE System on all wells
DPE-5	2/22/2010	992.46	15.01	977.45	DPE System on all wells
DPE-5	3/25/2010	992.46	16.42	976.04	DPE System on all wells
DPE-5	4/16/2010	992.46	15.54	976.92	DPE System on all wells
DPE-5	5/12/2010	992.46	15.98	976.48	DPE System on all wells
DPE-5	6/17/2010	992.46	17.21	975.25	DPE System on all wells
DPE-5	8/18/2010	992.46	16.55	975.91	DPE System on all wells
DPE-5	9/27/2010	992.46	13.73	978.73	DPE System on all wells
DPE-5	11/18/2010	992.46	14.19	978.27	DPE System not operating
DPE-5	12/22/2010	992.46	15.41	977.05	DPE System restarted
DPE-5	1/6/2011	992.46	14.14	978.32	DPE System on all wells
DPE-5	1/20/2011	992.46	15.38	977.08	DPE System on all wells
DPE-5	2/28/2011	992.46	15.38	977.08	DPE System on all wells
DPE-5	3/7/2011	992.46	16.81	975.65	DPE System on all wells
DPE-5	3/18/2011	992.46	15.03	977.43	DPE System on all wells
DPE-5	3/23/2011	992.46	13.08	979.38	DPE System on all wells
DPE-5	4/22/2011	992.46	16.26	976.20	DPE System on all wells
DPE-5	5/19/2011	992.46	14.32	978.14	DPE System on all wells
DPE-5	6/16/2011	992.46	14.73	977.73	DPE System on all wells
DPE-5	7/25/2011	992.46	13.59	978.87	DPE System on all wells
DPE-5	8/28/2011	992.46	16.28	976.18	DPE System on all wells
DPE-5	9/29/2011	992.46	15.35	977.11	DPE-1,2,3,4
DPE-5	10/18/2011	992.46	14.24	978.22	DPE-1,2,3,4
DPE-5	10/27/2011	992.46	16.46	976.00	DPE-1,2,3,4
DPE-5	11/21/2011	992.46	17.18	975.28	DPE-1,2,3,4
DPE-5	1/20/2012	992.46	15.39	977.07	DPE-1,2,3,4
DPE-5	1/27/2012	992.46	16.44	976.02	DPE-1,2,3,4
DPE-5	2/16/2012	992.46	17.42	975.04	DPE-1,2,3,4
DPE-5	3/16/2012	992.46	17.41	975.05	DPE-1,2,3,4
DPE-5	3/27/2012	992.46	15.62	976.84	DPE-1,2,3,4
DPE-5	4/17/2012	992.46	17.08	975.38	DPE-1,2,3,4
DPE-5	5/17/2012	992.46	16.65	975.81	DPE-1,2,3,4
DPE-5	5/31/2012	992.46	15.58	976.88	DPE-1,2,3,4
DPE-5	6/14/2012	992.46	16.95	975.51	DPE-1,2,3,4
DPE-5	7/19/2012	992.46	17.22	975.24	DPE-3
DPE-5	8/23/2012	992.46	16.22	976.24	DPE-3
DPE-5	9/26/2012	992.46	16.31	976.15	DPE-3
DPE-5	10/26/2012	992.46	16.41	976.05	DPE-3
DPE-5	12/19/2012	992.46	15.74	976.72	DPE-3; Before restarting the system
DPE-5	12/21/2012	992.46	17.58	974.88	DPE-3; After restarting the system
DPE-5	1/30/2013	992.46	17.21	975.25	DPE-1,2,3,4
DPE-5	2/26/2013	992.46	16.81	975.65	DPE-1,2,3,4
DPE-5	3/21/2013	992.46	17.48	974.98	DPE-1,2,3,4
DPE-5	5/23/2013	992.46	11.18	981.28	DPE-1,2,3,4
DPE-5	6/26/2013	992.46	14.90	977.56	DPE-1,2,3,4
DPE-5	8/26/2013	992.46	15.79	976.67	DPE-1,2,3,4
DPE-5	12/10/2013	992.46	14.41	978.05	System Off
DPE-5	2/17/2014	992.46	14.99	977.47	System Off
DPE-5	4/20/2014	992.46	13.61	978.85	System Off
DPE-5	8/21/2014	992.46	14.91	977.55	System Off
DPE-5	11/19/2014	992.46	14.12	978.34	System Off
DPE-5	2/25/2015	992.46	15.08	977.38	System Off
DPE-5	6/15/2015	992.46	14.25	978.21	System Off
DPE-5	8/17/2015	992.46	14.88	977.58	System Off
DPE-5	9/10/2015	992.46	14.61	977.85	System Off
DPE-5	10/12/2015	992.46	16.11	976.35	System Off
DPE-5	12/14/2015	992.46	14.49	977.97	DPE System on all wells
DPE-5	1/11/2016	992.46	16.11	976.35	DPE System on all wells
DPE-5	2/23/2016	992.46	14.30	978.16	DPE System on all wells
DPE-5	4/20/2016	992.46	15.76	976.70	DPE System on all wells
DPE-5	5/17/2016	992.46	13.54	978.92	DPE System on all wells
DPE-5	8/10/2016	992.46	15.58	976.88	DPE System on all wells

TABLE 1

GROUNDWATER ELEVATIONS
MN Bio Business Center
221 First Avenue SW
Rochester, Minnesota

Well ID	Date Measured	Top of Casing Elevation ^{1,2}	Depth to Groundwater (feet)	Groundwater Elevation ³	System Status
DPE-6	12/3/2008	991.44	12.93	978.51	pre-system installation
DPE-6	6/8/2009	992.40	16.19	976.21	pre-system startup
DPE-6	7/9/2009	992.40	16.54	975.86	DPE system on DPE-1
DPE-6	7/9/2009	992.40	15.92	976.48	DPE system temporarily off
DPE-6	9/4/2009	992.40	15.68	976.72	DPE system on DPE-1
DPE-6	9/4/2009	992.40	15.65	976.75	DPE-1 on after replacing inlet screen
DPE-6	9/4/2009	992.40	15.81	976.59	DPE-1 on after replacing inlet filter
DPE-6	10/15/2009	992.40	15.94	976.46	DPE system on DPE-1
DPE-6	10/23/2009	992.40	14.56	977.84	DPE system off
DPE-6	11/16/2009	992.40	14.24	978.16	DPE System on all wells
DPE-6	12/17/2009	992.40	14.89	977.51	DPE System on all wells
DPE-6	1/14/2010	992.40	15.14	977.26	DPE System on all wells
DPE-6	2/22/2010	992.40	15.61	976.79	DPE System on all wells
DPE-6	3/25/2010	992.40	15.24	977.16	DPE System on all wells
DPE-6	4/16/2010	992.40	15.48	976.92	DPE System on all wells
DPE-6	5/12/2010	992.40	16.02	976.38	DPE System on all wells
DPE-6	6/17/2010	992.40	15.98	976.42	DPE System on all wells
DPE-6	8/18/2010	992.40	16.56	975.84	DPE System on all wells
DPE-6	9/27/2010	992.40	13.98	978.42	DPE System on all wells
DPE-6	11/18/2010	992.40	14.24	978.16	DPE System not operating
DPE-6	12/22/2010	992.40	14.89	977.51	DPE System restarted
DPE-6	1/6/2011	992.40	13.96	978.44	DPE System on all wells
DPE-6	1/20/2011	992.40	14.20	978.20	DPE System on all wells
DPE-6	2/28/2011	992.40	14.31	978.09	DPE System on all wells
DPE-6	3/7/2011	992.40	14.80	977.60	DPE System on all wells
DPE-6	3/18/2011	992.40	14.87	977.53	DPE System on all wells
DPE-6	3/23/2011	992.40	14.08	978.32	DPE System on all wells
DPE-6	4/22/2011	992.40	13.52	978.88	DPE System on all wells
DPE-6	5/19/2011	992.40	14.09	978.31	DPE System on all wells
DPE-6	6/16/2011	992.40	14.30	978.10	DPE System on all wells
DPE-6	7/25/2011	992.40	14.64	977.76	DPE System on all wells
DPE-6	8/28/2011	992.40	15.38	977.02	DPE System on all wells
DPE-6	9/29/2011	992.40	15.57	976.83	DPE-1,2,3,4
DPE-6	10/18/2011	992.40	14.20	978.20	DPE-1,2,3,4
DPE-6	10/27/2011	992.40	15.64	976.76	DPE-1,2,3,4
DPE-6	11/21/2011	992.40	15.81	976.59	DPE-1,2,3,4
DPE-6	1/20/2012	992.40	15.39	977.01	DPE-1,2,3,4
DPE-6	1/27/2012	992.40	16.29	976.11	DPE-1,2,3,4
DPE-6	2/16/2012	992.40	16.28	976.12	DPE-1,2,3,4
DPE-6	3/16/2012	992.40	16.40	976.00	DPE-1,2,3,4
DPE-6	3/27/2012	992.40	15.68	976.72	DPE-1,2,3,4
DPE-6	4/17/2012	992.40	16.19	976.21	DPE-1,2,3,4
DPE-6	5/17/2012	992.40	16.09	976.31	DPE-1,2,3,4
DPE-6	5/31/2012	992.40	15.56	976.84	DPE-1,2,3,4
DPE-6	6/14/2012	992.40	16.51	975.89	DPE-1,2,3,4
DPE-6	7/19/2012	992.40	16.96	975.44	DPE-3
DPE-6	8/23/2012	992.40	16.51	975.89	DPE-3
DPE-6	9/26/2012	992.40	16.36	976.04	DPE-3
DPE-6	10/26/2012	992.40	16.42	975.98	DPE-3
DPE-6	12/19/2012	992.40	15.66	976.74	DPE-3; Before restarting the system
DPE-6	12/21/2012	992.40	16.00	976.40	DPE-3; After restarting the system
DPE-6	1/30/2013	992.40	16.63	975.77	DPE-1,2,3,4
DPE-6	2/26/2013	992.40	16.59	975.81	DPE-1,2,3,4
DPE-6	3/21/2013	992.40	16.61	975.79	DPE-1,2,3,4
DPE-6	5/23/2013	992.40	11.44	980.96	DPE-1,2,3,4
DPE-6	6/26/2013	992.40	13.18	979.22	DPE-1,2,3,4
DPE-6	8/26/2013	992.40	14.86	977.54	DPE-1,2,3,4
DPE-6	12/10/2013	992.40	14.39	978.01	System Off
DPE-6	2/17/2014	992.40	14.81	977.59	System Off
DPE-6	4/20/2014	992.40	13.59	978.81	System Off
DPE-6	8/21/2014	992.40	15.04	977.36	System Off
DPE-6	11/19/2014	992.40	13.01	979.39	System Off
DPE-6	2/25/2015	992.40	14.87	977.53	System Off
DPE-6	6/15/2015	992.40	13.45	978.95	System Off
DPE-6	8/17/2015	992.40	14.75	977.65	System Off
DPE-6	9/10/2015	992.40	14.57	977.83	System Off
DPE-6	10/12/2015	992.40	15.21	977.19	System Off
DPE-6	12/14/2015	992.40	14.35	978.05	DPE System on all wells
DPE-6	1/11/2016	992.40	14.67	977.73	DPE System on all wells
DPE-6	2/23/2016	992.40	14.09	978.31	DPE System on all wells
DPE-6	4/20/2016	992.40	13.93	978.47	DPE System on all wells
DPE-6	5/17/2016	992.40	14.28	978.12	DPE System on all wells
DPE-6	8/10/2016	992.40	15.02	977.38	DPE System on all wells

TABLE 1

GROUNDWATER ELEVATIONS
MN Bio Business Center
221 First Avenue SW
Rochester, Minnesota

Well ID	Date Measured	Top of Casing Elevation ^{1,2}	Depth to Groundwater (feet)	Groundwater Elevation ³	System Status
DPE-7	12/3/2008	991.47	12.96	978.51	pre-system installation
DPE-7	6/8/2009	993.48	16.78	976.70	pre-system startup
DPE-7	7/9/2009	993.48	17.76	975.72	DPE system on DPE-1
DPE-7	7/9/2009	993.48	17.16	976.32	DPE system temporarily off
DPE-7	9/4/2009	993.48	17.03	976.45	DPE system on DPE-1
DPE-7	9/4/2009	993.48	17.00	976.48	DPE-1 on after replacing inlet screen
DPE-7	9/4/2009	993.48	17.18	976.30	DPE-1 on after replacing inlet filter
DPE-7	10/15/2009	993.48	16.80	976.68	DPE system on DPE-1
DPE-7	10/23/2009	993.48	15.68	977.80	DPE system off
DPE-7	11/16/2009	993.48	15.44	978.04	DPE System on all wells
DPE-7	12/17/2009	993.48	16.03	977.45	DPE System on all wells
DPE-7	1/14/2010	993.48	16.26	977.22	DPE System on all wells
DPE-7	2/22/2010	993.48	16.98	976.50	DPE System on all wells
DPE-7	3/25/2010	993.48	16.65	976.83	DPE System on all wells
DPE-7	4/16/2010	993.48	16.71	976.77	DPE System on all wells
DPE-7	5/12/2010	993.48	17.41	976.07	DPE System on all wells
DPE-7	6/17/2010	993.48	17.50	975.98	DPE System on all wells
DPE-7	8/18/2010	993.48	17.98	975.50	DPE System on all wells
DPE-7	9/27/2010	993.48	15.36	978.12	DPE System on all wells
DPE-7	11/18/2010	993.48	15.59	977.89	DPE System not operating
DPE-7	12/22/2010	993.48	16.02	977.46	DPE System restarted
DPE-7	1/6/2011	993.48	15.20	978.28	DPE System on all wells
DPE-7	1/20/2011	993.48	15.31	978.17	DPE System on all wells
DPE-7	2/28/2011	993.48	15.61	977.87	DPE System on all wells
DPE-7	3/7/2011	993.48	16.08	977.40	DPE System on all wells
DPE-7	3/18/2011	993.48	16.08	977.40	DPE System on all wells
DPE-7	3/23/2011	993.48	14.83	978.65	DPE System on all wells
DPE-7	4/22/2011	993.48	15.60	977.88	DPE System on all wells
DPE-7	5/19/2011	993.48	15.33	978.15	DPE System on all wells
DPE-7	6/16/2011	993.48	15.58	977.90	DPE System on all wells
DPE-7	7/25/2011	993.48	14.64	978.84	DPE System on all wells
DPE-7	8/28/2011	993.48	16.96	976.52	DPE System on all wells
DPE-7	9/29/2011	993.48	17.35	976.13	DPE-1,2,3,4
DPE-7	10/18/2011	993.48	16.25	977.23	DPE-1,2,3,4
DPE-7	10/27/2011	993.48	17.46	976.02	DPE-1,2,3,4
DPE-7	11/21/2011	993.48	17.14	976.34	DPE-1,2,3,4
DPE-7	1/20/2012	993.48	16.68	976.80	DPE-1,2,3,4
DPE-7	1/27/2012	993.48	17.64	975.84	DPE-1,2,3,4
DPE-7	2/16/2012	993.48	17.69	975.79	DPE-1,2,3,4
DPE-7	3/16/2012	993.48	17.71	975.77	DPE-1,2,3,4
DPE-7	3/27/2012	993.48	17.08	976.40	DPE-1,2,3,4
DPE-7	4/17/2012	993.48	17.41	976.07	DPE-1,2,3,4
DPE-7	5/17/2012	993.48	17.62	975.86	DPE-1,2,3,4
DPE-7	5/31/2012	993.48	17.11	976.37	DPE-1,2,3,4
DPE-7	6/14/2012	993.48	17.83	975.65	DPE-1,2,3,4
DPE-7	7/19/2012	993.48	18.41	975.07	DPE-3
DPE-7	8/23/2012	993.48	18.21	975.27	DPE-3
DPE-7	9/26/2012	993.48	17.81	975.67	DPE-3
DPE-7	10/26/2012	993.48	17.88	975.60	DPE-3
DPE-7	12/19/2012	993.48	17.02	976.46	DPE-3; Before restarting the system
DPE-7	12/21/2012	993.48	17.59	975.89	DPE-3; After restarting the system
DPE-7	1/30/2013	993.48	17.86	975.62	DPE-1,2,3,4
DPE-7	2/26/2013	993.48	17.66	975.82	DPE-1,2,3,4
DPE-7	3/21/2013	993.48	18.03	975.45	DPE-1,2,3,4
DPE-7	5/23/2013	993.48	13.00	980.48	DPE-1,2,3,4
DPE-7	6/26/2013	993.48	14.40	979.08	DPE-1,2,3,4
DPE-7	8/26/2013	993.48	16.04	977.44	DPE-1,2,3,4
DPE-7	12/10/2013	993.48	15.64	977.84	System Off
DPE-7	2/17/2014	993.48	16.04	977.44	System Off
DPE-7	4/20/2014	993.48	14.84	978.64	System Off
DPE-7	8/21/2014	993.48	15.71	977.77	System Off
DPE-7	11/19/2014	993.48	15.27	978.21	System Off
DPE-7	2/25/2015	993.48	16.11	977.37	System Off
DPE-7	6/15/2015	993.48	15.43	978.05	System Off
DPE-7	8/17/2015	993.48	16.05	977.43	System Off
DPE-7	9/10/2015	993.48	15.79	977.69	System Off
DPE-7	10/12/2015	993.48	NR		Well was dry
DPE-7	12/14/2015	993.48	15.61	977.87	DPE System on all wells
DPE-7	1/11/2016	993.48	15.85	977.63	DPE System on all wells
DPE-7	2/23/2016	993.48	15.21	978.27	DPE System on all wells
DPE-7	4/20/2016	993.48	14.82	978.66	DPE System on all wells
DPE-7	5/17/2016	993.48	15.87	977.61	DPE System on all wells
DPE-7	8/10/2016	993.48	16.02	977.46	DPE System on all wells

TABLE 1

GROUNDWATER ELEVATIONS
MN Bio Business Center
221 First Avenue SW
Rochester, Minnesota

Well ID	Date Measured	Top of Casing Elevation ^{1,2}	Depth to Groundwater (feet)	Groundwater Elevation ³	System Status
DPE-8	12/3/2008	991.48	12.56	978.92	pre-system installation
DPE-8	6/8/2009	992.84	14.50	978.34	pre-system startup
DPE-8	7/9/2009	992.84	14.57	978.27	DPE system on DPE-1
DPE-8	7/9/2009	992.84	14.49	978.35	DPE system temporarily off
DPE-8	9/4/2009	992.84	14.29	978.55	DPE system on DPE-1
DPE-8	9/4/2009	992.84	14.31	978.53	DPE-1 on after replacing inlet screen
DPE-8	9/4/2009	992.84	14.28	978.56	DPE-1 on after replacing inlet filter
DPE-8	10/15/2009	992.84	14.01	978.83	DPE system on DPE-1
DPE-8	10/23/2009	992.84	13.18	979.66	DPE system off
DPE-8	11/16/2009	992.84	13.30	979.54	DPE System on all wells
DPE-8	12/17/2009	992.84	15.31	977.53	DPE System on all wells
DPE-8	1/14/2010	992.84	16.58	976.26	DPE System on all wells
DPE-8	2/22/2010	992.84	14.19	978.65	DPE System on all wells
DPE-8	3/25/2010	992.84	15.72	977.12	DPE System on all wells
DPE-8	4/16/2010	992.84	16.20	976.64	DPE System on all wells
DPE-8	5/12/2010	992.84	16.61	976.23	DPE System on all wells
DPE-8	6/17/2010	992.84	16.92	975.92	DPE System on all wells
DPE-8	8/18/2010	992.84	17.21	975.63	DPE System on all wells
DPE-8	9/27/2010	992.84	14.75	978.09	DPE System on all wells
DPE-8	11/18/2010	992.84	15.37	977.47	DPE System not operating
DPE-8	12/22/2010	992.84	15.40	977.44	DPE System restarted
DPE-8	1/6/2011	992.84	15.18	977.66	DPE System on all wells
DPE-8	1/20/2011	992.84	16.15	976.69	DPE System on all wells
DPE-8	2/28/2011	992.84	16.78	976.06	DPE System on all wells
DPE-8	3/7/2011	992.84	15.81	977.03	DPE System on all wells
DPE-8	3/18/2011	992.84	15.71	977.13	DPE System on all wells
DPE-8	3/23/2011	992.84	14.20	978.64	DPE System on all wells
DPE-8	4/22/2011	992.84	14.61	978.23	DPE System on all wells
DPE-8	5/19/2011	992.84	15.18	977.66	DPE System on all wells
DPE-8	6/16/2011	992.84	15.48	977.36	DPE System on all wells
DPE-8	7/25/2011	992.84	14.41	978.43	DPE System on all wells
DPE-8	8/28/2011	992.84	16.91	975.93	DPE System on all wells
DPE-8	9/29/2011	992.84	16.37	976.47	DPE-1,2,3,4
DPE-8	10/18/2011	992.84	15.41	977.43	DPE-1,2,3,4
DPE-8	10/27/2011	992.84	16.82	976.02	DPE-1,2,3,4
DPE-8	11/21/2011	992.84	17.11	975.73	DPE-1,2,3,4
DPE-8	1/20/2012	992.84	16.74	976.10	DPE-1,2,3,4
DPE-8	1/27/2012	992.84	17.43	975.41	DPE-1,2,3,4
DPE-8	2/16/2012	992.84	DRY		DPE-1,2,3,4
DPE-8	3/16/2012	992.84	17.50	975.34	DPE-1,2,3,4
DPE-8	3/27/2012	992.84	16.78	976.06	DPE-1,2,3,4
DPE-8	4/17/2012	992.84	17.49	975.35	DPE-1,2,3,4
DPE-8	5/17/2012	992.84	DRY		DPE-1,2,3,4
DPE-8	5/31/2012	992.84	16.99	975.85	DPE-1,2,3,4
DPE-8	6/14/2012	992.84	DRY		DPE-1,2,3,4
DPE-8	7/19/2012	992.84	DRY		DPE-3
DPE-8	8/23/2012	992.84	DRY		DPE-3
DPE-8	9/26/2012	992.84	DRY		DPE-3
DPE-8	10/26/2012	992.84	DRY		DPE-3
DPE-8	12/19/2012	992.84	17.02	975.82	DPE-3; Before restarting the system
DPE-8	12/21/2012	992.84	DRY		DPE-3; After restarting the system
DPE-8	1/30/2013	992.84	DRY		DPE-1,2,3,4
DPE-8	2/26/2013	992.84	DRY		DPE-1,2,3,4
DPE-8	3/21/2013	992.84	DRY		DPE-1,2,3,4
DPE-8	5/23/2013	992.84	12.19	980.65	DPE-1,2,3,4
DPE-8	6/26/2013	992.84	14.00	978.84	DPE-1,2,3,4
DPE-8	8/26/2013	992.84	15.49	977.35	DPE-1,2,3,4
DPE-8	12/10/2013	992.84	15.62	977.22	System Off
DPE-8	2/17/2014	992.84	16.00	976.84	System Off
DPE-8	4/20/2014	992.84	14.46	978.38	System Off
DPE-8	8/21/2014	992.84	16.00	976.84	System Off
DPE-8	11/19/2014	992.84	15.04	977.80	System Off
DPE-8	2/25/2015	992.84	16.04	976.80	System Off
DPE-8	6/15/2015	992.84	14.29	978.55	System Off
DPE-8	8/17/2015	992.84	15.74	977.10	System Off
DPE-8	9/10/2015	992.84	15.52	977.32	System Off
DPE-8	10/12/2015	992.84	16.45	976.39	System Off
DPE-8	12/14/2015	992.84	15.43	977.41	DPE System on all wells
DPE-8	1/11/2016	992.84	15.68	977.16	DPE System on all wells
DPE-8	2/23/2016	992.84	15.08	977.76	DPE System on all wells
DPE-8	4/20/2016	992.84	14.95	977.89	DPE System on all wells
DPE-8	5/17/2016	992.84	14.23	978.61	DPE System on all wells
DPE-8	8/10/2016	992.84	14.99	977.85	DPE System on all wells

TABLE 1

GROUNDWATER ELEVATIONS
MN Bio Business Center
221 First Avenue SW
Rochester, Minnesota

Well ID	Date Measured	Top of Casing Elevation ^{1,2}	Depth to Groundwater (feet)	Groundwater Elevation ³	System Status
Elevator Drantile Sump	6/8/2009	989.58	7.00	982.58	pre-system startup
Elevator Drantile Sump	6/25/2009	990.20	6.34	983.86	pre-system startup
Elevator Drantile Sump	7/9/2009	990.20	6.38	983.82	DPE system on DPE-1
Elevator Drantile Sump	9/4/2009	990.20	6.29	983.91	DPE system on DPE-1
Elevator Drantile Sump	10/15/2009	990.20	6.18	984.02	DPE system on DPE-1
Elevator Drantile Sump	10/23/2009	990.20	6.08	984.12	DPE system off
Elevator Drantile Sump	11/16/2009	990.20	5.72	984.48	DPE System on all wells
Elevator Drantile Sump	12/17/2009	990.20	6.48	983.72	DPE System on all wells
Elevator Drantile Sump	1/14/2010	990.20	6.46	983.74	DPE System on all wells
Elevator Drantile Sump	2/22/2010	990.20	6.81	983.39	DPE System on all wells
Elevator Drantile Sump	3/25/2010	990.20	6.88	983.32	DPE System on all wells
Elevator Drantile Sump	4/16/2010	990.20	6.91	983.29	DPE System on all wells
Elevator Drantile Sump	5/12/2010	990.20	7.01	983.19	DPE System on all wells
Elevator Drantile Sump	6/17/2010	990.20	6.88	983.32	DPE System on all wells
Elevator Drantile Sump	8/18/2010	990.20	6.72	983.48	DPE System on all wells
Elevator Drantile Sump	9/27/2010	990.20	6.02	984.18	DPE System on all wells
Elevator Drantile Sump	11/18/2010	990.20	6.59	983.61	DPE System not operating
Elevator Drantile Sump	12/22/2010	990.20	6.48	983.72	DPE System restarted
Elevator Drantile Sump	1/6/2011	990.20	NA		DPE System on all wells
Elevator Drantile Sump	1/20/2011	990.20	6.84	983.36	DPE System on all wells
Elevator Drantile Sump	2/28/2011	990.20	7.03	983.17	DPE System on all wells
Elevator Drantile Sump	3/7/2011	990.20	6.91	983.29	DPE System on all wells
Elevator Drantile Sump	3/18/2011	990.20	6.97	983.23	DPE System on all wells
Elevator Drantile Sump	3/23/2011	990.20	6.76	983.44	DPE System on all wells
Elevator Drantile Sump	4/22/2011	990.20	6.52	983.68	DPE System on all wells
Elevator Drantile Sump	5/19/2011	990.20	6.27	983.93	DPE System on all wells
Elevator Drantile Sump	6/16/2011	990.20	6.52	983.68	DPE System on all wells
Elevator Drantile Sump	7/25/2011	990.20	5.58	984.62	DPE System on all wells
Elevator Drantile Sump	8/28/2011	990.20	6.56	983.64	DPE System on all wells
Elevator Drantile Sump	9/29/2011	990.20	6.97	983.23	DPE-1,2,3,4
Elevator Drantile Sump	10/18/2011	990.20	6.68	983.52	DPE-1,2,3,4
Elevator Drantile Sump	10/27/2011	990.20	7.01	983.19	DPE-1,2,3,4
Elevator Drantile Sump	11/21/2011	990.20	7.31	982.89	DPE-1,2,3,4
Elevator Drantile Sump	1/20/2012	990.20	7.33	982.87	DPE-1,2,3,4
Elevator Drantile Sump	1/27/2012	990.20	7.38	982.82	DPE-1,2,3,4
Elevator Drantile Sump	2/16/2012	990.20	7.44	982.76	DPE-1,2,3,4
Elevator Drantile Sump	3/16/2012	990.20	7.61	982.59	DPE-1,2,3,4
Elevator Drantile Sump	4/17/2012	990.20	7.97	982.23	DPE-1,2,3,4
Elevator Drantile Sump	5/17/2012	990.20	DRY		DPE-1,2,3,4
Elevator Drantile Sump	5/31/2012	990.20	6.99	983.21	DPE-1,2,3,4
Elevator Drantile Sump	6/14/2012	990.20	7.11	983.09	DPE-1,2,3,4
Elevator Drantile Sump	7/19/2012	990.20	7.09	983.11	DPE-3
Elevator Drantile Sump	8/23/2012	990.20	6.88	983.32	DPE-3
Elevator Drantile Sump	9/26/2012	990.20	7.19	983.01	DPE-3
Elevator Drantile Sump	10/26/2012	990.20	7.41	982.79	DPE-3
Elevator Drantile Sump	12/19/2012	990.20	7.33	982.87	DPE-3; Before restarting the system
Elevator Drantile Sump	12/21/2012	990.20	7.36	982.84	DPE-3; After restarting the system
Elevator Drantile Sump	1/30/2013	990.20	7.48	982.72	DPE-1,2,3,4
Elevator Drantile Sump	2/26/2013	990.20	7.70	982.50	DPE-1,2,3,4
Elevator Drantile Sump	3/21/2013	990.20	7.18	983.02	DPE-1,2,3,4
Elevator Drantile Sump	5/23/2013	990.20	4.07	986.13	DPE-1,2,3,4
Elevator Drantile Sump	6/26/2013	990.20	5.54	984.66	DPE-1,2,3,4
Elevator Drantile Sump	8/26/2013	990.20	6.66	983.54	DPE-1,2,3,4
Elevator Drantile Sump	12/10/2013	990.20	6.89	983.31	System Off
Elevator Drantile Sump	2/17/2014	990.20	6.94	983.26	System Off
Elevator Drantile Sump	4/20/2014	990.20	5.92	984.28	System Off
Elevator Drantile Sump	8/21/2014	990.20	7.71	982.49	System Off
Elevator Drantile Sump	11/19/2014	990.20	6.58	983.62	System Off
Elevator Drantile Sump	2/25/2015	990.20	7.13	983.07	System Off
Elevator Drantile Sump	6/15/2015	990.20	NR		System Off
Elevator Drantile Sump	8/17/2015	990.20	NR		System Off
Elevator Drantile Sump	10/12/2015	990.20	6.68	983.52	System Off
Elevator Drantile Sump	1/11/2016	990.20	6.81	983.39	DPE System on all wells
Elevator Drantile Sump	2/23/2016	990.20	NR		DPE System on all wells
Elevator Drantile Sump	4/20/2016	990.20	NR		DPE System on all wells
Elevator Drantile Sump	8/10/2016	990.20	NR		DPE System on all wells

Notes:

NR: Not Recorded

- Monitoring well top of casing elevations were surveyed by Adolfsen and Peterson on 4/22/08.
- DPE well top of casing elevations changed during DPE well head installation and were estimated from a basement floor elevation of 989.5 ft and include the distance from the floor to the top of the well seal cover and the distance from the well seal cover to the top of the PVC stickup for collecting water level readings.
- Elevations are in feet above mean sea level.

TABLE 2

WELL CONSTRUCTION SUMMARY
(elevations are in feet above mean sea level)

MN Bio Business Center
221 First Avenue SW
Rochester, Minnesota

Monitoring Well	Top of Casing Elevation ^{1,2}	Basement Floor Elevation	Top of Seal Elevation	Top of Filter Pack Elevation	Top of Well Screen Elevation	Bottom of Well Screen Elevation	Screen Interval (feet)	Depth to Bottom of Well (feet)	Bottom of Well Elevation	Well Completion
MW-14	989.50	989.50	989.50	986.00	984.00	974.00	10	17.5	972.00	flush-mounted
MW-15	991.50	989.50	990.50	987.50	985.50	975.50	10	18.0	973.50	stickup
MW-16	989.44	989.50	989.94	985.44	983.44	973.44	10	18.0	971.44	flush-mounted
MW-17	989.53	989.50	989.03	973.53	971.53	966.53	5	25.0	964.53	flush-mounted
MW-18	989.50	989.50	989.25	938.50	936.50	931.50	5	60.0	929.50	flush-mounted
MW-19	991.13	989.50	990.63	984.13	983.13	973.13	10	20.0	971.13	stickup
MW-20	991.50	989.50	992.80	988.80	986.80	976.80	10	16.7	974.80	stickup
DPE-1	992.40	989.50	989.53	984.53	982.53	970.53	12	21.9	970.53	stickup
DPE-2	992.80	989.50	990.28	986.28	984.28	972.28	12	20.5	972.28	stickup
DPE-3	992.48	989.50	990.42	989.42	987.42	975.42	12	17.1	975.42	stickup
DPE-4	992.40	989.50	990.07	987.07	985.07	973.07	12	19.3	973.07	stickup
DPE-5	992.46	989.50	990.32	987.32	986.32	974.32	12	18.1	974.32	stickup
DPE-6	992.40	989.50	989.87	986.87	984.87	972.87	12	19.5	972.87	stickup
DPE-7	993.48	989.50	990.32	984.32	983.32	971.32	12	22.2	971.32	stickup
DPE-8	992.84	989.50	990.84	989.34	987.34	975.34	12	17.5	975.34	stickup

Notes:

1. Monitoring well top of casing elevations were surveyed by Adolfson and Peterson on 4/22/08.
2. DPE well top of casing elevations changed during DPE well head installation and were estimated from a basement floor elevation of 989.5 ft and include the distance from the floor to the top of the well seal cover and the distance from the well seal cover to the top of the PVC stickup for collecting water level readings.

TABLE 3

NATURAL ATTENUATION ANALYTICAL RESULTS (ug/L)

MN Bio Business Center

221 First Avenue SW

Rochester, Minnesota

Sample ID	DPE-1	DPE-1	DPE-2	DPE-2	DPE-3	DPE-3	DPE-4	DPE-4
Collected Date	09/28/2009	12/10/2008	09/28/2009	12/10/2008	09/28/200	12/10/2008	09/28/2009	12/10/2008
	12:52	13:50	14:22	11:45	9 15:25	10:57	10:13	11:20
Calcium, Dissolved	NA*	149,000	NA*	181,000	NA*	556,000	NA*	258,000
Dissolved Organic Carbon	<2000	4,800	2,000	2,800	3,700	6,900	<2000	2700
Iron, Dissolved	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0
Magnesium, Dissolved	NA*	33,400	NA*	47,600	NA*	103,000	NA*	73,400
Methane	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Nitrate as N	5,900	6,400	4,900	7,800	7,100	9,800	11,000	26,800
Sulfate	157,000	250,000	174,000	182,000	296,000	436,000	168,000	235,000
Sulfide	<5000	<5000	<5000	<5000	<5000	<5000	<5000	<5000

Sample ID	DPE-5	DPE-5	DPE-6	DPE-6	DPE-7	DPE-7	DPE-8	DPE-8
Collected Date	12/10/2008	09/24/2009	12/10/2008	09/24/2009	12/10/200	09/24/2009	12/10/2008	09/24/2009
	16:45	04:00	14:29	04:30	8 13:15	05:00	09:30	05:30
Calcium, Dissolved	75,400	NA*	70,800	NA*	123,000	NA*	189,000	NA*
Dissolved Organic Carbon	4700	<2000	2500	<2000	3,300	<2000	4,000	3,000
Iron, Dissolved	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0
Magnesium, Dissolved	86,200	NA*	17,700	NA*	23,400	NA*	36,800	NA*
Methane	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Nitrate as N	5,500	5,500	3,000	1,500	7,900	1,900	9,800	4,300
Sulfate	468,000	281,000	159,000	67,600	275,000	85,600	262,000	149,000
Sulfide	<5000	<5000	<5000	<5000	<5000	<5000	<5000	<5000

Notes:

Bold: Parameter detected
above laboratory reporting
limit

NA*: Not Analyzed

TABLE 3

NATURAL ATTENUATION ANALYTICAL RESULTS (ug/L)

MN Bio Business Center
221 First Avenue SW
Rochester, Minnesota

Sample ID	MW14	MW-14	MW15	MW15	MW16	MW-16	MW17	MW-17
Collected Date	10/01/2009	12/03/2008	10/01/2009	12/10/2008	10/01/2009	12/03/2008	10/01/2009	12/03/2008
	04:00	16:20	04:20	12:15	04:25	12:35	05:20	13:10
Calcium, Dissolved	NA*	114,000	NA*	67,700	NA*	194,000	NA*	76,300
Dissolved Organic Carbon	69,200	2,400	15,700	<2000	49,100	3,500	9,100	7,500
Iron, Dissolved	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	50.1
Magnesium, Dissolved	NA*	30,400	NA*	18,700	NA*	70,200	NA*	29,100
Methane	10.1	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Nitrate as N	1,600	3,700	580	2,200	16,200	NA*	3,900	NA*
Sulfate	146,000	131,000	99,900	87,500	258,000	253,000	159,000	199,000
Sulfide	<5000	<5000	<5000	<5000	<5000	<5000	<5000	<5000

Sample ID	MW18	MW-18	MW-19	MW-19	MW20	MW20
Collected Date	10/01/2009	12/03/2008	09/24/2009	12/03/2008	10/01/2009	12/10/2008
	05:46	14:26	11:40	16:59	06:00	10:30
Calcium, Dissolved	NA*	99,000	NA*	245,000	NA*	260,000
Dissolved Organic Carbon	5,400	8,500	<2000	3,100	20,300	2,700
Iron, Dissolved	88.3	4,190	<50.0	<50.0	<50.0	<50.0
Magnesium, Dissolved	NA*	52,600	NA*	71,100	NA*	65,900
Methane	<10.0	<10.0	10.7	<10.0	274	17.0
Nitrate as N	<400	NA*	16,800	NA*	8900	10,900
Sulfate	110,000	115,000	156,000	187,000	139,000	203,000
Sulfide	<5000	<5000	<5000	<5000	<5000	<5000

Notes:

Bold: Parameter detected above laboratory reporting limit

NA*: Not Analyzed

TABLE 4

GROUNDWATER FIELD DATA
MN Bio Business Center
221 First Avenue SW
Rochester, Minnesota

Monitoring Well	Date Measured	Temp (Deg. C)	Conductivity @ 25 deg. C (uS/cm)	pH	Redox Potential (Eh)	Dissolved Oxygen	Head Space (ppm)
MW-14	12/3/2008	15.1	735	7.41	228	2.6	1.752
MW-14	10/1/2009	18.8	1825	7.84	181	3.6	NR
MW-14	11/16/2009	19.22	1747	6.74	47.5	3.48	NR
MW-14	2/23/2010	18.51	1693	7.54	186	2.8	NR
MW-14	5/12/2010	18.65	1539	7.5	379	5.2	NR
MW-14	8/18/2010	19.16	1088	8.24	285	5.51	NR
MW-14	11/18/2010	19.54	1137	6.95	-42	3.49	NR
MW-14	3/1/2011	18.9	996	6.2	4.3	1.34	NR
MW-14	5/19/2011	19.38	984	7.61	-19.1	2.57	NR
MW-14	8/28/2011	19.5	1711	5.59	148	3.21	NR
MW-14	11/21/2011	19.7	1123	6.92	-14.2	3.99	NR
MW-14	2/15/2012	19.3	1174	7.44	-44.9	4.58	NR
MW-14	5/17/2012	9.9	1062	7.07	-17	1.9	NR
MW-14	9/26/2012	19.4	1043	7.53	-23	6.36	NR
MW-14	12/19/2012	19.8	1119	7.42	-36	1.33	NR
MW-14	2/25/2013	19.4	1324	7.17	-11.6	4.4	NR
MW-14	5/23/2013	19.2	701	7.92	-61	4.4	NR
MW-14	8/26/2013	19.41	1266	7.54	58.2	1.59	NR
MW-14	12/10/2013	20	1507	6.99	-25	4.08	NR
MW-14	2/17/2014	19.51	1596	7.74	-20.8	1.88	NR
MW-14	4/20/2014	19.34	1411	7.78	-36.6	1.95	NR
MW-14	8/21/2014	19.9	1009	6.92	-1	4.56	NR
MW-14	11/19/2014	19.8	1129	7.57	-30	2.83	NR
MW-14	2/25/2015	19.25	1328	7.7	-54	1.6	NR
MW-14	6/15/2015	19.48	1118	7.84	-80.1	2.49	NR
MW-14	8/17/2015	19.62	1652	7.23	147.4	2.11	NR
MW-14	12/14/2015	19.76	987	7.77	218.9	4.47	NR
MW-14	1/11/2016	19.51	1313	7.34	3.9	3.94	NR
MW-14	5/17/2016	19.21	1522	7.44	111.9	3.09	NR
MW-14	8/10/2016	19.2	1847	7.4	103.1	5.39	NR
MW-15	12/3/2008	13.4	735	8.18	87	3.8	279
MW-15	10/1/2009	18.4	920	8.08	167	5.22	NR
MW-15	11/16/2009	19.6	1155	7.35	200	4.53	NR
MW-15	2/22/2010	19.5	1506	7.82	916	4.27	NR
MW-15	5/12/2010	18.56	1708	7.37	84.9	6.97	NR
MW-15	8/18/2010	21.3	1593	10.6	166	6.04	NR
MW-15	11/18/2010	19.7	1446	6.14	25.8	4.86	NR
MW-15	3/1/2011	19.6	936	7.41	16.3	2.19	NR
MW-15	5/19/2011	15.4	1314	8.08	-42	2.91	NR
MW-15	8/28/2011	19.9	2051	6.65	121	5.15	NR
MW-15	11/21/2011	18.5	14	7.38	-37	97.3	NR
MW-15	2/15/2012	18.4	841	7.61	-53	4.21	NR
MW-15	5/17/2012	9.9	1223	7.49	-20	1.9	NR
MW-15	9/26/2012	19.2	1295	7.67	-30	6.3	NR
MW-15	12/19/2012	20.4	1130	7.49	-40	1.97	NR
MW-15	2/25/2013	20.7	1416	7.4	-23	1.46	NR
MW-15	5/23/2013	20.1	5007	7.53	-41	3.36	NR
MW-15	8/26/2013	20.31	3002	7.48	33.4	2.39	NR
MW-15	12/10/2013	20.31	1322	7.47	-51	4.63	NR
MW-15	2/17/2014	20.14	967	7.95	-32.3	2.26	NR
MW-15	4/20/2014	19.83	2281	7.74	-35.7	2.82	NR
MW-15	8/21/2014	20.2	2451	7.15	63.9	3.03	NR
MW-15	11/19/2014	20.5	1805	7.02	-33	2.04	NR
MW-15	2/25/2015	19.69	1560	7.72	-56	2	NR
MW-15	6/15/2015	20.17	2766	7.79	-45.5	3.7	NR
MW-15	8/18/2015	20.41	2465	7.5	241.3	3.5	NR
MW-15	12/14/2015	20.62	2249	7.39	235.4	3.27	NR
MW-15	1/11/2016	20.27	3590	7.46	101.8	3.65	NR
MW-15	5/17/2016	20.8	3226	7.05	149.9	3.69	NR
MW-15	8/10/2016	20.7	2404	7.51	100.5	6.02	NR

TABLE 4

GROUNDWATER FIELD DATA
MN Bio Business Center
221 First Avenue SW
Rochester, Minnesota

Monitoring Well	Date Measured	Temp (Deg. C)	Conductivity @ 25 deg. C (uS/cm)	pH	Redox Potential (Eh)	Dissolved Oxygen	Head Space (ppm)
MW-16	12/3/2008	14.5	735	8.21	-45	1.9	40
MW-16	10/1/2009	18.27	1182	7.46	214	9.68	NR
MW-16	11/16/2009	18.82	4048	6.91	170	3.67	NR
MW-16	2/22/2010	18.54	3238	7.31	115	4.17	NR
MW-16	5/12/2010	18.52	3240	7.46	209	6.29	NR
MW-16	8/18/2010	19.21	2695	10.3	49	6.26	NR
MW-16	11/18/2010	19.19	2935	7.61	-71	3.54	NR
MW-16	3/1/2011	18.93	1862	7.22	-23	1.94	NR
MW-16	5/19/2011	19.2	2476	7.76	-26	2.54	NR
MW-16	8/28/2011	19.4	3357	6.96	117	4.16	NR
MW-16	11/21/2011	19.7	2535	7.17	-26	3.35	NR
MW-16	2/15/2012	18.9	1492	7.68	-57	4.25	NR
MW-16	5/17/2012	9.9	1129	7.54	-24	1.9	NR
MW-16	9/26/2012	18.9	1126	7.4	-16	6.21	NR
MW-16	12/19/2012	19.6	2177	7.39	-10	3.61	NR
MW-16	2/25/2013	19.4	1338	7.48	-27	4.7	NR
MW-16	5/23/2013	19.1	2161	7.02	-19	1.92	NR
MW-16	8/26/2013	19.69	2058	7.29	-2.5	2.37	NR
MW-16	12/10/2013	19.88	2319	7.45	-50.7	6.12	NR
MW-16	2/17/2014	19.76	2391	7.71	-19.2	4.19	NR
MW-16	4/20/2014	19.24	9599	7.01	1.9	3.43	NR
MW-16	8/21/2014	19.89	3415	7.1	92.6	3.7	NR
MW-16	11/19/2014	20.3	3437	7.43	63	3.56	NR
MW-16	2/25/2015	19.5	2559	7.45	-41	2.57	NR
MW-16	6/15/2015	19.75	4532	7.62	-33.6	3.55	NR
MW-16	8/18/2015	19.94	3952	7.39	412.4	2.43	NR
MW-16	12/14/2015	19.89	4269	7.49	111.4	2.55	NR
MW-16	1/11/2016	19.7	2876	7.28	83.5	3.19	NR
MW-16	5/17/2016	19.58	3358	7.25	131.6	4.49	NR
MW-16	8/10/2016	19.5	2907	7.47	75.3	5.77	NR
MW-17	12/3/2008	14.8	735	8.99	-99	2.6	1.3
MW-17	10/1/2009	17.8	1428	8.6	175	1.99	NR
MW-17	11/16/2009	17.62	1761	7.34	29	1.62	NR
MW-17	2/22/2010	18.25	16.08	7.66	-163	2.02	NR
MW-17	5/12/2010	18.05	1707	7.21	-82	1.96	NR
MW-17	8/18/2010	18.29	1759	10.4	15	3.51	NR
MW-17	11/18/2010	18.47	2102	7.43	-62	2.23	NR
MW-17	3/1/2011	18.5	1425	7.21	-76	1.21	NR
MW-17	5/19/2011	18.6	1371	7.87	-31	0.77	NR
MW-17	8/28/2011	19.1	2206	6.96	-116	4.1	NR
MW-17	11/21/2011	19.81	1927	7.26	-31	0.83	NR
MW-17	2/15/2012	19.04	1349	7.45	-45	0.42	NR
MW-17	5/17/2012	9.9	1000	7.54	-39	1.09	NR
MW-17	9/26/2012	18.2	753	7.03	2.1	3.02	NR
MW-17	12/19/2012	19.5	727	7.48	-40	0.43	NR
MW-17	2/25/2013	19.2	1361	7.32	-19.3	1.6	NR
MW-17	5/23/2013	19.2	1396	7.92	-58	1.62	NR
MW-17	8/26/2013	19.29	1594	7.32	-51.2	1.02	NR
MW-17	12/10/2013	20.15	1480	7.41	-48	2.77	NR
MW-17	2/17/2014	19.59	1311	7.79	-23.5	0.97	NR
MW-17	4/20/2014	19.46	1861	7.56	-26.3	1.54	NR
MW-17	8/21/2014	19.65	640	7.5	22.3	1.28	NR
MW-17	11/19/2014	19.9	1436	7.76	6.9	1.62	NR
MW-17	2/25/2015	19.44	1509	7.56	-84.1	0.57	NR
MW-17	6/15/2015	19.8	1123	9.5	-450	0.33	NR
MW-17	8/18/2015	19.73	1813	8.37	226.1	0.8	NR
MW-17	12/14/2015	19.68	1952	8.65	-78.3	0.81	NR
MW-17	1/11/2016	19.59	1817	7.67	-89.3	0.73	NR
MW-17	5/17/2016	19.44	1539	10.39	-195.6	0.47	NR
MW-17	8/10/2016	19.1	2521	7.7	13.4	1.93	NR

TABLE 4

GROUNDWATER FIELD DATA
MN Bio Business Center
221 First Avenue SW
Rochester, Minnesota

Monitoring Well	Date Measured	Temp (Deg. C)	Conductivity @ 25 deg. C (uS/cm)	pH	Redox Potential (Eh)	Dissolved Oxygen	Head Space (ppm)
MW-18	12/3/2008	14.9	735	8.06	-137	3.1	1.2
MW-18	10/1/2009	17.8	1497	7.75	176	1.47	NR
MW-18	11/16/2009	16.46	2588	6.6	54.7	1.09	NR
MW-18	2/22/2010	17.7	2061	7.41	-244	1.19	NR
MW-18	5/12/2010	18.11	1992	6.98	-122	2.21	NR
MW-18	8/18/2010	17.3	1876	10.3	-69	0.69	NR
MW-18	11/18/2010	17.34	1640	7.51	-66	2.7	NR
MW-18	3/1/2011	17.4	1845	6.94	-46	0.61	NR
MW-18	5/19/2011	17.5	1949	7.41	-8.5	0.91	NR
MW-18	8/28/2011	18.9	2149	6.71	2.7	1.1	NR
MW-18	11/21/2011	19.8	1840	7.31	-34	1.03	NR
MW-18	2/15/2012	18.76	1937	7.5	-86	0.71	NR
MW-18	5/17/2012	9.9	2361	6.68	-46	5.6	NR
MW-18	9/26/2012	19.3	1680	6.98	4.9	2.9	NR
MW-18	12/19/2012	19.5	1738	7.08	-18	0.6	NR
MW-18	2/25/2013	19.9	2076	7.11	-85	0.5	NR
MW-18	5/23/2013	19.6	2121	7.67	-16	1.06	NR
MW-18	8/26/2013	19.39	2441	7.03	-65.9	0.28	NR
MW-18	12/10/2013	18.59	2655	7.22	-36.5	1.52	NR
MW-18	2/17/2014	19.58	2669	7.41	-3.4	0.62	NR
MW-18	4/20/2014	19.36	2280	7.46	-21	0.3	NR
MW-18	8/21/2014	19.59	2341	7.47	-224	0.68	NR
MW-18	11/19/2014	19.8	2198	7.36	-190	0.4	NR
MW-18	2/25/2015	19.46	2507	7.19	-116.7	0.57	NR
MW-18	6/15/2015	19.57	2113	8.23	-450	0.75	NR
MW-18	8/18/2015	19.71	2105	7.92	-164.2	2.47	NR
MW-18	12/14/2015	19.78	1392	11.01	68.1	1.93	NR
MW-18	1/11/2016	19.64	2180	7.37	-83.8	2.08	NR
MW-18	5/17/2016	19.61	2114	10.47	-210.8	0.74	NR
MW-18	8/10/2016	19.8	2501	8.22	-120.4	1.5	NR
MW-19	12/3/2008	13.7	735	7.20	219	2.2	0.13
MW-19	10/1/2009	15.6	3667	7.03	163	225	NR
MW-19	11/16/2009	15.96	3482	6.13	226	3.03	NR
MW-19	2/23/2010	15.81	4277	6.88	130	5.42	NR
MW-19	5/12/2010	6.4	8955	6.25	332.2	43.55	NR
MW-19	8/18/2010	17.28	3147	6.44	157	6.61	NR
MW-19	11/18/2010	16.99	4653	6.74	-25	3.71	NR
MW-19	3/1/2011	17.8	3992	6.77	30.8	2.81	NR
MW-19	5/19/2011	16.9	3750	7.05	14	2.61	NR
MW-19	8/28/2011	17.4	4618	6.59	47	4.7	NR
MW-19	11/21/2011	17.1	64	5.18	300	5.93	NR
MW-19	2/15/2012	17.33	3772	6.23	19.7	4.25	NR
MW-19	5/17/2012	9.9	4425	7.30	-3.4	7	NR
MW-19	9/26/2012	18.14	4655	6.71	17.3	8.16	NR
MW-19	12/19/2012	17	5054	6.71	-24	2.39	NR
MW-19	2/25/2013	17.9	6006	7.15	-10.3	2.12	NR
MW-19	5/23/2013	17.2	4673	6.63	-40	0.63	NR
MW-19	8/26/2013	17.54	5499	6.93	77.8	2.46	NR
MW-19	12/10/2013	17.89	5095	6.90	79.8	5.89	NR
MW-19	2/17/2014	17.38	6328	7.17	9.2	2.1	NR
MW-19	4/20/2014	17.63	5684	6.89	7.9	2.53	NR
MW-19	8/21/2014	17.6	6939	6.44	111.2	3.69	NR
MW-19	11/19/2014	17.9	6174	6.97	-4.5	2.95	NR
MW-19	2/25/2015	17.62	6298	6.87	74.5	2.41	NR
MW-19	6/15/2015	17.49	6233	6.94	-6.2	2.51	NR
MW-19	8/18/2015	17.42	7015	6.34	204.3	2.45	NR
MW-19	12/14/2015	17.99	7173	6.47	69.8	2.48	NR
MW-19	1/11/2016	17.87	6853	6.53	82.7	2.94	NR
MW-19	5/17/2016	17.32	6835	6.69	153.9	2.81	NR
MW-19	8/10/2016	17.4	6552	6.76	131.1	3.75	NR

TABLE 4

GROUNDWATER FIELD DATA
MN Bio Business Center
221 First Avenue SW
Rochester, Minnesota

Monitoring Well	Date Measured	Temp (Deg. C)	Conductivity @ 25 deg. C (uS/cm)	pH	Redox Potential (Eh)	Dissolved Oxygen	Head Space (ppm)
MW-20	12/3/2008	13.1	753	7.47	139	1.8	3.279
MW-20	10/1/2009	17.5	4008	7.31	317	6.19	NR
MW-20	11/16/2009	17.31	3760	6.8	288	3.85	NR
MW-20	2/23/2010	16.82	4720	7.23	322	5.22	NR
MW-20	5/12/2010	17.96	2410	7.16	276	7.83	NR
MW-20	8/18/2010	18.3	4559	10.1	182	8	NR
MW-20	11/18/2010	18.39	4497	7.44	-62	3.88	NR
MW-20	3/1/2011	16.6	3505	6.42	9.6	2.43	NR
MW-20	5/19/2011	18.5	3788	7.27	7.2	2.17	NR
MW-20	8/28/2011	18.7	5102	7.12	82	6.24	NR
MW-20	11/21/2011	18.45	5491	5.19	253	1.89	NR
MW-20	2/15/2012	17.95	5192	6.99	-22	4.42	NR
MW-20	5/17/2012	9.9	726	7.02	-21	1.06	NR
MW-20	9/26/2012	18.4	4277	6.99	3.6	3.9	NR
MW-20	12/19/2012	18.4	4868	6.78	-3	0.33	NR
MW-20	2/25/2013	18.9	5812	7.04	-4.8	1.3	NR
MW-20	5/23/2013	19.35	6325	6.96	-12	2.83	NR
MW-20	8/26/2013	19.13	7554	6.88	63.6	4.04	NR
MW-20	12/10/2013	19.35	6735	7.93	-32	4.93	NR
MW-20	2/17/2014	18.72	6617	7.14	10.9	0.6	NR
MW-20	4/20/2014	19.24	9599	7.01	1.9	3.43	NR
MW-20	8/21/2014	19.5	93.61	6.68	252	4.26	NR
MW-20	11/19/2014	19.6	8514	7.15	-10	4.3	NR
MW-20	2/25/2015	18.98	6510	6.96	108.1	0.76	NR
MW-20	6/15/2015	19.76	9394	7.11	-13.6	5.6	NR
MW-20	8/18/2015	20.02	1006	7.08	111.6	3.58	NR
MW-20	12/14/2015	19.38	1006	6.93	137.3	3.65	NR
MW-20	1/11/2016	19.23	9861	7.24	143.2	4.12	NR
MW-20	5/17/2016	19	1033	8.16	-22.7	6.35	NR
MW-20	8/10/2016	19.2	8308	6.94	112.1	4.63	NR
DPE-1	12/3/2008	14.5	735	8.02	-4.9	0.9	10.5
DPE-1	9/28/2009	18.1	2584	7.64	170	4.8	NR
DPE-1	11/16/2009	18.18	2595	7.52	173	4.98	NR
DPE-1	2/22/2010	17.9	1152	6.23	255.6	8.16	NR
DPE-1	5/13/2010	18.4	2428	6.41	248	8.05	NR
DPE-1	8/18/2010	19.3	2242	10.4	286	5.54	NR
DPE-1	12/23/2010	18.61	1982	5.96	-4.7	12.57	10.1
DPE-1	3/1/2011	18.2	990	7.6	14.2	4.02	6.4
DPE-1	5/19/2011	18.9	1677	8.42	-59	4.17	NR
DPE-1	8/28/2011	18.1	2162	7.01	3	4	NR
DPE-1	11/21/2011	18.4	16.21	7.69	-53	5.89	NR
DPE-1	2/16/2012	18.14	1381	7.08	-26	5.04	NR
DPE-1	5/17/2012	9.9	1023	7.83	-57	1.09	NR
DPE-1	9/26/2012	19.1	1170	8.5	-74	5.7	NR
DPE-1	12/19/2012	18.9	1205	7.95	-64	4.24	NR
DPE-1	2/26/2013	17.1	1321	7.09	-6	5.1	NR
DPE-1	5/23/2013	19.2	4945	7.69	-49	3.63	NR
DPE-1	8/26/2013	19.97	1858	7.49	168	4.11	NR
DPE-1	12/10/2013	19.19	1176	7.9	-75.8	6.3	NR
DPE-1	2/17/2014	18.88	1910	8.3	-49.9	3.39	NR
DPE-1	4/20/2014	18.86	4150	7.89	-43.1	3.62	NR
DPE-1	8/21/2014	19.23	6093	7.69	138.2	4.41	NR
DPE-1	11/19/2014	19.02	4194	8.15	133	4.37	NR
DPE-1	2/25/2015	17.3	3570	7.83	-61	2.2	NR
DPE-1	6/15/2015	20.28	4422	7.91	-51.1	3.05	NR
DPE-1	8/17/2015	19.78	5025	7.83	162.8	3.05	NR
DPE-1	12/14/2015	19.56	4053	7.53	218.1	1.44	NR
DPE-1	1/11/2016	18.52	2309	7.54	292.7	3.56	NR
DPE-1	5/17/2016	18.63	2257	7.29	158.3	6.55	NR
DPE-1	8/10/2016	19.89	2471	6.95	136.2	7.65	NR

TABLE 4

GROUNDWATER FIELD DATA
MN Bio Business Center
221 First Avenue SW
Rochester, Minnesota

Monitoring Well	Date Measured	Temp (Deg. C)	Conductivity @ 25 deg. C (uS/cm)	pH	Redox Potential (Eh)	Dissolved Oxygen	Head Space (ppm)
DPE-2	12/3/2008	14.4	735	7.83	109	1.9	2000
DPE-2	9/28/2009	18.2	2440	8	81	7.82	NR
DPE-2	11/17/2009	18.15	4523	6.86	114	5.43	NR
DPE-2	2/22/2010	17.5	2751	7.75	283	4.57	NR
DPE-2	5/13/2010	18.1	2900	7.25	268	5.59	NR
DPE-2	8/18/2010	18.7	4401	10.4	258	5.07	NR
DPE-2	12/23/2010	17.6	962	7.09	-42	11.6	2.8
DPE-2	3/1/2011	18.6	1986	7.21	118	3.16	15.1
DPE-2	5/19/2011	18.4	1972	8	-38	2.75	NR
DPE-2	8/28/2011	18.2	3408	7.04	-62	3.6	NR
DPE-2	11/21/2011	18.5	2767	7.56	-46	2.02	NR
DPE-2	2/16/2012	18.6	1931	7.56	-51	2.37	NR
DPE-2	5/17/2012	18.9	2156	7.74	-61	4.37	NR
DPE-2	9/26/2012	19.2	943	7.9	-42	3.8	NR
DPE-2	12/19/2012	18.7	2440	7.7	-51	5.03	NR
DPE-2	2/26/2013	16.4	1062	7.10	-62	4.2	NR
DPE-2	5/23/2013	18.8	5181	7.52	-40	4.87	NR
DPE-2	8/26/2013	20.24	2245	7.49	134	4.41	NR
DPE-2	12/10/2013	19.66	5387	7.56	-57.2	6.2	NR
DPE-2	2/17/2014	19.09	4705	8.13	-41.4	3.66	NR
DPE-2	4/20/2014	19.03	6497	7.72	-34.4	4.09	NR
DPE-2	8/21/2014	19.48	7389	7.76	138.2	4.13	NR
DPE-2	11/19/2014	19.17	6329	8.1	-56	3.79	NR
DPE-2	2/25/2015	18.92	4769	7.53	-39	3.98	NR
DPE-2	6/15/2015	19.7	5018	8.06	-52.9	3	NR
DPE-2	8/17/2015	19.83	6552	8.1	180.2	3.85	NR
DPE-2	12/14/2015	19.8	5137	7.7	78.8	3.65	NR
DPE-2	1/11/2016	18.22	3076	7.63	279.1	3.88	NR
DPE-2	5/17/2016	19.82	3689	7.22	141.3	4.61	NR
DPE-3	12/3/2008	13.4	735	7.96	127	2.5	1684
DPE-3	9/28/2009	17.3	7799	7.95	158	7.05	NR
DPE-3	11/17/2009	17.43	4442	7.1	208	3.32	NR
DPE-3	2/22/2010	15.4	4707	7.9	310	7.59	NR
DPE-3	5/13/2010	17.1	4484	7.62	270	7.36	NR
DPE-3	8/18/2010	18.4	4992	10.5	277	6.31	NR
DPE-3	12/23/2010	16.2	5922	7.15	17	16.23	28.2
DPE-3	3/1/2011	18.8	6621	7.19	-0.6	2.01	23.5
DPE-3	5/19/2011	17.2	4847	8.12	-44	5.76	NR
DPE-3	8/28/2011	NR	5894	7.61	-41	5.3	NR
DPE-3	11/21/2011	17.6	3012	7.54	-45	2.7	NR
DPE-3	2/16/2012	17.92	4634	7.07	-25	4.85	NR
DPE-3	5/17/2012	9.9	4383	7.45	-40	1.09	NR
DPE-3	9/26/2012	17	2777	8.3	-63	7.1	NR
DPE-3	12/19/2012	18.2	4487	7.14	-21	2.07	NR
DPE-3	2/26/2013	18.3	1114	7.11	-51	3.9	NR
DPE-3	5/23/2013	18.4	7742	7.02	-47	3.12	NR
DPE-3	8/26/2013	19.39	5878	6.98	156	3.47	NR
DPE-3	12/10/2013	NR*	NR*	NR*	NR*	NR*	NR
DPE-3	2/17/2014	18.58	6875	7.35	0	1.11	NR
DPE-3	4/20/2014	19.23	7780	7.07	-1.2	2.26	NR
DPE-3	8/21/2014	19.47	7917	7.14	103.7	2.97	NR
DPE-3	11/19/2014	19.07	7193	7.48	-20	2.54	NR
DPE-3	2/25/2015	17.16	6630	7.27	-32	1.59	NR
DPE-3	6/15/2015	19.87	6953	7.43	-28.7	2.2	NR
DPE-3	8/17/2015	19.98	7990	7.29	119.2	1.52	NR
DPE-3	12/14/2015	19.31	8178	7.36	153.3	3.67	NR
DPE-3	1/11/2016	18.07	7280	7.53	286.7	4.54	NR
DPE-3	5/17/2016	18.85	7065	6.97	165.1	5.51	NR

TABLE 4

GROUNDWATER FIELD DATA
MN Bio Business Center
221 First Avenue SW
Rochester, Minnesota

Monitoring Well	Date Measured	Temp (Deg. C)	Conductivity @ 25 deg. C (uS/cm)	pH	Redox Potential (Eh)	Dissolved Oxygen	Head Space (ppm)
DPE-4	12/3/2008	13.5	735	7.84	114	1.9	2000
DPE-4	9/28/2009	17.14	3230	8.25	87.4	8.22	NR
DPE-4	11/17/2009	17.49	4057	7.16	285	5.2	NR
DPE-4	2/22/2010	17.4	2899	7.11	198	7.64	NR
DPE-4	5/13/2010	17.6	3362	7.88	242	8.61	NR
DPE-4	8/18/2010	18.3	3296	10.6	252	6.9	NR
DPE-4	12/23/2010	17.1	3227	7.46	3.9	NR	23.1
DPE-4	3/1/2011	18.8	874	7.18	144	1.9	11.5
DPE-4	5/19/2011	18.8	2168	8.21	-49	4.37	NR
DPE-4	8/28/2011	18.6	3318	7.63	-48	5.4	NR
DPE-4	11/21/2011	17.8	2265	7.38	-42	2.09	NR
DPE-4	2/16/2012	18.2	2692	7.5	-47	4.18	NR
DPE-4	5/17/2012	19.2	2579	7.45	-18	6.33	NR
DPE-4	9/26/2012	18.5	1891	8.1	-56	5.9	NR
DPE-4	12/19/2012	19.6	3637	6.62	-158	2.76	NR
DPE-4	2/26/2013	18.4	951	7.62	-46	4.4	NR
DPE-4	5/23/2013	19	4272	6.34	-73	1.78	NR
DPE-4	8/26/2013	20.05	3719	7.01	135	3.12	NR
DPE-4	12/10/2013	19.93	4120	6.75	-11.5	3.86	NR
DPE-4	2/17/2014	19.79	4102	6.98	19.2	1.76	NR
DPE-4	4/20/2014	19.32	4794	6.52	26.8	1.21	NR
DPE-4	8/21/2014	19.77	5364	7.05	11.3	3.11	NR
DPE-4	11/19/2014	19.4	4684	7.35	-81	2.88	NR
DPE-4	2/25/2015	20.1	4562	6.89	-93	1.45	NR
DPE-4	6/15/2015	19.93	4474	7.06	-11.9	2.27	NR
DPE-4	8/17/2015	20.21	5609	7.23	65	1.74	NR
DPE-4	12/14/2015	19.88	5983	6.69	-64.3	2.14	NR
DPE-4	1/11/2016	18.61	3878	7.65	268.1	5.28	NR
DPE-4	5/17/2016	19.43	3915	6.65	200.1	6.21	NR
DPE-5	12/3/2008	14.3	735	9.26	13	0.5	1.3
DPE-5	9/28/2009	17.06	2264	7.94	181	0.2	NR
DPE-5	11/17/2009	18.02	2921	7.58	204	4.15	NR
DPE-5	2/22/2010	16.7	3271	7.48	231	6.3	NR
DPE-5	5/13/2010	17.1	3115	7.92	274	7.54	NR
DPE-5	8/18/2010	18.3	2997	10.5	241	3.65	NR
DPE-5	12/23/2010	17.4	2216	7.12	-13	10.3	17.7
DPE-5	3/1/2011	18.5	776	7.21	22	2.87	0
DPE-5	5/19/2011	18.6	1008	8.15	-36	2.91	NR
DPE-5	8/28/2011	18.6	3219	6.69	-44	5.9	NR
DPE-5	11/21/2011	18.5	2939	7.76	-56	4.77	NR
DPE-5	2/16/2012	18.19	2280	7.95	-72	5.11	NR
DPE-5	5/17/2012	9.9	1767	7.85	-15	1.09	NR
DPE-5	9/26/2012	18.3	1972	8.5	-73	7.2	NR
DPE-5	12/19/2012	18.9	1886	9.28	-134	0.91	NR
DPE-5	2/26/2013	19.2	1801	7.21	-44	4.6	NR
DPE-5	5/23/2013	18.85	1528	7.91	-60	1.57	NR
DPE-5	8/26/2013	19.99	2163	7.07	174	2.93	NR
DPE-5	12/10/2013	19.56	1468	8.14	-89	2.79	NR
DPE-5	2/17/2014	19.12	1508	8.26	-49.2	0.92	NR
DPE-5	4/20/2014	19.05	2290	7.92	-45.2	1.44	NR
DPE-5	8/21/2014	19.34	3428	8.37	85.9	2.21	NR
DPE-5	11/19/2014	18.5	3111	8.64	-82	0.98	NR
DPE-5	2/25/2015	19.5	2818	9.8	85.6	2.48	NR
DPE-5	6/15/2015	19.89	3738	7.08	-105.8	2.3	NR
DPE-5	8/17/2015	19.92	4832	8.53	62.5	1.57	NR
DPE-5	12/14/2015	19.87	4175	8.01	162.4	2.7	NR
DPE-5	1/11/2016	17.95	3497	7.88	179.5	5.81	NR
DPE-5	5/17/2016	18.61	3308	7.12	163.1	6.17	NR

TABLE 4

GROUNDWATER FIELD DATA
MN Bio Business Center
221 First Avenue SW
Rochester, Minnesota

Monitoring Well	Date Measured	Temp (Deg. C)	Conductivity @ 25 deg. C (uS/cm)	pH	Redox Potential (Eh)	Dissolved Oxygen	Head Space (ppm)
DPE-6	12/3/2008	14.6	735	8.12	67.1	1.9	1.2
DPE-6	9/28/2009	18.6	1086	8.39	98.6	9.8	NR
DPE-6	11/17/2009	18.7	1400	7.81	249	6.3	NR
DPE-6	2/22/2010	17.9	1248	7.81	213	5.42	NR
DPE-6	5/13/2010	18.4	1022	8.18	272	5.86	NR
DPE-6	8/18/2010	19.1	559	11.1	251	6.67	NR
DPE-6	11/18/2010	18.39	4497	7.44	-62	3.88	NR
DPE-6	12/23/2010	17.2	3341	7.11	-12	10.9	17.7
DPE-6	3/1/2011	17.9	1048	7.09	-16	2.04	6.2
DPE-6	5/19/2011	18.4	1162	8.22	-44	2.61	NR
DPE-6	8/28/2011	18.7	1800	6.82	-3	4.6	NR
DPE-6	11/21/2011	19.3	648	8.15	-76	3.49	NR
DPE-6	2/16/2012	19.07	590	7.9	-69	3.59	NR
DPE-6	5/17/2012	14.9	611	7.93	-23	6.43	NR
DPE-6	9/26/2012	19.6	461	8	50	4.3	NR
DPE-6	12/19/2012	19.6	695	7.49	-40	3.3	NR
DPE-6	2/26/2013	17.6	1726	6.91	-40	5.1	NR
DPE-6	5/23/2013	19.12	1414	7.86	-58	3.96	NR
DPE-6	8/26/2013	20.34	1006	6.97	167	2.73	NR
DPE-6	12/10/2013	19.6	622	7.89	-75	3.17	NR
DPE-6	2/17/2014	19.62	472	7.24	-4.9	2.5	NR
DPE-6	4/20/2014	19.66	706	6.95	4.7	3.28	NR
DPE-6	8/21/2014	19.51	879	7.84	130.1	3.65	NR
DPE-6	11/19/2014	19.6	929	8.02	95	3.11	NR
DPE-6	2/25/2015	18.6	1088	7.6	13.3	3.1	NR
DPE-6	6/15/2015	19.99	882	7.98	-54.2	3.55	NR
DPE-6	8/17/2015	19.68	1132	7.84	412.4	3.14	NR
DPE-6	12/14/2015	19.65	1380	7.5	274.3	3.6	NR
DPE-6	1/11/2016	18.39	1486	7.58	193	3.53	NR
DPE-6	5/17/2016	19.27	1563	7.14	162.5	4.95	NR
DPE-7	12/3/2008	15.2	735	7.95	92.8	0.4	2.5
DPE-7	9/28/2009	17.15	2216	7.01	196	2.14	NR
DPE-7	11/17/2009	19.01	2095	7.97	193	5.01	NR
DPE-7	2/22/2010	18.1	1354	7.84	209	5.31	NR
DPE-7	5/13/2010	18.5	1240	7.93	272	5.19	NR
DPE-7	8/18/2010	19.7	1012	11.1	276	4.13	NR
DPE-7	11/18/2010	19.19	2535	7.61	-71	3.54	NR
DPE-7	12/23/2010	17.3	5901	7.19	-18	9.6	10.7
DPE-7	3/1/2011	18.5	996	7.01	-8	1.96	0
DPE-7	5/19/2011	18.2	2472	8.09	-43	2.97	NR
DPE-7	8/28/2011	16.9	1602	7.72	-51	9.4	NR
DPE-7	11/21/2011	19.7	727	7.92	-64	3.48	NR
DPE-7	2/16/2012	19.3	1478	7.5	-48	2.5	NR
DPE-7	5/17/2012	19.3	1366	7.68	-22	4.76	NR
DPE-7	9/26/2012	19.9	747	7.8	40	4.3	NR
DPE-7	12/19/2012	20	1045	6.88	-8.6	3.04	NR
DPE-7	2/26/2013	18.4	1500	7.08	-49	3.2	NR
DPE-7	5/23/2013	19.6	2289	7.28	-28	2.98	NR
DPE-7	8/26/2013	19.6	2289	7.28	-28	2.98	NR
DPE-7	12/10/2013	19.7	972	7.9	-76	4.4	NR
DPE-7	2/17/2014	19.11	885	7.95	-31.9	3.45	NR
DPE-7	4/20/2014	19.36	11.33	7.65	-31.3	3.61	NR
DPE-7	8/21/2014	20.33	1655	7.77	95.3	3.51	NR
DPE-7	11/19/2014	19.2	1524	8.26	93	3.61	NR
DPE-7	2/25/2015	18.7	1442	6.31	103	3.36	NR
DPE-7	6/15/2015	19.91	1273	8.1	-58.4	2.65	NR
DPE-7	8/17/2015	19.94	2319	7.98	442.1	2.56	NR
DPE-7	12/14/2015	19.73	2297	7.41	182.7	3.01	NR
DPE-7	1/11/2016	20.17	1845	7.22	191.1	4.51	NR
DPE-7	5/17/2016	19.73	2311	7.02	157.9	5.08	NR

TABLE 4

GROUNDWATER FIELD DATA
 MN Bio Business Center
 221 First Avenue SW
 Rochester, Minnesota

Monitoring Well	Date Measured	Temp (Deg. C)	Conductivity @ 25 deg. C (uS/cm)	pH	Redox Potential (Eh)	Dissolved Oxygen	Head Space (ppm)
DPE-8	12/3/2008	13.6	753	7.52	165	1.4	1056
DPE-8	9/28/2009	17.31	2826	7.93	460	6.61	NR
DPE-8	11/17/2009	16.78	3604	7.2	226	5.19	NR
DPE-8	2/22/2010	16.2	2661	7.82	227	7.15	NR
DPE-8	5/13/2010	17.8	2236	8.03	267	9.06	NR
DPE-8	8/18/2010	17.6	3115	11	262	6.68	NR
DPE-8	11/18/2010	NR	NR	NR	NR	NR	NR
DPE-8	12/23/2010	17.3	4162	NR	NR	NR	11.4
DPE-8	3/1/2011	18.4	872	6.92	21	1.87	0.8
DPE-8	5/19/2011	18.4	3649	7.21	1.7	2.22	NR
DPE-8	8/28/2011	18.7	5345	7.14	-20	4.09	NR
DPE-8	11/21/2011	18.55	5100	7.2	-28	3.38	NR
DPE-8	2/16/2012	NR*	NR*	NR*	NR*	NR*	NR
DPE-8	5/17/2012	NR*	NR*	NR*	NR*	NR*	NR
DPE-8	9/26/2012	NR*	NR*	NR*	NR*	NR*	NR
DPE-8	12/19/2012	NR*	NR*	NR*	NR*	NR*	NR
DPE-8	2/26/2013	NR*	NR*	NR*	NR*	NR*	NR
DPE-8	2/25/2013	19.9	6720	7.35	-32	4.3	NR
DPE-8	8/26/2013	19.98	7601	6.65	186	2.82	NR
DPE-8	12/10/2013	NR*	NR*	NR*	NR*	NR*	NR
DPE-8	2/17/2014	NR*	NR*	NR*	NR*	NR*	NR
DPE-8	4/20/2014	NR*	NR*	NR*	NR*	NR*	NR
DPE-8	8/21/2014	19.37	8741	7.17	165.2	3.48	NR
DPE-8	11/19/2014	NR*	NR*	NR*	NR*	NR*	NR
DPE-8	2/25/2015	20.7	6803	8.45	128	2.3	NR
DPE-8	6/15/2015	19.8	8359	7.41	-27.7	4.05	NR
DPE-8	8/17/2015	20.4	9924	7.38	125.5	2.65	NR
DPE-8	12/14/2015	19.86	9141	7.28	160.3	3.08	NR
DPE-8	1/11/2016	18.17	7311	7.35	239.3	5.57	NR
DPE-8	5/17/2016	17.69	7236	6.88	174.5	6.5	NR

Notes:

- Bold** - number has exceeded the range of the instrument
- NR - Not Recorded
- NR* - Not Recorded, well was dry

TABLE 5

PCE GROUNDWATER CONCENTRATION DATA
MN Bio Business Center
221 First Avenue SW
Rochester, Minnesota

Sample ID	Date	PCE Conc. (ug/L)	% Change
MW-14	12/3/2008	30.6	
MW-14	6/29/2009	30.6	
MW-14	10/1/2009	4.2	-86.3
MW-14	11/16/2009	7.1	-76.8
MW-14	2/23/2010	3.0	-90.2
MW-14	5/12/2010	3.1	-89.9
MW-14	8/18/2010	1.8	-94.1
MW-14	11/18/2010	6.6	-78.4
MW-14	3/1/2011	4.8	-84.3
MW-14	5/19/2011	5.0	-83.7
MW-14	8/28/2011	1.5	-95.1
MW-14	11/21/2011	1.5	-95.1
MW-14	2/16/2012	<1.0	-100.0
MW-14	5/17/2012	<1.0	-100.0
MW-14	9/26/2012	<1.0	-100.0
MW-14	12/19/2012	1.3	-95.8
MW-14	2/25/2013	<1.0	-100.0
MW-14	5/23/2013	2.2	-92.8
MW-14	8/26/2013	1.2	-96.1
MW-14	12/10/2013	1.5	-95.1
MW-14	2/17/2014	3.1	-89.9
MW-14	5/20/2014	5.7	-81.4
MW-14	8/21/2014	1.4	-95.4
MW-14	11/19/2014	2.9	-90.5
MW-14	3/3/2015	244.0	697.4
MW-14	6/15/2015	60.4	97.4
MW-14	8/18/2015	4.1	-86.6
MW-14	12/14/2015	88.3	188.6
MW-14	1/11/2016	11.1	-63.7
MW-14	2/23/2016	2.8	-90.8
MW-14	5/17/2016	35.7	16.7
MW-14	8/10/2016	1.1	-96.4
MW-15	12/10/2008	104	
MW-15	6/29/2009	104	
MW-15	10/1/2009	15.7	-84.9
MW-15	11/16/2009	9.5	-90.9
MW-15	2/22/2010	5.7	-94.5
MW-15	5/12/2010	2.8	-97.3
MW-15	8/18/2010	1.3	-98.8
MW-15	11/18/2010	3.3	-96.8
MW-15	3/1/2011	<1.0	-100.0
MW-15	5/19/2011	<1.0	-100.0
MW-15	8/28/2011	1.2	-98.8
MW-15	11/21/2011	<1.0	-100.0
MW-15	2/15/2012	<1.0	-100.0
MW-15	5/17/2012	<1.0	-100.0
MW-15	9/26/2012	<1.1	-99.0
MW-15	12/19/2012	<1.0	-100.0
MW-15	2/25/2013	<1.0	-100.0
MW-15	5/23/2013	3.9	-96.3
MW-15	8/26/2013	<1.0	-100.0
MW-15	12/10/2013	<1.0	-100.0
MW-15	2/17/2014	<1.0	-100.0
MW-15	5/20/2014	1.6	-98.5
MW-15	8/21/2014	<1.0	-100.0
MW-15	11/19/2014	<1.1	-100.0
MW-15	3/3/2015	85.2	-18.1
MW-15	6/15/2015	101	-2.9
MW-15	8/18/2015	1.8	-98.3
MW-15	12/14/2015	194	86.5
MW-15	1/11/2016	11.9	-88.6
MW-15	2/23/2016	1.1	-98.9
MW-15	5/17/2016	26.4	-74.6
MW-15	8/10/2016	3.6	-96.5

TABLE 5

PCE GROUNDWATER CONCENTRATION DATA
MN Bio Business Center
221 First Avenue SW
Rochester, Minnesota

Sample ID	Date	PCE Conc. (ug/L)	% Change
MW-16	12/3/2008	14,100	
MW-16	6/29/2009	14,100	
MW-16	10/1/2009	6,890	-51.1
MW-16	11/16/2009	21,000	48.9
MW-16	2/22/2010	4,390	-68.9
MW-16	5/12/2010	815	-94.2
MW-16	8/18/2010	696	-95.1
MW-16	11/18/2010	2,120	-85.0
MW-16	3/1/2011	322	-97.7
MW-16	5/19/2011	1,310	-90.7
MW-16	8/28/2011	590	-95.8
MW-16	11/21/2011	75	-99.5
MW-16	2/15/2012	16.1	-99.9
MW-16	5/17/2012	7.8	-99.9
MW-16	9/26/2012	21.8	-99.8
MW-16	12/19/2012	128.0	-99.1
MW-16	2/25/2013	8.0	-99.9
MW-16	5/23/2013	7,450.0	-47.2
MW-16	8/26/2013	469.0	-96.7
MW-16	12/10/2013	432.0	-96.9
MW-16	2/17/2014	413.0	-97.1
MW-16	5/20/2014	2,530.0	-82.1
MW-16	8/21/2014	1,780.0	-87.4
MW-16	11/19/2014	2,350.0	-83.3
MW-16	2/25/2015	963.0	-93.2
MW-16	6/15/2015	2,650.0	-81.2
MW-16	8/18/2015	2,790.0	-80.2
MW-16	12/14/2015	1,490.0	-89.4
MW-16	1/11/2016	290.0	-97.9
MW-16	2/23/2016	461.0	-96.7
MW-16	5/17/2016	452.0	-96.8
MW-16	8/10/2016	92.2	-99.3
MW-17	12/3/2008	363	
MW-17	6/29/2009	363	
MW-17	10/1/2009	803	121.2
MW-17	11/16/2009	1,100	203.0
MW-17	2/22/2010	639	76.0
MW-17	5/12/2010	412	13.5
MW-17	8/18/2010	174	-52.1
MW-17	11/18/2010	209	-42.4
MW-17	3/1/2011	145	-60.1
MW-17	5/19/2011	109	-70.0
MW-17	8/28/2011	107	-70.5
MW-17	11/21/2011	106	-70.8
MW-17	2/15/2012	47.1	-87.0
MW-17	5/17/2012	37.1	-89.8
MW-17	9/26/2012	38.1	-89.5
MW-17	12/19/2012	22.0	-93.9
MW-17	2/25/2013	49.9	-86.3
MW-17	5/23/2013	215.0	-40.8
MW-17	8/26/2013	95.5	-73.7
MW-17	12/10/2013	69.9	-80.7
MW-17	2/17/2014	54.8	-84.9
MW-17	5/20/2014	94.7	-73.9
MW-17	8/21/2014	211.0	-41.9
MW-17	11/19/2014	227.0	-37.5
MW-17	2/25/2015	70.4	-80.6
MW-17	6/15/2015	433.0	19.3
MW-17	8/18/2015	1,060.0	192.0
MW-17	12/14/2015	1,010.0	178.2
MW-17	1/11/2016	329.0	-9.4
MW-17	2/23/2016	877.0	141.6
MW-17	5/18/2016	227.0	-37.5
MW-17	8/10/2016	9.2	-97.5

TABLE 5

PCE GROUNDWATER CONCENTRATION DATA
MN Bio Business Center
221 First Avenue SW
Rochester, Minnesota

Sample ID	Date	PCE Conc. (ug/L)	% Change
MW-18	12/3/2008	257	
MW-18	6/29/2009	257	
MW-18	10/1/2009	250	-2.7
MW-18	11/16/2009	130	-49.4
MW-18	2/22/2010	96.8	-62.3
MW-18	5/12/2010	26	-89.9
MW-18	8/18/2010	8.4	-96.7
MW-18	11/18/2010	8.6	-96.7
MW-18	3/1/2011	4.8	-98.1
MW-18	5/19/2011	3.6	-98.6
MW-18	8/28/2011	3.6	-98.6
MW-18	11/21/2011	3.6	-98.6
MW-18	2/15/2012	2.9	-98.9
MW-18	5/17/2012	1.5	-99.4
MW-18	9/26/2012	1.8	-99.3
MW-18	12/19/2012	<1.0	-100.0
MW-18	2/25/2013	2.3	-99.1
MW-18	5/23/2013	1.2	-99.5
MW-18	8/26/2013	1.5	-99.4
MW-18	12/10/2013	1.6	-99.4
MW-18	2/17/2014	2	-99.2
MW-18	5/20/2014	15.7	-93.9
MW-18	8/21/2014	3	-98.8
MW-18	11/19/2014	1.3	-99.5
MW-18	2/25/2015	2.3	-99.1
MW-18	6/15/2015	340	32.3
MW-18	8/18/2015	2.1	-99.2
MW-18	12/14/2015	952	270.4
MW-18	1/11/2016	156	-39.3
MW-18	2/23/2016	522	103.1
MW-18	5/18/2016	121	-52.9
MW-18	8/10/2016	1.6	-99.4
MW-19	12/3/2008	2.4	
MW-19	6/29/2009	2.4	
MW-19	9/24/2009	17.4	625.0
MW-19	11/16/2009	13.6	466.7
MW-19	2/23/2010	12.9	437.5
MW-19	5/12/2010	7.2	200.0
MW-19	8/18/2010	4.2	75.0
MW-19	11/18/2010	4.8	100.0
MW-19	3/1/2011	4.8	100.0
MW-19	5/19/2011	4.7	95.8
MW-19	8/28/2011	2.9	20.8
MW-19	11/21/2011	2.7	12.5
MW-19	2/15/2012	2.2	-8.3
MW-19	5/17/2012	1.1	-54.2
MW-19	9/26/2012	<1.0	-100.0
MW-19	12/19/2012	1.4	-41.7
MW-19	2/25/2013	<1.0	-100.0
MW-19	5/23/2013	3	25.0
MW-19	8/26/2013	1.7	-29.2
MW-19	12/10/2013	2.1	-12.5
MW-19	2/17/2014	11.7	387.5
MW-19	5/20/2014	4.7	95.8
MW-19	8/21/2014	3.7	54.2
MW-19	11/19/2014	5.3	120.8
MW-19	2/25/2015	50.1	1987.5
MW-19	6/15/2015	203	8358.3
MW-19	8/18/2015	55.7	2220.8
MW-19	12/14/2015	139	5691.7
MW-19	1/11/2016	36.1	1404.2
MW-19	2/23/2016	35.4	1375.0
MW-19	5/17/2016	54.2	2158.3
MW-19	8/10/2016	1.8	-25.0

TABLE 5

PCE GROUNDWATER CONCENTRATION DATA
 MN Bio Business Center
 221 First Avenue SW
 Rochester, Minnesota

Sample ID	Date	PCE Conc. (ug/L)	% Change
MW-20	12/10/2008	599	
MW-20	6/29/2009	599	
MW-20	10/1/2009	713	19.0
MW-20	11/16/2009	307	-48.7
MW-20	2/23/2010	402	-32.9
MW-20	5/12/2010	194	-67.6
MW-20	8/18/2010	74.7	-87.5
MW-20	11/18/2010	50.9	-91.5
MW-20	3/1/2011	211	-64.8
MW-20	5/19/2011	16.8	-97.2
MW-20	8/28/2011	12.2	-98.0
MW-20	11/21/2011	32.5	-94.6
MW-20	2/15/2012	41.8	-93.0
MW-20	5/17/2012	28.7	-95.2
MW-20	9/26/2012	17.4	-97.1
MW-20	12/19/2012	40.8	-93.2
MW-20	2/25/2013	50.2	-91.6
MW-20	5/23/2013	198	-66.9
MW-20	8/26/2013	45.5	-92.4
MW-20	12/10/2013	81.4	-86.4
MW-20	2/17/2014	106	-82.3
MW-20	5/20/2014	46.9	-92.2
MW-20	8/21/2014	12.7	-97.9
MW-20	11/19/2014	20.4	-96.6
MW-20	2/25/2015	47.1	-92.1
MW-20	6/15/2015	172	-71.3
MW-20	8/18/2015	762	27.2
MW-20	12/14/2015	177	-70.5
MW-20	1/11/2016	27.5	-95.4
MW-20	2/23/2016	62	-89.6
MW-20	5/17/2016	23.2	-96.1
MW-20	8/10/2016	3.6	-99.4

TABLE 5

PCE GROUNDWATER CONCENTRATION DATA
MN Bio Business Center
221 First Avenue SW
Rochester, Minnesota

Sample ID	Date	PCE Conc. (ug/L)	% Change
DPE-1	8/7/2008	157,000	
DPE-1	12/10/2008	161,000	
DPE-1	6/29/2009	161,000	
DPE-1	9/28/2009	6,820	-95.8
DPE-1	11/16/2009	3,330	-97.9
DPE-1	2/22/2010	2,610	-98.4
DPE-1	5/13/2010	1,700	-98.9
DPE-1	8/18/2010	965	-99.4
DPE-1	12/22/2010	1,190	-99.3
DPE-1	3/1/2011	101	-99.9
DPE-1	5/19/2011	185	-99.9
DPE-1	8/28/2011	309	-99.8
DPE-1	11/21/2011	99	-99.9
DPE-1	2/16/2012	26.4	-100.0
DPE-1	5/17/2012	38.8	-100.0
DPE-1	9/26/2012	82.2	-99.9
DPE-1	12/19/2012	505.0	-99.7
DPE-1	2/26/2013	171.0	-99.9
DPE-1	5/23/2013	9,840.0	-93.9
DPE-1	8/26/2013	265.0	-99.8
DPE-1	12/10/2013	1,270.0	-99.2
DPE-1	2/17/2014	2,400.0	-98.5
DPE-1	5/20/2014	1,550.0	-99.0
DPE-1	8/21/2014	5,620.0	-96.5
DPE-1	11/19/2014	4,180.0	-97.4
DPE-1	2/25/2015	4,690.0	-97.1
DPE-1	6/15/2015	4,660.0	-97.1
DPE-1	8/18/2015	6,700.0	-95.8
DPE-1	12/14/2015	5,490.0	-96.6
DPE-1	1/11/2016	1,270.0	-99.2
DPE-1	2/23/2016	2,970.0	-98.2
DPE-1	5/18/2016	889.0	-99.4
DPE-1	8/10/2016	207.0	-99.9
DPE-2	12/10/2008	38,200	
DPE-2	6/29/2009	38,200	
DPE-2	9/28/2009	32,000	-16.2
DPE-2	11/17/2009	10,600	-72.3
DPE-2	2/22/2010	2,710	-92.9
DPE-2	5/13/2010	5,800	-84.8
DPE-2	8/18/2010	12,100	-68.3
DPE-2	12/22/2010	4,690	-87.7
DPE-2	3/1/2011	2,990	-92.2
DPE-2	5/19/2011	1,680	-95.6
DPE-2	8/28/2011	2,080	-94.6
DPE-2	11/21/2011	890	-97.7
DPE-2	2/16/2012	511	-98.7
DPE-2	5/17/2012	206	-99.5
DPE-2	9/26/2012	39	-99.9
DPE-2	12/19/2012	746	-98.0
DPE-2	2/26/2013	140	-99.6
DPE-2	5/23/2013	7,100	-81.4
DPE-2	8/26/2013	184	-99.5
DPE-2	12/10/2013	1,720	-95.5
DPE-2	2/17/2014	1,840	-95.2
DPE-2	5/20/2014	6,800	-82.2
DPE-2	8/21/2014	7,330	-80.8
DPE-2	11/19/2014	6,200	-83.8
DPE-2	3/3/2015	1,100	-97.1
DPE-2	6/15/2015	5,130	-86.6
DPE-2	8/18/2015	10,300	-73.0
DPE-2	12/14/2015	7,680	-79.9
DPE-2	1/11/2016	1,280	-96.6
DPE-2	2/23/2016	4,230	-88.9
DPE-2	5/18/2016	1,260	-96.7
DPE-2	8/10/2016	1,260	-96.7

TABLE 5

PCE GROUNDWATER CONCENTRATION DATA
MN Bio Business Center
221 First Avenue SW
Rochester, Minnesota

Sample ID	Date	PCE Conc. (ug/L)	% Change
DPE-3	12/10/2008	152,000	
DPE-3	6/29/2009	152,000	
DPE-3	9/28/2009	20,300	-86.6
DPE-3	11/17/2009	34,600	-77.2
DPE-3	2/22/2010	806	-99.5
DPE-3	5/13/2010	2,240	-98.5
DPE-3	8/18/2010	20,400	-86.6
DPE-3	12/22/2010	1,450	-99.0
DPE-3	3/1/2011	12,700	-91.6
DPE-3	5/19/2011	3,220	-97.9
DPE-3	8/28/2011	4,260	-97.2
DPE-3	11/21/2011	5,310	-96.5
DPE-3	2/16/2012	1,010	-99.3
DPE-3	5/17/2012	3,690	-97.6
DPE-3	9/26/2012	75	-100.0
DPE-3	12/19/2012	5,670	-96.3
DPE-3	2/26/2013	264	-99.8
DPE-3	5/23/2013	61,800	-59.3
DPE-3	8/26/2013	6,980	-95.4
DPE-3	12/10/2013	10,200	-93.3
DPE-3	2/17/2014	20,000	-86.8
DPE-3	5/20/2014	53,800	-64.6
DPE-3	8/21/2014	21,200	-86.1
DPE-3	11/19/2014	36,300	-76.1
DPE-3	2/25/2015	30,800	-79.7
DPE-3	6/15/2015	21,200	-86.1
DPE-3	8/18/2015	30,800	-79.7
DPE-3	12/14/2015	37,300	-75.5
DPE-3	1/11/2016	2,960	-98.1
DPE-3	2/23/2016	19,600	-87.1
DPE-3	5/18/2016	2,510	-98.3
DPE-3	8/10/2016	2,590	-98.3
DPE-4	12/10/2008	35,600	
DPE-4	6/29/2009	35,600	
DPE-4	9/28/2009	7,340	-79.4
DPE-4	11/17/2009	5,040	-85.8
DPE-4	2/22/2010	429	-98.8
DPE-4	5/13/2010	357	-99.0
DPE-4	8/18/2010	2,600	-92.7
DPE-4	12/22/2010	1,100	-96.9
DPE-4	3/1/2011	1,160	-96.7
DPE-4	5/19/2011	367	-99.0
DPE-4	8/28/2011	771	-97.8
DPE-4	11/21/2011	763	-97.9
DPE-4	2/16/2012	830	-97.7
DPE-4	5/17/2012	223	-99.4
DPE-4	9/26/2012	187	-99.5
DPE-4	12/19/2012	1,410	-96.0
DPE-4	2/26/2013	219	-99.4
DPE-4	5/23/2013	13,700	-61.5
DPE-4	8/26/2013	982	-97.2
DPE-4	12/10/2013	6,850	-80.8
DPE-4	2/17/2014	8,860	-75.1
DPE-4	5/20/2014	8,320	-76.6
DPE-4	8/21/2014	9,670	-72.8
DPE-4	11/19/2014	11,100	-68.8
DPE-4	2/25/2015	5,090	-85.7
DPE-4	6/15/2015	11,800	-66.9
DPE-4	8/18/2015	14,900	-58.1
DPE-4	12/14/2015	6,900	-80.6
DPE-4	1/11/2016	1,040	-97.1
DPE-4	2/23/2016	6,170	-82.7
DPE-4	5/18/2016	724	-98.0
DPE-4	8/10/2016	400	-98.9

TABLE 5

PCE GROUNDWATER CONCENTRATION DATA
MN Bio Business Center
221 First Avenue SW
Rochester, Minnesota

Sample ID	Date	PCE Conc. (ug/L)	% Change
DPE-5	12/10/2008	1,340	
DPE-5	6/29/2009	1,340	
DPE-5	9/24/2009	875	-34.7
DPE-5	11/17/2009	1,450	8.2
DPE-5	2/22/2010	486	-63.7
DPE-5	5/13/2010	205	-84.7
DPE-5	8/18/2010	124	-90.7
DPE-5	12/22/2010	22	-98.4
DPE-5	3/1/2011	339	-74.7
DPE-5	5/19/2011	67	-95.0
DPE-5	8/28/2011	<1.0	-100.0
DPE-5	11/21/2011	51	-96.2
DPE-5	2/16/2012	70	-94.8
DPE-5	5/17/2012	11	-99.2
DPE-5	9/26/2012	16	-98.8
DPE-5	12/19/2012	74	-94.5
DPE-5	2/26/2013	31	-97.7
DPE-5	5/23/2013	405	-69.8
DPE-5	8/26/2013	30	-97.8
DPE-5	12/10/2013	740	-44.8
DPE-5	2/17/2014	209	-84.4
DPE-5	5/20/2014	135	-89.9
DPE-5	8/21/2014	1,670	24.6
DPE-5	11/19/2014	2,280	70.1
DPE-5	2/25/2015	174	-87.0
DPE-5	6/15/2015	288	-78.5
DPE-5	8/18/2015	17,900	1235.8
DPE-5	12/14/2015	263	-80.4
DPE-5	1/11/2016	209	-84.4
DPE-5	2/23/2016	148	-89.0
DPE-5	5/17/2016	152	-88.7
DPE-5	8/10/2016	85	-93.7
DPE-6	12/10/2008	188	
DPE-6	6/29/2009	188	
DPE-6	9/24/2009	79.3	-57.8
DPE-6	11/17/2009	104	-44.7
DPE-6	2/22/2010	57.8	-69.3
DPE-6	5/13/2010	14.6	-92.2
DPE-6	8/18/2010	21.7	-88.5
DPE-6	12/22/2010	77.1	-59.0
DPE-6	3/1/2011	3.9	-97.9
DPE-6	5/19/2011	23.4	-87.6
DPE-6	8/28/2011	7.7	-95.9
DPE-6	11/21/2011	1.9	-99.0
DPE-6	2/16/2012	44.8	-76.2
DPE-6	5/17/2012	<1.0	-100.0
DPE-6	9/26/2012	4.6	-97.6
DPE-6	12/19/2012	10.9	-94.2
DPE-6	2/26/2013	19.8	-89.5
DPE-6	5/23/2013	6.2	-96.7
DPE-6	8/26/2013	4	-97.9
DPE-6	12/10/2013	107	-43.1
DPE-6	2/17/2014	12.9	-93.1
DPE-6	5/20/2014	17.4	-90.7
DPE-6	8/21/2014	25	-86.7
DPE-6	11/19/2014	24.6	-86.9
DPE-6	2/25/2015	5.2	-97.2
DPE-6	6/15/2015	52	-72.3
DPE-6	8/18/2015	65.9	-64.9
DPE-6	12/14/2015	67.8	-63.9
DPE-6	1/11/2016	17	-91.0
DPE-6	2/23/2016	5.8	-96.9
DPE-6	5/17/2016	51.2	-72.8
DPE-6	8/10/2016	2.4	-98.7

TABLE 5

PCE GROUNDWATER CONCENTRATION DATA
MN Bio Business Center
221 First Avenue SW
Rochester, Minnesota

Sample ID	Date	PCE Conc. (ug/L)	% Change
DPE-7	12/10/2008	22.3	
DPE-7	6/29/2009	22.3	
DPE-7	9/24/2009	5.2	-76.7
DPE-7	11/17/2009	55.2	147.5
DPE-7	2/22/2010	7.3	-67.3
DPE-7	5/13/2010	25.7	15.2
DPE-7	8/18/2010	189	747.5
DPE-7	12/22/2010	23.2	4.0
DPE-7	3/1/2011	7.1	-68.2
DPE-7	5/19/2011	15.9	-28.7
DPE-7	8/28/2011	26.9	20.6
DPE-7	11/21/2011	<1.0	-100.0
DPE-7	2/16/2012	27.8	24.7
DPE-7	5/17/2012	<1.0	-100.0
DPE-7	9/26/2012	<1.0	-100.0
DPE-7	12/19/2012	3.7	-83.4
DPE-7	2/26/2013	8	-64.1
DPE-7	5/23/2013	1.6	-92.8
DPE-7	8/26/2013	<0.4	-100.0
DPE-7	12/10/2013	2	-91.0
DPE-7	2/17/2014	5.8	-74.0
DPE-7	5/20/2014	6.9	-69.1
DPE-7	8/21/2014	44.2	98.2
DPE-7	11/19/2014	48.9	119.3
DPE-7	2/25/2015	14	-37.2
DPE-7	6/15/2015	233	944.8
DPE-7	8/18/2015	127	469.5
DPE-7	12/14/2015	146	554.7
DPE-7	1/11/2016	29.1	30.5
DPE-7	2/23/2016	3.4	-84.8
DPE-7	5/17/2016	37	65.9
DPE-7	8/10/2016	5.3	-76.2
DPE-8	12/10/2008	14,200	
DPE-8	6/29/2009	14,200	
DPE-8	9/24/2009	1,850	-87.0
DPE-8	11/17/2009	1,480	-89.6
DPE-8	2/22/2010	90.3	-99.4
DPE-8	5/13/2010	66.9	-99.5
DPE-8	8/18/2010	131.0	-99.1
DPE-8	12/22/2010	262.0	-98.2
DPE-8	3/1/2011	415.0	-97.1
DPE-8	5/19/2011	698.0	-95.1
DPE-8	8/28/2011	700.0	-95.1
DPE-8	11/21/2011	389.0	-97.3
DPE-8	2/16/2012	NS	NS
DPE-8	5/17/2012	NS	NS
DPE-8	9/26/2012	NS	NS
DPE-8	12/19/2012	NS	NS
DPE-8	2/26/2013	NS	NS
DPE-8	5/23/2013	4,240.0	-70.1
DPE-8	8/26/2013	291.0	-98.0
DPE-8	12/10/2013	2,450.0	-82.7
DPE-8	2/17/2014	2,390.0	-83.2
DPE-8	5/20/2014	5,610.0	-60.5
DPE-8	8/21/2014	1,130.0	-92.0
DPE-8	11/19/2014	1,230.0	-91.3
DPE-8	2/25/2015	221.0	-98.4
DPE-8	6/15/2015	2,980.0	-79.0
DPE-8	8/18/2015	2,350.0	-83.5
DPE-8	12/14/2015	2,700.0	-81.0
DPE-8	1/11/2016	288.0	-98.0
DPE-8	2/23/2016	503.0	-96.5
DPE-8	5/18/2016	808.0	-94.3
DPE-8	8/10/2016	429.0	-97.0

Notes:
NS - Not Sampled

TABLE 6B

GROUNDWATER ANALYTICAL RESULTS (ug/L)

MN Bio Business Center
221 1st Avenue SW
Rochester, Minnesota

Table with columns for Sample ID, MDH Health Risk Limits, Collected Date and Time, and 30 monitoring wells (MW-14 to MW-4). Rows list various chemical compounds such as Tetrachloroethane, Dichloroethane, and Benzene.

Notes:
NL: No Limit
NA*: Not Analyzed
NS: Not Sampled

1.620 Parameter detected above laboratory reporting limit
5.2 Parameter detected above MDH Health Risk Limit

TABLE 7
Vapor Mitigation Systems Monitoring Results
MN Bio Business Center
221 1st Avenue SW
Rochester, MN

Date	Passive Venting On/Off	VMS-1 (north)	VMS-2 (middle)	VMS-3 (south)	V-1	V-2	V-3	V-4	LSG-7	LSG-8	LSG-9	LSG-10	SP-1	SP-2
Venting System Monitoring during Soil Vapor Sampling														
8/22/2014	ON	NA	NA	NA	0.059	0.063	0.067	NR	0.066	0.051	0.045	0.048	0.024	0.00
2/26/2015	ON	NA	NA	NA	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
9/8/2015	OFF	NA	NA	NA	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1/12/2016	OFF	NA	NA	NA	NR	NR	NR	NR	0.068	0.092	0.068	0.089	NR	NR
2/23/2016	OFF	NA	NA	NA	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
8/10/2016	ON	-2.01	-1.78	-1.74	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Pre-Mitigation Diagnostic Testing (ACTIVE VENTING SYSTEM)														
3/23/2015	ACTIVE ON	-1.5	NA	NA	-0.17	0	-0.015	NR	0.027	0.002	-0.116	-0.01	NR	NR
3/23/2015	ACTIVE ON	NA	-1.5	NA	-0.907	-0.025	-1.023	NR	0.007	-0.018	-0.110	-0.199	NR	NR
3/23/2015	ACTIVE ON	NA	NA	-1.5	-0.07	-1.194	-0.046	NR	0.001	-0.095	-0.158	-0.183	NR	NR
Post-Mitigation Diagnostic Testing and Monitoring (ACTIVE VENTING SYSTEM)														
9/14/2015	ACTIVE ON	-2.06	NR	-1.68	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
9/21/2015	ACTIVE ON	-2.05	NR	-1.66	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
9/30/2015	ACTIVE ON	-2.09	NR	-1.69	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
10/13/2015	ACTIVE ON	-2.06	-2.02	-1.68	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
12/15/2015	ACTIVE ON/OFF	-2.05	-1.97	-2.28	-1.532	-1.474	-1.324	NR	-0.098	-0.378	-0.732	-0.683	NR	NR
5/17/2016	ACTIVE OFF/ON	-2.02	-1.67	-0.51	-1.277	-0.167	-1.379	-1.941	-0.032	-0.120	-0.382	-0.291	NR	NR
6/23/2016	ACTIVE ON	-2.03	-1.76	-1.75	-1.542	-1.485	-1.625	-1.826	-0.103	-0.425	-0.831	-0.823	NR	NR
9/14/2016	ACTIVE ON	-2.05	-1.79	-1.76	-1.561	-1.508	-1.668	-2.007	-0.165	-0.481	-0.845	-0.839	NR	NR

Notes:

VMS-1 is the north system connected to V-4.

VMS-2 is the middle system connected to V-1 & V-3.

VMS-3 is the south system connected to V-2.

NA: Not applicable.

NR: Not recorded.

*VMS-3 (south) digital meter appears to not be working on 5/17/2016 because the readings were very low and fluctuating a lot

*It was determined that the fan at VMS-3 (south) was powered off. It was powered back on on 6/23/16. Moisture was also in the tubing that lead to the digital manometer so that was fixed as well.

Table 9

Soil Vapor and Venting System Field Monitoring Results

MN Bio Business Center
 221 1st Avenue SW
 Rochester, Minnesota

	Date	Time	Static Pressure (+/-) Inch in WC	PID (ppm)	Methane (CH4)	Lower Explosive Limit	Oxygen	Hydrogen Sulfide	Carbon Monoxide
LSG-7	8/22/2014	1138	0.066	0.0	0.0	0.0	20.9	0.0	0.0
	2/26/2015	927	NR	1.0	NR	NR	NR	NR	NR
	9/8/2015	NR	NR	NR	0.0	0.0	20.9	0.0	0.0
	1/12/2016	1208	0.068	0.0	0.0	0.0	20.9	0.0	0.0
	2/23/2016	1700	NR	0.0	NR	NR	NR	NR	NR
	6/23/2016	1245	-0.103	0.0	0.0	0.0	20.9	0.0	0.0
	8/10/2016	1452	NR	0.0	NR	NR	NR	NR	NR
LSG-8	8/22/2014	1155	0.051	0.0	0.0	0.0	20.9	0.0	0.0
	2/26/2015	944	NR	0.1	NR	NR	NR	NR	NR
	9/8/2015	NR	NR	NR	0.0	0.0	20.5	0.0	0.0
	1/12/2016	1115	0.092	0.0	0.0	0.0	20.9	0.0	0.0
	2/23/2016	1723	NR	0.0	NR	NR	NR	NR	NR
	6/23/2016	1259	-0.425	0.0	0.0	0.0	20.9	0.0	0.0
	8/10/2016	1503	NR	0.0	NR	NR	NR	NR	NR
LSG-9	8/22/2014	1106	0.045	0.0	0.0	0.0	20.9	0.0	0.0
	2/26/2015	856	NR	2.8	NR	NR	NR	NR	NR
	9/8/2015	NR	NR	NR	0.0	0.0	20.9	0.0	0.0
	1/12/2016	1132	0.068	0.0	0.0	0.0	20.9	0.0	0.0
	2/23/2016	1603	NR	0.0	NR	NR	NR	NR	NR
	6/23/2016	1206	-0.831	0.0	0.0	0.0	20.9	0.0	0.0
	8/10/2016	1418	NR	0.0	NR	NR	NR	NR	NR
LSG-10	8/22/2014	1122	0.048	0.0	0.0	0.0	20.9	0.0	0.0
	2/26/2015	908	NR	0.3	NR	NR	NR	NR	NR
	9/8/2015	NR	NR	NR	0.0	0.0	20.9	0.0	0.0
	1/12/2016	1147	0.089	0.0	0.0	0.0	20.9	0.0	0.0
	2/23/2016	1632	NR	0.0	NR	NR	NR	NR	NR
	6/23/2016	1222	-0.823	0.0	0.0	0.0	20.9	0.0	0.0
	8/10/2016	1435	NR	0.0	NR	NR	NR	NR	NR
SP-1	8/22/2014	1210	0.024	0.0	0.0	0.0	20.9	0.0	0.0
	2/26/2015	956	NR	0.2	NR	NR	NR	NR	NR
	9/8/2015	NR	NR	NR	NR	NR	NR	NR	NR
	1/12/2016	1253	NR	0.0	0.0	0.0	20.9	0.0	0.0
	2/23/2016	1620	NR	1.1	NR	NR	NR	NR	NR
	6/23/2016	1316	NR	0.0	0.0	0.0	20.9	0.0	0.0
SP-2	8/22/2014	1220	0.000	0.0	0.0	0.0	20.9	0.0	0.0
	2/26/2015	1009	NR	0.7	NR	NR	NR	NR	NR
	9/8/2015	NR	NR	NR	NR	NR	NR	NR	NR
	1/12/2016	1236	NR	0.0	0.0	0.0	20.9	0.0	0.0
	2/23/2016	1711	NR	0.0	NR	NR	NR	NR	NR
	6/23/2016	1122	NR	0.0	0.0	0.0	20.9	0.0	0.0
PV-1	8/22/2014	NR	0.059	0.0	0.0	0.0	20.9	0.0	0.0
	2/26/2015	NR	NR	0.0	NR	NR	NR	NR	NR
	9/8/2015	NR	NR	0.0	NR	NR	NR	NR	NR
	1/12/2016	NR	NR	NR	NR	NR	NR	NR	NR
PV-2	8/22/2014	NR	0.063	0.0	0.0	0.0	20.9	0.0	0.0
	2/26/2015	NR	NR	0.0	NR	NR	NR	NR	NR
	9/8/2015	NR	NR	0.9	NR	NR	NR	NR	NR
	1/12/2016	NR	NR	NR	NR	NR	NR	NR	NR
PV-3	8/22/2014	NR	0.067	0.2	0.0	0.0	20.9	0.0	0.0
	2/26/2015	NR	NR	0.0	NR	NR	NR	NR	NR
	9/8/2015	NR	NR	NR	NR	NR	NR	NR	NR
	1/12/2016	NR	NR	NR	NR	NR	NR	NR	NR

Notes:

NR: Not recorded.

NA: Not analyzed

TABLE 10

SYSTEM OPERATION AND MAINTENANCE SUMMARY

MN Bio Business Center
221 1st Avenue SW
Rochester, Minnesota

Date	Approximate Time	Sensophone Call Received?	Alarm Condition	DPE System Status	Comments
9-Apr-09	NA	NA	NA	Off	DPE system temporary startup. Sampled initial DPE groundwater discharge and air emissions. System shut down to determine if air emissions and/or groundwater treatment were necessary.
4-Jun-09	NA	NA	NA	Off	Air stripper installed. Air stripper air emissions and influent and effluent groundwater samples collected.
5-Jun-09	NA	NA	NA	Off/On	Installed temporary secondary containment around DPE room door way. DPE system left on.
6-Jun-09	19:00	Y	MS High Level	On/Off	
8-Jun-09	NA	NA	NA	Off	Landmark on site to clean MS float switch assembly. DPE system left off per client request until elevator pit drain tile sump can be connected to the air stripper, a permanent secondary containment berm can be installed, and additional floor sump alarm and conductivity meter can be installed.
19-Jun-09	NA	NA	NA	Off	Landmark onsite to monitor elevator pit sump water levels and PID readings.
23-Jun-09	NA	NA	NA	Off	Landmark, SDE, and Muska on site to install permanent secondary containment berm and sump pit flow meter.
25-Jun-09	NA	NA	NA	Off	Landmark and PLC on site to terminate switches to the control panel. Noticed lower trilevel float switch is getting caught on the site tube. PLC to replace MS trilevel float assembly. Pumped 300 gallons of water from elevator drain tile sump through the air stripper. Sump appears to be recharging with water.
29-Jun-09	NA	NA	NA	Off/On	Landmark replaced MS trilevel float assembly. Bottom float still catches on site tube; therefore, Landmark installed JB-welded washers onto float assembly. Also compared flow meter readings with handheld monitor; replaced leaking air stripper hoses; recorded all system data from gauges and control panel. System restarted for permanent operation.
9-Jul-09	NA	NA	NA	On	Landmark onsite to troubleshoot low flowrate and vacuum readings observed remotely, to collect fluid level measurements at each well, to check the vacuum influence from DPE-1 operation at each DPE well head location; collect operational data during operation of DPE-1; to conduct a groundwater recovery test a DPE-1; modified the drop tube at DPE-3; and collected operational data while operating on DPE-3. Kept system operating on DPE-1. Sampled groundwater discharge.
18-Jul-09	NA	No	DPE Pump Motor Fault	On/Off	
20-Jul-09	NA	NA	DPE Pump Motor Fault	Off	Received a call from Paramark stating the DPE was off and there was about 1 quart of oil leaking from the DPE pump.
22-Jul-09	NA	NA	DPE Pump Motor Fault	Off	Landmark onsite to troubleshoot DPE system shut down and determine the source of the oil leak.
24-Jul-09	NA	NA	DPE Pump Motor Fault	Off	Landmark and PLC onsite to remove DPE pump and deliver to John Henry Foster for Repair.
11-Aug-09	NA	NA	DPE Pump Motor Fault	Off/On	Landmark and PLC onsite to reinstall repaired DPE pump and restart the system. Landmark installed thermometer to monitor the ambient and max temperature in the DPE room in two different locations. Landmark swept, vacuumed, and mopped the floor several times to prevent dust from passing through the vacuum relief valve and clogging the pump inlet screen. PLC fixed the sensophone. PLC and Landmark checked flow rate readings with blower curve. DPE system was restarted.
14-Aug-09	13:17	Y	DPE Pump High Inlet Vacuum	On/Off/On	Paramark opened all of the individual DPE well bleed valves and restarted the system.
16-Aug-09	4:34	Y	DPE Pump High Outlet Temperature	On/Off	
17-Aug-09	NA	NA	DPE Pump High Outlet Temperature	Off/On	Paramark checked max room temperature readings and all were OK. Paramark could not restart the DPE system. Landmark onsite to troubleshoot the pump and determined the inlet screen was plugged. Landmark cleaned the inlet screen, replaced the moisture separator filter, and restarted the system. The system was adjusted to run with the DPE pump bleed valve open 5% and the DPE-1 bleed valve open 20%.
18-Aug-09	4:15	Y	DPE Pump High Inlet Vacuum	On/Off	Landmark tried restarting the system remotely, but the system would not operate for more than 30 seconds. A pressure drop was observed while trying to restart the system indicating the moisture separator filter or pump inlet screen was plugged.
20-Aug-09	NA	NA	DPE Pump High Inlet Vacuum	Off/On	Landmark onsite to troubleshoot system shutdown. Landmark verified the shutdown was the result of a plugged pump intake screen. The screen was cleaned with hydrochloric acid and reinstalled. Landmark installed a pipe plug in place of the vacuum relief valve to determine if the material plugging the screen is entering through the vacuum relief valve. Landmark added slits to DPE-1 drop tube to facilitate dewatering of the well. System restarted with DPE-1 bleed air valve opened 50% and pump bleed valve closed.
22-Aug-09	5:30	Y	DPE Pump High Inlet Vacuum	On/Off	
24-Aug-09	NA	NA	DPE Pump High Inlet Vacuum	Off/On	Restarted system remotely. Directed Paramark to open DPE-1 bleed valve 100%.

TABLE 10

SYSTEM OPERATION AND MAINTENANCE SUMMARY
MN Bio Business Center
221 1st Avenue SW
Rochester, Minnesota

Date	Approximate Time	Sensophone Call Received?	Alarm Condition	DPE System Status	Comments
4-Sep-09	NA	NA	NA	On	Landmark on site to conduct monthly monitoring and sampling event , install 1 micron moisture separator filter, and install new pump intake screen.
16-Sep-09	19:26	Y	DPE Pump High Inlet Vacuum	On/Off	
17-Sep-09	NA	NA	DPE Pump High Inlet Vacuum	Off/On	Restarted system remotely. Directed Paramark to open DPE-1 bleed valve 100%.
28-Sep-09	NA	NA	NA	On	Landmark on site to conduct quarterly groundwater monitoring and sampling event , and spray aluminum pump inlet components with dry lube to prevent corrosion.
	21:22	Y	DPE Pump High Inlet Vacuum	On/Off	
29-Sep-09	NA	NA	DPE Pump High Inlet Vacuum	Off/On	Landmark and PLC on site to troubleshoot alarm. The rubber hose between the moisture separator and the DPE pump was found to be defective. The rubber hose was replaced and the system was restarted.
30-Sep-09	6:32	Y	MS High Level	Off	
	NA	NA	MS High Level	Off/On	Landmark on site to finish quarterly groundwater monitoring and sampling event , and clean the float switches controlling the moisture separator transfer pump. The DPE system was restarted.
10/15/2009 and 10/16/09	NA	NA	NA	On	Landmark on site to conduct monthly monitoring and sampling event and modify all of the wells for sequential operation.
19-Oct-09	18:00	Y	MS High Level	On/Off	
23-Oct-09	NA	Yes	NA	Off/On	Landmark on site to clean the MS float assembly, replace MS hose with SCH 80 pipe and union, and install bleed air port on DPE-3 water level drop tube.
25-Oct-09	8:15	Y	MS High Level	On/Off	
27-Oct-09	NA	Yes	NA	Off/On	Landmark on site to clean MS float assembly, remove sediment from the MS, collect a TCLP VOC sediment sample for haz waste characterization, and modify the drop tube for DPE-3.
	14:15	Y	Hi Vacuum and Hi Inlet Vacuum	On/Off	System shut down from DPE-4's solenoid valve which was stuck in the off position.
28-Oct-09	NA	NA	Hi Vacuum and Hi Inlet Vacuum	Off/On	Under Landmark's direction, Paramark was able to get DPE-4's solenoid valve to work.
2-Nov-09	23:15	Y	Hi Vacuum and Hi Inlet Vacuum	On/Off	System shut down from high inlet vacuum while operating at DPE-8.
3-Nov-09	11:15	NA	Hi Vacuum and Hi Inlet Vacuum	Off/On	System restarted remotely by Landmark.
5-Nov-09	11:16	Y	Hi Vacuum and Hi Inlet Vacuum	On/Off	System shut down from high inlet vacuum while operating at DPE-8.
	11:36	NA	Hi Vacuum and Hi Inlet Vacuum	Off/On	System restarted remotely by Landmark. DPE-8 interval replaced by DPE-1 until Landmark is on site to modify the DPE-8's well head. Large pressure drop observed between VT1 an VT2. With Paramark's assistance, Landmark was able to determine the pressure drop was from a plugged DPE pump inlet screen.
	13:00	NA	NA	On/Off	Large pressure drop observed between VT1 an VT2 while Landmark checked the system remotely. With Paramark's assistance, Landmark was able to determine the pressure drop was from a plugged DPE pump inlet screen. System shut down by Landmark until screen could be cleaned.
6-Nov-09	NA	NA	NA	Off/On	Landmark onsite to install new inlet screen on DPE pump, tighten air stripper rods, inspect and clean inside of DPE-1 and DPE-3 aluminum solenoid valves, and restart the system.
7-Nov-09	20:15	Y	Hi Vacuum and Hi Inlet Vacuum	On/Off	System shut down from high inlet vacuum while operating at DPE-4.
9-Nov-09	10:58	NA	Hi Vacuum and Hi Inlet Vacuum	Off/On	Landmark restarted the system remotely and adjusted the high vacuum alarm setpoints to 25 in. Hg.
15-Nov-09	6:27	Y	MS High Level	On/Off	
11/16/2009 and 11/17/09	NA	NA	MS High Level	Off/On	Landmark on site to conduct monthly monitoring and sampling event and quarterly groundwater monitoring event . Removed sediment from moisture separator, and modified DPE-8 well head, and cleaned pump inlet screen.

TABLE 10

SYSTEM OPERATION AND MAINTENANCE SUMMARY

MN Bio Business Center
221 1st Avenue SW
Rochester, Minnesota

Date	Approximate Time	Sensophone Call Received?	Alarm Condition	DPE System Status	Comments
26-Nov-09	3:45	Y	DPE Pump Hi Outlet Temperature	On/Off	
27-Nov-09	NA	NA	DPE Pump Hi Outlet Temperature	Off/On	Landmark on site to clean the pump inlet screen and restart the system.
4-Dec-09	NA	NA	NA	On/Off	Landmark on site to clean solenoid valves and apply corrosion resistant coating to valves; DPE-4 and DPE-5 well heads modified to entrain air through water level port.
7-Dec-09	NA	NA	NA	Off/On	Landmark on site to reassemble solenoid valves; raise the manifold 1 foot; clean the pump inlet screen; and restart the system.
17-Dec-09	NA	NA	NA	On	Landmark on site to conduct monthly monitoring and sampling event , replace pump inlet screen, clean moisture separator, and clean floats.
28-Dec-09	NA	NA	NA	On	Landmark on site to replace pump inlet screen after remote monitoring indicated it was about to shut down from being clogged.
11-Jan-10	NA	NA	NA	On/Off	Landmark shut down the system remotely after the remote data indicated the pump inlet screen was clogged and about to shut down the system.
14-Jan-10	NA	NA	NA	Off/On	Landmark on site to conduct monthly monitoring and sampling event , clean pump inlet screen, and clean moisture separator floats.
23-Jan-10	14:15	Y	DPE Pump High Inlet Vacuum	On/Off	
27-Jan-10	NA	NA	DPE Pump High Inlet Vacuum	Off/On	Landmark on site to clean the pump inlet screen and restart the system.
30-Jan-10	18:58	Y	MS High Level	On/Off	
3-Feb-10	NA	NA	MS High Level	Off/On	Landmark onsite to clean the transfer pump floats, clean the moisture separator, and clean the pump inlet screen.
	22:09	Y	MS High Level	On/Off	
4-Feb-10	14:50	NA	MS High Level	Off/On	Landmark directed Paramark to pour tap water through the site tube to dislodge the low level transfer pump float and restart the system.
6-Feb-10	7:22	Y	MS High Level	On/Off	
10-Feb-10	NA	NA	MS High Level	Off/On	Landmark onsite to clean the transfer pump floats, the moisture separator, the moisture separator site tube elbow, discharge pump floats, and the pump inlet screen. Landmark also restarted the system.
	16:47	Y	MS High Level	On/Off	
	18:00	NA	MS High Level	Off/On	Landmark restarted the system remotely.
	19:42	Y	MS High Level	On/Off	
11-Feb-10	10:34	NA	MS High Level	Off/On	Landmark restarted the system remotely.
	12:54	Y	MS High Level	On/Off	
12-Feb-10	NA	NA	MS High Level	Off/On	Landmark onsite to troubleshoot the MS High Level alarm. Landmark performed the following tasks: checked the MS level switch configurations; ran diagnostic tests to narrow down the cause of the MS High Level alarm; replaced the check valve upstream of the MS pump; and, took apart the MS pump head to inspect and clean the internal pump parts.
16-Feb-10	NA	NA	NA	On	System is operational; however, remote monitoring of the system showed the MS transfer pump cycling every 2 minutes. Landmark onsite to replace the MS transfer pump stator, and troubleshoot the continuous cycling issue with the transfer pump.
22-Feb-10	NA	NA	NA	On	Landmark onsite to conduct monthly monitoring and sampling event, quarterly groundwater monitoring event , to disabled the sensophone sound alarm, and remove sediment from the primary moisture separator (MS1).
23-Feb-10	NA	NA	NA	On/Off/On	Landmark on site to finish the quarterly groundwater monitoring event , and to provide oversight while PLC installs the secondary moisture separator (MS2). MS2 level switch was determined to be faulty; however, the DPE system was restarted.
26-Feb-10	NA	NA	NA	On	Landmark and PLC were on site to replace the faulty level switch for MS2, and replace the MS1 and MS2 filters.
7-Mar-10	18:00	Y	DPE Pump High Inlet Vacuum	On/Off	
9-Mar-10	NA	NA	DPE Pump High Inlet Vacuum	Off/On	Landmark onsite to permanently remove the DPE pump inlet screen and change the oil in the DPE pump. Oil in the DPE pump was changed after 4,472 hours of operation.

TABLE 10

SYSTEM OPERATION AND MAINTENANCE SUMMARY
MN Bio Business Center
221 1st Avenue SW
Rochester, Minnesota

Date	Approximate Time	Sensophone Call Received?	Alarm Condition	DPE System Status	Comments
25-Mar-10	NA	NA	NA	On	Landmark on site to conduct monthly monitoring and sampling event , and clean the air stripper by adding 1 gallon of hydrochloric acid.
26-Mar-10	5:16	Y	DPE Pump High Inlet Vacuum	On/Off/On	System shut down during operation at DPE-8. System restarted remotely by Landmark.
	11:15	Y	DPE Pump High Inlet Vacuum	On/Off/On	System shut down during operation at DPE-8. System restarted by Paramark as directed by Landmark after opening the bleed valve on DPE-8's well head.
	17:15	Y	DPE Pump High Inlet Vacuum	On/Off	System shut down during operation at DPE-8.
29-Mar-10	11:17	Y	DPE Pump High Inlet Vacuum	Off/On	System shut down during operation at DPE-8. System restarted remotely by Landmark after troubleshooting the system.
	12:36	Y	DPE Pump High Inlet Vacuum	On/Off/On	System shut down during operation at DPE-8. System restarted remotely by Landmark after troubleshooting the system.
	13:41	Y	DPE Pump High Inlet Vacuum	On/Off/On	System shut down during operation at DPE-8. System restarted remotely by Landmark after troubleshooting the system.
	13:42	Y	DPE Pump High Inlet Vacuum	On/Off/On	System shut down during operation at DPE-8. System restarted remotely by Landmark after troubleshooting the system.
	13:56	Y	DPE Pump High Inlet Vacuum	On/Off/On	System shut down during operation at DPE-8. System restarted remotely by Landmark after troubleshooting the system. To prevent system shutdown's during operation of DPE-8, Landmark modified the DPE system to allow DPE-7 to operate any time that DPE-8 is operating.
30-Mar-10	NA	NA	NA	On	Landmark on site to troubleshoot DPE-8.
8-Apr-10	NA	NA	NA	On	Landmark remote troubleshooting of DPE-8. Operated DPE-8 without DPE-7.
	11:35	Y	DPE Pump High Inlet Vacuum	On/Off/On	Landmark modified the DPE system to allow DPE-7 to operate any time that DPE-8 is operating.
12-Apr-10	12:36	Y	DPE Pump High Inlet Vacuum	On/Off/On	Landmark tested DPE-8 remotely to see if it could operate on its own. Landmark modified the DPE system to allow DPE-7 to operate any time that DPE-8 is operating.
16-Apr-10	NA	NA	NA	On/Off/On	Landmark on site to conduct monthly monitoring and sampling event , replaced the check valve on the DPE-8 wellhead, and clean the air stripper by adding 1 gallon of hydrochloric acid.
17-Apr-10	23:20	Y	DPE Pump High Inlet Vacuum	On/Off/On	Landmark tested DPE-8 remotely to see if it could operate on its own. The system shut down; therefore, Landmark modified the DPE system to allow DPE-7 to operate any time that DPE-8 is operating.
4-May-10	NA	NA	NA	On/Off/On	Landmark tested DPE-8 remotely to see if it could operate on its own. The system shut down; therefore, Landmark modified the DPE system to allow DPE-7 to operate any time that DPE-8 is operating.
5-May-10	11:27	Y	DPE Pump High Inlet Vacuum	On/Off/On	The system shut down from DPE-8 operation; therefore, Landmark modified the DPE system to allow DPE-7 to operate any time that DPE-8 is operating.
13-May-10	NA	NA	NA	On	Landmark on site to conduct monthly monitoring and sampling event, quarterly groundwater sampling event , cleaned the air stripper by adding 1/2 gallon of hydrochloric acid. Plastic debris was found on the inlet side of the piping leaving the wellhead for DPE-8. Plastic piece was removed and the system shutdowns resulting from DPE-8 operation were resolved.
17-Jun-10	NA	NA	NA	On	Landmark on site to conduct monthly monitoring and sampling event , cleaned the air stripper by adding 1/2 gallon of hydrochloric acid.
29-Jun-10	6:04	Y	DPE Pump High Inlet Vacuum	On/Off/On	The system shut down after switching to DPE-1 operation. Landmark restarted the system remotely.
30-Jun-10	12:07	Y	DPE Pump High Inlet Vacuum	On/Off/On	The system shut down after switching to DPE-1 operation. Landmark restarted the system remotely and temporarily changed the DPE pump high inlet vacuum alarm to 24.5 inches Hg.
1-Jul-10	0:12	Y	DPE Pump High Inlet Vacuum	On/Off/On	The system shut down after switching to DPE-1 operation. Landmark restarted the system remotely and modified the system to operate DPE-1 and DPE-8 at the same time until the Landmark is on site for routine monitoring and can troubleshoot DPE-1. The DPE pump high inlet vacuum alarm was reset to 24 inches Hg.
8-Jul-10	0:27	Y	DPE Pump High Inlet Vacuum	On/Off/On	The system shut down after DPE-1 and DPE-8 operation switched to DPE-1 operation. Landmark restarted the system remotely and modified the system to operate DPE-1 and DPE-8 at the same time during 30 minutes of the DPE-1 cycle.
9-Jul-10	0:37	Y	DPE Pump High Inlet Vacuum	On/Off/On	The system shut down after DPE-1 and DPE-8 operation switched to DPE-1 operation. Landmark restarted the system remotely and modified the system to operate DPE-1 and DPE-8 at the same time during the entire DPE-1 cycle.

TABLE 10

SYSTEM OPERATION AND MAINTENANCE SUMMARY
MN Bio Business Center
221 1st Avenue SW
Rochester, Minnesota

Date	Approximate Time	Sensophone Call Received?	Alarm Condition	DPE System Status	Comments
26-Jul-10	NA	NA	NA	On	Landmark on site to conduct monthly monitoring and sampling event , cleaned the air stripper by adding 1/2 gallon of hydrochloric acid. DPE-1 troubleshooting by pulling piping out of DPE-1 for cleaning and inspection. Sediments may have been clogging screen. Also noticed sanitary well seal was broken and missing rubber pieces. Fluid levels were not collected due to instrument malfunction. Air sampling flow controller malfunctioned and only operated for 3 hours. Therefore, a 3 hour composite air sample was collected.
29-Jul-10	7:05	Y	DPE Pump Low Inlet Vacuum	On/Off/On	System shut down was actually due to a power outage in the building. This power outage may have also increased the elevator pit drain tile sump totalizer reading from 330 to 340 gallons. Paramark restarted the DPE system.
18-Aug-10	NA	NA	NA	On/Off	Landmark on site to conduct monthly monitoring and sampling event and quarterly groundwater monitoring event . Oil was observed to be leaking from the DPE pump; therefore, the pump was turned off immediately for inspection and troubleshooting by Landmark. Monthly DPE system monitoring and sampling was not completed . The transfer pump stator was replaced.
20-Aug-10	NA	NA	NA	Off	Landmark and John Henry Foster on site to troubleshoot DPE pump oil leak. The pump could not be fixed on site, so it was shipped back to John Henry Foster's shop for further inspection and repair.
27-Sep-10	NA	NA	NA	Off/On	Landmark and John Henry Foster on site to reinstall DPE pump. Landmark conducted monthly monitoring and sampling event . Air sampling flow controller malfunctioned and only operated for 30 minutes. Therefore, a 30 minute composite air sample was collected.
18-Oct-10	NA	NA	NA	On	Landmark conducted monthly monitoring and sampling event . Replaced MS#1 and MS#2 filters and cleaned air stripper by adding 1 gallon of hydrochloric acid.
16-Nov-10	11:20	NA	NA	On/Off	DPE system shut down due to a DPE pump oil leak discovered by Paramark.
18-Nov-10	NA	NA	NA	Off	Landmark and John Henry Foster on site to troubleshoot DPE pump oil leak. The pump could not be fixed on site, so it was shipped back to John Henry Foster's shop for further inspection and repair.
	NA	NA	NA	Off	Landmark onsite to conduct quarterly groundwater monitoring event for non-DPE wells .
22-Dec-10	NA	NA	NA	Off/On	Landmark and John Henry Foster on site to reinstall DPE pump. Landmark conducted monthly monitoring and sampling event . New oil in pump from repairs. Solenoid rebuild kits required for DPE-1, 2, and 8.
23-Dec-10	NA	NA	NA	Off	Landmark onsite to conduct quarterly groundwater monitoring event for DPE wells . Replaced 4" flex hose to air stripper.
6-Jan-11	NA	NA	NA	On	Landmark on site to install solenoid rebuild kits for DPE-1, 2, and 8.
	15:45	Y	DPE Pump High Inlet Vacuum	On/Off/On	DPE system turned off when operating on DPE-6. Landmark restarted system remotely. DPE-6 was left off until the coil to the solenoid valve could be replaced.
20-Jan-11	NA	NA	NA	On	Landmark onsite to conduct monthly system monitoring and sampling event , and troubleshoot DPE-2, DPE-4, and DPE-6 which appear to be stuck open. Hunt Electric on site to trouble shoot solenoid valves. They had to reset a breaker in the DPE system control panel and fixed DPE-2 and DPE-4. DPE-6 appears to have a faulty coil.
16-Feb-11	NA	NA	NA	On	Paramark contacted Landmark about a leak from the line from DPE-8 in the boiler room. Leak appears to be from pressure gauge.
	12:49	Y	DPE Pump Low Inlet Vacuum	On/Off	
	13:49	NA	NA	Off/On	Landmark restarted the DPE system remotely. DPE-8 taken offline.
28-Feb-11	NA	NA	NA	On	Landmark onsite to conduct monthly system monitoring and sampling event and quarterly groundwater sampling event , change oil in the DPE pump (10,989 hrs), replaced hose from air stripper blower to the tank, fixed DPE-8 leak, put DPE-8 back on line, and installed solenoid valve rebuild kits at DPE-3, 5, and 7.
2-Mar-11	13:28	Y	MS High Level	On/Off	
7-Mar-11	NA	NA	NA	Off/On	Landmark onsite to replace the coil to DPE-6, clean the moisture separator, clean the moisture separator floats, and put DPE-8 back online.
18-Mar-11	13:30	NA	NA	On/Off	Landmark onsite to repair DPE-8 (possible bonnet gasket pinched), clean the moisture separator floats, replaced transfer pump stator, and troubleshoot constant transfer pump operation. DPE system left off after it was determined that the floats were not operational.
23-Mar-11	9:00	NA	NA	Off/On	Landmark onsite to conduct monthly monitoring and sampling event . Landmark also replaced MS-1 tri-level floats, and changed oil at 11,276 hours.
22-Apr-11	9:10	NA	NA	On	Landmark Onsite to conduct monthly monitoring and sampling event . Landmark also changed oil at 11,995 hours.
3-May-11	21:00	NA	NA	On	Landmark on site to troubleshoot and clean the discharge flow meter.
5-May-11	NA	NA	NA	On	Landmark on site to troubleshoot leaking solenoid valve. DPE-4 solenoid valve repaired.
19-May-11	6:00	NA	NA	On	Landmark onsite to conduct monthly monitoring and sampling event as well as quarterly groundwater sampling event . Landmark also changed oil at 12,645 hours.
16-Jun-11	12:00	NA	NA	On	Landmark onsite to conduct monthly monitoring and sampling event . Landmark also changed oil at 13,314 hours and installed new vacuum gauge in DPE 4 manifold.

TABLE 10

SYSTEM OPERATION AND MAINTENANCE SUMMARY

MN Bio Business Center
221 1st Avenue SW
Rochester, Minnesota

Date	Approximate Time	Sensophone Call Received?	Alarm Condition	DPE System Status	Comments
18-Jul-11	15:37	Y	Lo Inlet Vacuum	On/Off/On	Contacted Paramark and the shutdown was due to a building power outage. Paramark restarted the system after the power returned.
21-Jul-11	11:00	Y	Air Stripper High High Level	On/Off	
	14:16	NA	NA	Off/On	Paramark onsite and turned AS pump to the "hand" position until the water level in the air stripper was below the High Level switch. Paramark returned AS pump to auto position and restarted the DPE system.
22-Jul-11	2:26	Y	Air Stripper High High Level	On/Off	
	8:00	NA	NA	Off/On	Paramark onsite and turned AS pump to the "hand" position until the water level in the air stripper was below the High Level switch. Paramark returned AS pump to auto position and restarted the DPE system.
	9:06	Y	Air Stripper High High Level	On/Off	
27-Jul-11	9:00	NA	NA	On	Landmark onsite to conduct monthly monitoring and sampling event . Landmark also changed oil at 14,169 hours and installed installed new transfer pump stator as well as cleaned floats..
28-Aug-11	11:00	NA	NA	On	Landmark onsite to conduct monthly monitoring and sampling event . Landmark also changed oil at 14,962 hours and installed new transfer pump stator as well as rebuilt DPE-1 solenoid valve.
8-Sep-11	15:18	NA	NA	On	Landmark changed the operational configuration to focus operation on DPE-1, DPE_2, DPE-3, and DPE-4.
29-Sep-11	11:40	NA	NA	On	Landmark onsite to conduct monthly monitoring and sampling event as well as quarterly groundwater sampling event . Landmark also changed oil at 15,722 hours and installed new moisture separator filters (both 1 micron).
2-Oct-11	14:11	Y	Air Stripper High High Level	On/Off	
4-Oct-11	10:46	NA	NA	Off	Landmark onsite to troubleshoot system alarm. Air stripper floats cleaned. Landmark cleaned moisture separator floats at MS-1 and noticed the bottom float was causing the transfer pump to operate continuously. Hunt Electric onsite to troubleshoot MS-1 float issues and confirmed the bottom reed of the tri-level float assembly was causing electrical connection in any float position. Hunt checked wiring from the tri-level assembly to the panel and found no issues.
11-Oct-11	12:28	NA	NA	Off	Landmark onsite replace the tri-level float switch for MS-1 and replace the transfer pump stator. The low float on the tri-level switch was 1/2-inch lower than previous switch and was allowing air through the transfer pump, preventing the low float from shutting down the transfer pump. The tri-level switch was returned to PLC to be rebuilt. Therefore the system could not be restarted.
18-Oct-11	10:00	NA	NA	Off/On	Landmark onsite to install a new float switch assembly for MS-1. System restarted.
27-Oct-11	8:00	NA	NA	On	Landmark onsite to conduct monthly monitoring and sampling event . Landmark also changed oil at 16,013 hours.
21-Nov-11	11:00	NA	NA	On	Landmark onsite to conduct monthly monitoring and sampling event . Landmark also changed oil at 16,619 hours.
2-Dec-11	8:52	Y	Lo Inlet Vacuum	On/Off	DPE system shut down due to a low inlet vacuum alarm. Paramark inspected the DPE pump and observed an oil leak from the DPE pump.
12-Dec-11	13:00	NA	NA	Off	Landmark and JHF onsite to remove the DPE pump for repair.
21-Dec-11	11:00	NA	NA	Off	Landmark onsite to collect sump water sample and inspect corrosion on elevator support buckets.
20-Jan-12	8:00	NA	NA	Off/On	Landmark and JHF onsite to reinstall the DPE pump and restart the DPE system.
27-Jan-12	9:00	NA	NA	On	Landmark onsite to conduct monthly monitoring and sampling event .
16-Feb-12	9:00	NA	NA	On	Landmark onsite to conduct monthly monitoring and sampling event as well as quarterly groundwater sampling event . Landmark also changed oil at 17,520 hours.
16-Mar-12	11:00	NA	NA	On	Landmark onsite to conduct monthly monitoring and sampling event . Landmark also changed oil at 18,219 hours.
25-Mar-12	19:58	Y	Air Stripper High High Level	On/Off	
27-Mar-12	7:00	Y	Air Stripper High High Level	Off/On	Landmark onsite to clean the air stripper floats. System restarted.
17-Apr-12	10:25	NA	NA	On	Landmark onsite to conduct monthly monitoring and sampling event . Landmark also changed oil at 18,964 hours.
17-May-12	10:00	NA	NA	On	Landmark onsite to conduct monthly monitoring and sampling event as well as quarterly groundwater sampling event . Solenoid for DPE-3 faulty and taken off-line. Landmark also changed oil at 19,660 hours.
31-May-12	10:59	NA	NA	On	Landmark onsite and replaced solenoid bonnet for DPE-2 and DPE-3, and inner seal on DPE-1. Landmark also changed oil at 19,950 hours.

TABLE 10

SYSTEM OPERATION AND MAINTENANCE SUMMARY
MN Bio Business Center
221 1st Avenue SW
Rochester, Minnesota

Date	Approximate Time	Sensophone Call Received?	Alarm Condition	DPE System Status	Comments
14-Jun-12	10:17	NA	NA	On	Landmark onsite to conduct monthly monitoring and sampling event . Landmark also changed oil at 20,279 hours.
18-Jun-12	14:18	NA	NA	On	Landmark changed the DPE operational configuration from operating at DPE-1, DPE-2, DPE-3, and DPE-4 to operation of only DPE-3.
19-Jul-12	11:11	NA	NA	On	Landmark onsite to conduct monthly monitoring and sampling event . Conducted troubleshooting of MS#1 and MS#2 pressure drop. Replaced DPE#3 solenoid components. Landmark also changed oil at 21,119 hours.
25-Jul-12	NA	NA	NA	On	Landmark onsite to replace filters for MS#1 and MS#2; replace transfer pump stator; and clean flow meter.
23-Aug-12	7:30	NA	NA	On	Landmark onsite to conduct monthly monitoring and sampling event . Conducted troubleshooting of MS#1 and MS#2 pressure drop. Landmark also changed oil at 21,872 hours.
26-Sep-12	20:12	NA	NA	On	Landmark onsite to conduct monthly monitoring and sampling event as well as quarterly groundwater sampling event . Pressure drop issue determined to be clogged demister pad from MS#2. Landmark also changed oil at 22,695 hours.
26-Oct-12	8:55	NA	NA	On	Landmark onsite to conduct monthly monitoring and sampling event . Landmark also changed oil at ???? hours.
26-Oct-12	13:53	NA	NA	On	
31-Oct-12	10:00	NA	NA	On	Landmark on site to remove demister pad from MS#2 and troubleshoot DPE system alarm. Transfer pump failed; therefore, system shut down temporarily to conduct rebound sampling of DPE emissions and groundwater concentrations.
		NA	NA	On	
		NA	NA	On	
26-Oct-12	6:00	NA	NA	On/Off	Landmark onsite to conduct monthly monitoring and sampling event . Landmark turned DPE system off to conduct rebound test . DPE-3 solenoid valve rebuilt.
31-Oct-12	NA	NA	NA	Off	Landmark onsite to troubleshoot transfer pump.
19-Dec-12	NA	NA	NA	Off	Landmark onsite to conduct quarterly groundwater sampling event and soil gas sampling event .
21-Dec-12	NA	NA	NA	Off/On	Landmark onsite to restart the DPE system for rebound emissions sampling and conduct monthly monitoring and sampling event . Landmark also changed oil at 23,442 hours.
4-Jan-13	9:40	NA	NA	On	Landmark onsite to replace transfer pump stator, clean air stripper, and rebuild DPE-3 solenoid. Landmark also changed oil at 23,655 hours.
9-Jan-13	9:40	NA	NA	On	Landmark onsite to replace transfer pump coupling and key.
18-Jan-13	8:00	NA	NA	On	Landmark onsite to repair transfer pump.
23-Jan-13	13:40	NA	NA	On	DPE system switched from DPE-3 operation to operating on DPE-1, DPE-2, DPE-3, to DPE-4.
30-Jan-13	6:00	NA	NA	On	Landmark onsite to conduct monthly monitoring and sampling event .
5-Feb-13	7:26	Y	MS High Level	On/Off/On	Restarted system remotely.
8-Feb-13	13:45	Y	MS High Level	On/Off	
12-Feb-13	NA	NA	NA	Off/On	Landmark onsite to replace transfer pump.
26-Feb-13	NA	NA	NA	On	Landmark onsite to conduct quarterly groundwater sampling event and monthly DPE system monitoring and sampling event .
21-Mar-13	8:00	NA	NA	On	Landmark onsite to conduct monthly monitoring and sampling event .
4-Apr-13	NA	NA	NA	On/Off	DPE system shut down for rebound test.
23-May-13	16:00	NA	NA	Off/On	Landmark onsite to restart DPE system and conduct monthly monitoring and sampling event and quarterly groundwater sampling event . Rebuilt solenoids 2 and 4.
26-Jun-13	10:40	NA	NA	On	Landmark onsite to conduct monthly monitoring and sampling event .
26-Aug-13	17:30	NA	NA	On	Landmark onsite to conduct quarterly groundwater sampling event and monthly DPE system monitoring and sampling event . DPE system shut down.
10-Dec-13	13:30	NA	NA	Off	Landmark onsite to conduct quarterly groundwater sampling event . DPE system shut down.
18-Feb-14	10:30	NA	NA	Off	Landmark onsite to conduct quarterly groundwater sampling event . DPE system shut down. Landmark also conducted the semi-annual soil vapor monitoring.
20-May-14	10:00	NA	NA	Off	Landmark onsite to conduct quarterly groundwater sampling event . DPE system shut down.
21-Aug-14	9:30	NA	NA	Off	Landmark onsite to conduct quarterly groundwater sampling event . DPE system shut down. Landmark also conducted the semi-annual soil vapor monitoring.
19-Nov-14	8:40	NA	NA	Off	Landmark onsite to conduct quarterly groundwater sampling event . DPE system shut down.
25-Feb-15	14:45	NA	NA	Off	Landmark onsite to conduct quarterly groundwater sampling event . DPE system shut down. Landmark also conducted the semi-annual soil vapor monitoring.
3-Mar-15	3:20	NA	NA	Off	Landmark onsite to resample groundwater at MW-14, MW-15, and DPE-2 due to broken vials from February visit.
15-Jun-15	4:20	NA	NA	Off	Landmark onsite to conduct quarterly groundwater sampling event . DPE system shut down.
20-Jul-15	9:00	NA	NA	Off	Landmark and JHF onsite to remove the DPE pump for repair.

TABLE 10

SYSTEM OPERATION AND MAINTENANCE SUMMARY

MN Bio Business Center
221 1st Avenue SW
Rochester, Minnesota

Date	Approximate Time	Sensophone Call Received?	Alarm Condition	DPE System Status	Comments
18-Aug-15	8:40	NA	NA	Off	Landmark onsite to conduct quarterly groundwater sampling event . DPE system shut down.
8-Sep-15	11:50	NA	NA	Off	Landmark onsite to conduct semi-annual soil vapor monitoring .
9-Sep-15	7:00	NA	NA	Off	Landmark & JHF onsite to reinstall DPE pump. JHF fixed the DPE pump and replaced the vacuum pump. Landmark replaced DPE system components. Replaced 5 of the 8 solenoid valves (#1, 2, 3, 4, & 6). Waiting on three additional solenoids for the 3 remaining repairs. Serviced water separator w/several gallons of muriatic acid. Removed significant sediment from water separator. Replaced the PVC well piping at all DPE wells.
12-Oct-15	11:30	NA	NA	Off	Landmark onsite to repair the remaining 3 solenoid valves (#5, 7, & 8). Maintenance check of DPE system done as well. Replaced transfer pump stator and MS#1 filter.
13-Oct-15	8:30	NA	NA	Off/On/Off	Landmark onsite to collect 6-hour air stripper air emissions and influent and effluent groundwater samples . System on while air emissions sample was collected.
12/14/2015 and 12/15/2015	11:00	NA	NA	Off/On	Landmark onsite to conduct quarterly groundwater sampling event . DPE system was powered back on . Venting system shutdown.
1/11/2016 and 1/12/2016	9:25	NA	NA	On	Landmark onsite to conduct quarterly groundwater sampling event, semi-annual soil vapor monitoring, collect 6-hour air stripper air emissions and influent and effluent groundwater samples . Drained oil in the DPE motor pump and put new oil in.
26-Jan-16	12:57	Y	Air Stripper Lo Airflow	On/Off/On	Restarted system via remote access
	19:57	Y	Air Stripper Lo Airflow	On/Off	
27-Jan-16	NA	NA	Air Stripper Lo Airflow	Off	Site visit to troubleshoot AS alarm condition. AS exhaust pressure is 0 and should be 8-12 inches WC. Looked in AS and holes are plugged with scale build up.
2/23/2016 and 2/24/2016	12:50	NA	NA	Off/On	Landmark onsite to conduct quarterly groundwater sampling event, semi-annual soil vapor monitoring, collect 6-hour air stripper air emissions and influent and effluent groundwater samples . Air stripper was taken apart and cleaned and rubber gasquets were replaced.
21-Mar-16	10:30	Y	Air Stripper High High Level & floor sensor alarm	Off/On	Site visit to troubleshoot AS alarm condition. Groundwater overflowed over the air stripper and caused the basement to flood. Cleaned up the basement and cleaned the air stripper floats. Wanted to dump muriatic acid into the air stripper to unplug and diminish scale build-up, but the MN Biobusiness building was locked and I didn't have keys to leave the building and come back. Turned system back on when I left.
30-Mar-16	9:00	NA	NA	On/Off/On	The air stripper overflowed onto the basement floor again (about 25 gallons of water) but the HHL air stripper alarm wasn't triggered. The floor sensor alarm wasn't triggered either because the water flowed away from the floor sensors based on the slope of the floor. The air stripper was plugged so we took the whole air stripper apart and cleaned off all the scale build-up with a garden hose, tools, and muriatic acid. Turned the system back on after the re-assembly of the AS. Collected 6-hour AS air emissions and influent and effluent groundwater samples .
20-Apr-16	9:15	NA	NA	On	Landmark onsite to collect 6-hour air stripper air emissions and influent and effluent groundwater samples . System on while air emissions sample was collected. Monthly maintenance checks were completed as well .
17-May-16	10:00	NA	Air Stripper High High Level & floor sensor alarm	Off/On	Landmark onsite to conduct quarterly groundwater sampling event, collect 6-hour air stripper air emissions and influent and effluent groundwater samples . DPE System was powered back on . Muriatic acid was dumped into the air stripper to eliminate any scaling and mineral build-up. The high-level and high-high level float on the air stripper malfunctioned so the system shut down. All of the air stripper floats were removed and cleaned. Venting System powered back on .
16-Jun-16	9:30	Y	Zone 2 Alarm	Off/On/Off	Landmark onsite to trouble shoot Zone 2 AS alarm. The moisture separator was not draining so the floats were cleaned and the system was turned back on. The system ran for over an hour and the moisture separator filled up and was not draining even though the transfer pump to the air stripper was running. Appears to be something with the moisture separator pump and may need a new rubber strator. The moisture separator transfer pump appeared to work when it wasn't fighting against the air stripper blower. Shut system down before leaving and will bring a new strator on next site visit.
20-Jun-16	9:00	NA	NA	Off/On/Off	Landmark onsite to fix moisture separator issues. Old rubber strator was removed from the MS transfer pump and a new one was installed. System ran for an hour and we were still having issues with the MS tank emptying. Removed piping from the MS tank that connects to the transfer pump and it was very clogged with limestone build-up. Cleaned all of these parts and piping and the system appeared to work fine again.
23-Jun-16	8:45	NA	NA	On	Landmark onsite to collect 6-hour air stripper air emissions sample . Semi-annual soil vapor samples were collected as well . Monthly maintenance checks were completed as well . Had a meeting with the plumber and got the south venting system fan working again. The fan started right up after the plumber went up to check it out. The tubing that lead to the digital manometer had moisture in it so that was cleared out and the digital reading worked again. The plumber also modified the DPE and AS exhaust stacks in the alleyway so rain water wouldn't get in the piping.

TABLE 10

**SYSTEM OPERATION AND MAINTENANCE SUMMARY
 MN Bio Business Center
 221 1st Avenue SW
 Rochester, Minnesota**

Date	Approximate Time	Sensophone Call Received?	Alarm Condition	DPE System Status	Comments
29-Jun-16	9:00	NA	NA	On	Eric onsite and modified the plumbing piping so the MS transfer pump is pumping groundwater directly to the sanitary sewer instead of into the air stripper. The AS influent groundwater concentrations are well below discharge criteria and we've be having AS issues the past few months so the system is now modified to pump GW directly to the sanitary sewer.
22-Jul-16	NA	NA	NA	Off	Jason shut down DPE system to allow the groundwater to equilibrate prior to the SIREM microbial groundwater collection event.
28-Jul-16	6:00	NA	NA	Off	Aaron and Zi-Yao onsite to collect influent and effluent groundwater samples and SIREM samples . Groundwater elevations were not collected, except wells MW-19, MW-20 and DPE-8, due to water level meter breaking.
10-Aug-16	10:00	NA	NA	Off/On	ADK, JEG, and Zi-Yao onsite. Cleaned and replaced parts on 4 solenoid valves (2, 5, 7, 8). System still wasn't running like it typically does even after fixing the solenoid valves because the DPE exhaust flow rate was still high at all 8 wells. Collected 6-hour air stripper air emissions sample. Also collected soil gas samples at LSG-7 through LSG-10. Quarterly groundwater samples were collected, as well as, influent and effluent groundwater samples.
8-Sep-16	NA	NA	NA	Off	Jason shut down DPE system to allow the groundwater levels to stabilize prior to the bioremediation/bioaugmentation chemical injection activities.
12-Sep-16	13:00	NA	NA	Off	ADK onsite for the whole week. Bioremediation injection occurred from 9/12/2016 to 9/17/2016.

NA: Not Applicable.
 Y: Yes.
 N: No.

TABLE 11

MASS REMOVAL FROM DPE EXHAUST
 MN Bio Business Center
 221 1st Avenue SW
 Rochester, Minnesota

Monitoring Period		DPE Well(s) Operating	DPE Pump Hours	Hours Per Period	Total Flow Rate (scfm)	Total VOCs			PCE		
Start Date	End Date					Concentration (ug/m ³)	Pounds Per Period	Cumulative pounds	Concentration (ug/m ³)	Pounds Per Period	Cumulative Pounds
---	6/29/2009	---	0	0	0	0	0	0	0	0	0
6/29/2009 ³	8/15/2009 ¹	DPE-1	478.5	478.5	24.3	14,613,880	636.97	636.97	11,600,000	505.61	505.61
8/15/2009	9/4/2009 ²	DPE-1	957	478.5	36.1	3,795,092	245.74	882.71	3,630,000	235.05	740.66
9/4/2009	---	DPE-1	1428	471	36.1	3,795,092	241.89	1,124.60	3,630,000	231.37	972.02
---	10/15/2009 ⁴	DPE-1	1899	471	31.6	494,779	27.60	1,152.21	396,000	22.09	994.12
10/16/2009 ⁵	---	All Wells	1899	231	48.9	608,840	25.78	1,177.99	571,000	24.18	1018.30
---	11/17/2009 ⁵	All Wells	2361	231	48.9	453,479	19.20	1,197.19	381,000	16.13	1034.43
11/17/2009	12/17/2009 ⁵	All Wells	2960	599	48.9	12,510	1.37	1,198.56	6,790	0.75	1035.17
12/17/2009	1/14/2010 ⁵	All Wells	3568	608	48.9	11,403,200	1270.88	2,469.45	8,550,000	952.89	1988.07
1/14/2010	2/22/2010 ⁶	All Wells	4161	593	69.4	2,364,821	364.82	2,834.27	1,720,000	265.34	2253.41
2/22/2010	3/25/2010 ⁷	All Wells	4868	707	69.4	548	0.10	2,834.37	215,000	39.54	2292.96
3/25/2010	4/16/2010	All Wells	5308	440	77.9	331,284	42.57	2,876.93	282,000	36.23	2329.19
4/16/2010	5/12/2010	All Wells	5908	600	86.9	438,730	85.73	2,962.66	27,900	5.45	2334.64
5/12/2010	6/17/2010	All Wells	6768	860	55.6	50,553	9.06	2,971.72	689,000	123.50	2458.14
6/17/2010	7/26/2010	All Wells	7671	903	75.6	1,032,070	264.11	3,235.83	489,000	125.14	2583.28
7/26/2010	9/27/2010 ⁸	All Wells	8222	551	86.8	493,213	88.42	3,324.25	245,150	43.95	2627.23
9/27/2010	10/18/2010	All Wells	8662	440	77.4	246,881	31.52	3,355.77	1,300	0.17	2627.39
10/18/2010	12/22/2010	All Wells	9378	716	94.1	19,686	4.97	3,360.74	2,680	0.68	2628.07
12/22/2010	1/20/2011	All Wells	10034	656	88.0	46,334	10.03	3,370.77	5,040	1.09	2629.16
1/20/2011	2/28/2011	All Wells	10969	935	83.1	61,844	18.02	3,388.79	4,590	1.34	2630.50
2/28/2011	3/23/2011	All Wells	11277	308	64.8	21,690	1.62	3,390.41	7,340	0.55	2631.05
3/23/2011	4/22/2011	All Wells	11995	718	65.8	56,955	10.08	3,400.49	6,840	1.21	2632.26
4/22/2011	5/19/2011	All Wells	12645	650	61.3	29,665	4.43	3,404.92	6,270	0.94	2633.19
5/19/2011	6/16/2011	All Wells	13314	669	56.4	25,270	3.57	3,408.49	668	0.09	2633.29
6/16/2011	7/25/2011	All Wells	14169	855	59.5	8,991	1.71	3,410.20	308	0.06	2633.35
7/25/2011	8/28/2011	All Wells	14962	793	68.7	8,866	1.81	3,412.01	0	0.00	2633.35
8/28/2011	9/29/2011	DPE-1, 2, 3, & 4	15722	760	59.9	8,324	1.42	3,413.44	3,420	0.58	2633.93
9/29/2011	10/27/2011	DPE-1, 2, 3, & 4	16013	291	52.3	106,710	6.09	3,419.52	180	0.01	2633.94
10/27/2011	11/21/2011	DPE-1, 2, 3, & 4	16619	606	57.6	11,328	1.48	3,421.01	22,100	2.89	2636.83
11/21/2011	1/27/2012	DPE-1, 2, 3, & 4	17042	423	49.1	268,469	20.90	3,441.91	29,100	2.27	2639.10
1/27/2012	2/16//2012	DPE-1, 2, 3, & 4	17520	478	39.9	85,733	6.13	3,448.04	4,440	0.32	2639.41
2/16/2012	3/16/2012	DPE-1, 2, 3, & 4	18219	699	34.0	59,394	5.29	3,453.33	0	0.00	2639.41
3/16/2012	4/17/2012	DPE-1, 2, 3, & 4	18964	745	29.2	71,800	5.86	3,459.18	20,600	1.68	2641.09
4/17/2012	5/17/2012	DPE-1, 2, 3, & 4	19660	696	32.3	50,874	4.29	3,463.47	25,200	2.12	2643.22
5/17/2012	6/14/2012	DPE-1, 2, 3, & 4	20279	619	38.5	41,142	3.68	3,467.15	11,200	1.00	2644.22

TABLE 11

**MASS REMOVAL FROM DPE EXHAUST
MN Bio Business Center
221 1st Avenue SW
Rochester, Minnesota**

Monitoring Period		DPE Well(s) Operating	DPE Pump Hours	Hours Per Period	Total Flow Rate (scfm)	Total VOCs			PCE		
Start Date	End Date					Concentration (ug/m ³)	Pounds Per Period	Cumulative pounds	Concentration (ug/m ³)	Pounds Per Period	Cumulative Pounds
6/14/2012	7/19/2012	DPE-3	21119	840	49.2	173,300	26.85	3,493.99	113,000	17.51	2661.72
7/19/2012	8/23/2012	DPE-3	21872	753	33.3	54,700	5.14	3,499.13	27,800	2.61	2664.34
8/23/2012	9/26/2012	DPE-3	22695	823	45.9	100,659	14.25	3,513.39	45,800	6.49	2670.82
9/26/2012	10/26/2012 ⁹	DPE-3	23397	702	40.1	1,099,548	116.03	3,629.42	664,000	70.07	2740.89
10/26/2012	12/21/2012	DPE-3	23442	45	48.1	447,600	3.63	3,633.05	358,000	2.90	2743.80
12/21/2012	1/30/2013	DPE-1, 2, 3, & 4	24138	696	38.1	475,000	47.22	3,680.26	348,000	34.59	2778.39
1/30/2013	2/26/2013	DPE-1, 2, 3, & 4	24625	487	44.1	9,017	0.73	3,680.99	1,600	0.13	2778.52
2/26/2013	3/21/2013	DPE-1, 2, 3, & 4	25176	551	39.1	51,872	4.19	3,685.18	17,500	1.41	2779.93
3/21/2013	5/23/2013	DPE-1, 2, 3, & 4	25691	515	100.0	56,690	10.94	3,696.12	43,200	8.34	2788.27
5/23/2013	6/26/2013	DPE-1, 2, 3, & 4	26501	810	92.5	215	0.06	3,696.18	102	0.03	2788.30
6/26/2013	8/26/2013	DPE-1, 2, 3, & 4	27889	1388	80.6	3,154	1.32	3,697.51	122	0.05	2788.35
10/12/2015	10/12/2015	All Wells	27889	0	NA	NA	NA	3,697.51	NA	NA	2788.35
10/13/2015	10/13/2015	All Wells	27898	9	48.8	5,958	0.01	3,697.52	61	0.00	2788.35
12/15/2015	1/12/2016	All Wells	28591	693	64.4	13,567	2.27	3,699.79	7,200	1.20	2789.55
1/12/2016	2/24/2016	All Wells	29503	912	64.4	15,685	3.45	3,703.24	8,400	1.85	2791.40
2/24/2016	3/30/2016	All Wells	30254	751	65.6	26,073	4.82	3,708.05	19,000	3.51	2794.91
3/30/2016	4/20/2016	All Wells	30758	504	64.4	3,139	0.38	3,708.44	6	0.00	2794.91
4/20/2016	5/17/2016	All Wells	31395	637	66.3	3,041	0.48	3,708.92	18	0.00	2794.92
5/17/2016	6/23/2016 ¹⁰	All Wells	32275	880	65.02	2,699	0.58	3,709.50	230	0.05	2794.96
6/23/2016	8/10/2016	All Wells	33091	816	138.13	1,584	0.67	3,710.17	15	0.01	2794.97

Notes:

1. The initial concentrations of total VOCs and PCE used for estimating the mass removed during the first 478.5 hours of system operation, which was estimated to be from, June 29, 2009, through August 15, 2009.
2. The concentrations of total VOCs and PCE from the September 4, 2009, sampling event were used for estimating the mass removed during the remaining 478.5 hours of system operation, which was estimated to be from August 15, 2009, through September 4, 2009.
3. The DPE system was temporarily started on April 9, 2009, for baseling DPE emissions sampling and analysis. The analytical data from April 4, 2009, was used for the emissions calculations on the estimated DPE system start date of June 29, 2009.
4. The flow rate used for the 10/15/09 calculations was from operation at DPE-1.
5. The flow rates used for the 10/16/09, 11/17/09, 12/17/09, and 1/14/10 calculations was from averaging the flowrates on 11/17/09 from each well during sequential operation of all DPE wells.
6. The flow rates used after 1/14/10 were averaged from the flow rates from each well during sequential operation of all DPE wells.
- 7: There was a typo when entering the DPE pump hours; therefore, this value was revised while entering the data from 4/16/10.
- 8: The 6-hr flow controller failed and only lasted 26 minutes during exhaust sample collection. Therefore, the concentrations used during this sampling event were averaged from the July 26 and October 18, 2010, sampling events.
- 9: Landmark believes the October 26, 2012, emissions results from Pace Analytical are suspect and are outliers from previous concentration trends.
- 10: Hours and flow rate values are calculated based on previous results

TABLE 13

EMISSIONS RATES SUMMARY
MN Bio Business Center
221 1st Avenue SW
Rochester, Minnesota

Date	DPE Wells Operating	Parameter	Conc. (ug/m ³)	RRASS Emissions Summary						PR Program Emissions Summary					
				DPE (ug per sec)	AS (ug per sec)	Site Specific (ug per sec)	Excess Lifetime Cancer Risk (guideline value = 1E-05)	SER for Chronic Risk (ug per sec)	SER for Acute Risk (ug per sec)	DPE (ug per sec)	AS (ug per sec)	Site Specific (ug per sec)	Acute Hazard Quotient	Chronic Hazard Quotient	Excess Lifetime Cancer Risk (guideline value = 1E-05)
9/4/2009	DPE-1	PCE	3,630,000	61,710	70	61,780	NA	16,300	5,980,000	NA	NA	NA	NA	NA	NA
10/15/2009	DPE-1	PCE	396,000	5,940	5.6	5,946	NA	16,300	5,980,000	NA	NA	NA	NA	NA	NA
10/16/2009	All Wells	PCE	571,000	8,565	5.6	8,571	NA	16,300	5,980,000	NA	NA	NA	NA	NA	NA
11/17/2009	All Wells	PCE	381,000	4,953	0.5	4,953	NA	16,300	5,980,000	NA	NA	NA	NA	NA	NA
12/17/2009	All Wells	PCE	6,790	197	0.5	197	NA	16,300	5,980,000	NA	NA	NA	NA	NA	NA
1/14/2010	All Wells	PCE	8,550,000	393,300	3.9	393,304	NA	16,300	5,980,000	NA	NA	NA	NA	NA	NA
2/22/2010	All Wells	PCE	1,720,000	82,560	1.3	82,561	NA	16,300	5,980,000	NA	NA	NA	NA	NA	NA
3/25/2010	All Wells	PCE	215,000	11,180	2.1	11,182	NA	16,300	5,980,000	NA	NA	NA	NA	NA	NA
4/16/2010	All Wells	PCE	282,000	9,588	1.3	9,589	NA	16,300	5,980,000	NA	NA	NA	NA	NA	NA
5/12/2010	All Wells	PCE	27,900	1,729	0.8	1,730	NA	16,300	5,980,000	NA	NA	NA	NA	NA	NA
6/17/2010	All Wells	PCE	689,000	11,713	3.9	11,717	NA	16,300	5,980,000	NA	NA	NA	NA	NA	NA
7/26/2010	All Wells	PCE	489,000	22,983	1.2	22,984	NA	16,300	5,980,000	NA	NA	NA	NA	NA	NA
10/18/2010	All Wells	PCE	1,300	79	6.5	86	NA	16,300	5,980,000	NA	NA	NA	NA	NA	NA
12/23/2010	All Wells	PCE	2,680	64	3.2	68	NA	16,300	5,980,000	NA	NA	NA	NA	NA	NA
1/20/2011	All Wells	PCE	5,040	282	3.5	286	NA	16,300	5,980,000	NA	NA	NA	NA	NA	NA
2/28/2011	All Wells	PCE	4,590	225	4.1	229	NA	16,300	5,980,000	NA	NA	NA	NA	NA	NA
3/23/2011	All Wells	PCE	7,340	250	0.18	250	NA	16,300	5,980,000	NA	NA	NA	NA	NA	NA
4/22/2011	All Wells	PCE	6,840	233	5.53	239	1.5E-07	16,300	5,980,000	235	5	240	0	0	1.9E-07
5/19/2011	All Wells	PCE	6,270	125	0.67	126	7.8E-08	16,300	5,980,000	121	1	122	0	0	9.8E-08
6/16/2011	All Wells	PCE	668	14	0.40	14	8.9E-09	16,300	5,980,000	14	0	14	0	0	1.2E-08
7/25/2011	All Wells	PCE	308	NA	NA	NA	NA	NA	NA	6	5	11	0	0	8.5E-09
8/28/2011	All Wells	PCE	0	NA	NA	NA	NA	NA	NA	0	7	7	0	0	5.5E-09
9/29/2011	DPE-1,2,3,4	PCE	3,420	NA	NA	NA	NA	NA	NA	97	0	97	0	0	1.0E-07
10/27/2011	DPE-1,2,3,4	PCE	180	NA	NA	NA	NA	NA	NA	4	0	4	0	0	5.2E-09
11/21/2011	DPE-1,2,3,4	PCE	22,100	NA	NA	NA	NA	NA	NA	578	1	579	0	0	5.1E-07
1/27/2012	DPE-1,2,3,4	PCE	29,100	NA	NA	NA	NA	NA	NA	674	3	677	0	0	3.7E-10
2/16/2012	DPE-1,2,3,4	PCE	4,440	NA	NA	NA	NA	NA	NA	84	2	86	0	0	7.1E-08
3/16/2012	DPE-1,2,3,4	PCE	0	NA	NA	NA	NA	NA	NA	0	1	1	0	0	4.9E-10
4/17/2012	DPE-1,2,3,4	PCE	20,600	NA	NA	NA	NA	NA	NA	284	1	285	0	0	2.4E-07
5/17/2012	DPE-1,2,3,4	PCE	25,200	NA	NA	NA	NA	NA	NA	384	1	385	0	0	3.1E-07
6/14/2012	DPE-1,2,3,4	PCE	11,200	NA	NA	NA	NA	NA	NA	204	1	205	0	0	1.6E-07
7/19/2012	DPE-3	PCE	113,000	NA	NA	NA	NA	NA	NA	2,624	0	2,624	0	0	2.1E-06
8/23/2012	DPE-3	PCE	27,800	NA	NA	NA	NA	NA	NA	437	1	438	0	0	3.5E-07
9/26/2012	DPE-3	PCE	45,800	NA	NA	NA	NA	NA	NA	983	0	983	0	0	7.9E-07
10/26/2012 ¹	DPE-3	PCE	664,000	NA	NA	NA	NA	NA	NA	12,535	5	12,540	0	0.2	1.0E-05
12/21/2012	DPE-3	PCE	358,000	NA	NA	NA	NA	NA	NA	8,127	13	8,140	0	0.1	6.5E-06
1/30/2013	DPE-1,2,3,4	PCE	348,000	NA	NA	NA	NA	NA	NA	6,257	2	6,259	0	0.1	5.0E-06
2/26/2013	DPE-1,2,3,4	PCE	1,600	NA	NA	NA	NA	NA	NA	33	7	40	0	0.0	3.2E-08
3/21/2013	DPE-1,2,3,4	PCE	17,500	NA	NA	NA	NA	NA	NA	323	1	324	0	0.0	2.6E-07
5/23/2013	DPE-1,2,3,4	PCE	43,200	NA	NA	NA	NA	NA	NA	2,039	1	2,040	0	0.0	1.6E-06
6/26/2013	DPE-1,2,3,4	PCE	102	NA	NA	NA	NA	NA	NA	56	1	57	0	0.0	4.3E-09
8/26/2013	DPE-1,2,3,4	PCE	122	NA	NA	NA	NA	NA	NA	5	1	6	0	0.0	4.3E-09
10/13/2015	All Wells	PCE	61	NA	NA	NA	NA	NA	NA	1	10	11	0	0.0	1.7E-08
1/12/2016	All Wells	PCE	7,200	NA	NA	NA	NA	NA	NA	219.00	0.00	219.00	0.00	0.00	1.8E-07
2/24/2016	All Wells	PCE	8,400	NA	NA	NA	NA	NA	NA	255.00	7.00	262.00	0.00	0.00	2.1E-07
3/30/2016	All Wells	PCE	19,000	NA	NA	NA	NA	NA	NA	588.00	1.00	589.00	0.00	0.00	4.8E-07
4/20/2016	All Wells	PCE	6	NA	NA	NA	NA	NA	NA	0.00	2.00	2.00	0.00	0.00	2.1E-09
5/18/2016	All Wells	PCE	18	NA	NA	NA	NA	NA	NA	1.00	0.00	1.00	0.00	0.00	6.5E-10
6/23/2016	All Wells	PCE	230	NA	NA	NA	NA	NA	NA	7.00	0.00	7.00	0.00	0.00	5.9E-09
8/10/2016	All Wells	PCE	15	NA	NA	NA	NA	NA	NA	1.00	0.00	1.00	0.00	0.00	2.1E-09

Notes:

SERs: MPCA Screening Emissions Rates

61,780 Emissions rate is above MPCA SER

NA: Not Applicable

1: Landmark believes the October 26, 2012, emissions results from Pace Analytical are suspect and are outliers from previous concentration trends.

Table 14

**Mass Removal from Groundwater Treatment System
MN Bio Business Center
221 1st Avenue SW
Rochester, Minnesota**

Monitoring Period		Days per Period	Hours per Period	Flow Meter Reading (gallons)	Gallons Treated During Period	Average Flow Rate (gpm)	Average Flow Rate (liter/sec)	Total VOCs		% Reduction	Mass Removed per Period (lbs)	Cumulative Mass Removed (lbs)	Addition to Emission Rate (lbs/day)
Start Date ¹	End Date							Influent Conc. (ug/L)	Effluent Conc. (ug/L)				
4/9/2009 ²	4/9/2009	0	2	119	51	0.4	0.027	176,343	NA	NA	NA	NA	NA
6/4/2009	6/4/2009 ³	0	2	192	73	0.6	0.038	4,630	8,991	-94	NA	NA	NA
6/4/2009	7/9/2009	11	264	16,115	15,923	1.0	0.063	1,547	479	69	0.14	0.14	0.01
7/9/2009	9/4/2009	57	1368	38,299	22,184	0.3	0.017	191	20	90	0.03	0.17	0.001
9/4/2009	10/15/2009	41	984	62,643	24,344	0.4	0.026	238	0	100	0.05	0.22	0.001
10/15/2009	11/16/2009	32	768	73,800	11,157	0.2	0.015	31	0	100	0.00	0.22	0.000
11/16/2009	12/17/2009 ⁴	31	744	89,800	16,000	0.4	0.023	24	12	50	0.00	0.23	0.000
12/17/2009	1/14/2010	28	672	106,024	16,224	0.4	0.025	309	32	90	0.04	0.26	0.001
1/14/2010	2/22/2010	39	936	122,167	16,143	0.3	0.018	73	16	78	0.01	0.27	0.000
2/22/2010	3/25/2010 ^{5,6}	31	744	148,206	26,039	0.6	0.037	507	764	-51	-0.06	0.27	-0.002
3/25/2010 ^{5,6}	4/16/2010 ⁵	22	528	161,857	13,651	0.4	0.027	61	525	-765	-0.05	0.27	-0.002
4/16/2010	5/12/2010	26	624	170,079	8,222	0.2	0.014	66	0	100	0.005	0.28	0.000
5/12/2010	6/17/2010	36	864	200,398	30,319	0.6	0.037	119	24	80	0.024	0.30	0.001
6/17/2010	7/26/2010	39	936	226,504	26,106	0.5	0.029	41	0	100	0.009	0.31	0.000
7/26/2010	9/27/2010	63	1512	240,247	13,743	0.2	0.010	84	18	79	0.008	0.32	0.000
9/27/2010	10/18/2010	21	504	255,417	15,170	0.5	0.032	210	6	97	0.026	0.34	0.001
10/18/2010	12/22/2010	65	1560	283,957	28,540	0.3	0.019	173	11	94	0.038	0.38	0.001
12/22/2010	1/20/2011	29	696	328,912	44,955	1.1	0.068	52	0	100	0.019	0.40	0.001
1/20/2011	3/1/2011	40	960	357,774	28,862	0.5	0.032	131	0	100	0.031	0.43	0.001
3/1/2011	3/23/2011	22	528	369,603	11,829	0.4	0.024	43	7	84	0.004	0.43	0.000
3/23/2011	4/22/2011	30	720	461,499	91,896	2.1	0.134	41	0	100	0.032	0.47	0.001
4/22/2011	5/19/2011	27	648	480,836	19,337	0.5	0.031	22	0	100	0.004	0.47	0.000
5/19/2011	6/16/2011	28	672	487,852	7,016	0.2	0.011	43	0	100	0.003	0.47	0.000
6/16/2011	7/25/2011	39	936	606,917	119,065	2.1	0.134	37	0	100	0.037	0.51	0.001
7/25/2011	8/28/2011	34	816	645,249	38,332	0.8	0.049	51	5	90	0.015	0.52	0.000
8/28/2011	9/29/2011	32	768	673,352	28,103	0.6	0.038	45	7	86	0.009	0.53	0.000
9/29/2011	10/27/2011	28	672	694,330	20,978	0.5	0.033	41	0	100	0.007	0.54	0.000
10/27/2011	11/21/2011	25	600	716,049	21,719	0.6	0.038	32	0	100	0.006	0.55	0.000
11/21/2011	1/20/2012	60	1440	725,742	9,693	0.1	0.007	149	45	70	0.008	0.55	0.000
1/20/2012	1/27/2012	7	168	731,337	5,595	0.6	0.035	76	0	100	0.004	0.56	0.001
1/27/2012	2/16/2012	20	480	746,725	15,388	0.5	0.034	52	0	100	0.007	0.56	0.000
2/16/2012	3/16/2012	29	696	757,124	10,399	0.2	0.016	87	0	100	0.007	0.57	0.000
3/16/2012	4/17/2012	32	768	783,562	26,438	0.6	0.036	40	0	100	0.009	0.58	0.000
4/17/2012	5/17/2012	30	720	809,091	25,529	0.6	0.037	23	0	100	0.005	0.58	0.000

Table 14

**Mass Removal from Groundwater Treatment System
MN Bio Business Center
221 1st Avenue SW
Rochester, Minnesota**

Monitoring Period		Days per Period	Hours per Period	Flow Meter Reading (gallons)	Gallons Treated During Period	Average Flow Rate (gpm)	Average Flow Rate (liter/sec)	Total VOCs		% Reduction	Mass Removed per Period (lbs)	Cumulative Mass Removed (lbs)	Addition to Emission Rate (lbs/day)
Start Date ¹	End Date							Influent Conc. (ug/L)	Effluent Conc. (ug/L)				
5/17/2012	6/14/2012	28	672	830,565	21,474	0.5	0.034	39	3	92	0.006	0.59	0.000
6/14/2012	7/19/2012	35	840	835,414	4,849	0.1	0.006	36	35	2	0.000	0.59	0.000
7/19/2012	8/23/2012	35	840	849,507	14,093	0.3	0.018	46	0	100	0.005	0.60	0.000
8/23/2012	9/26/2012	34	816	860,318	10,811	0.2	0.014	22	2	92	0.002	0.60	0.000
9/26/2012	10/26/2012	30	720	951,486	91,168	2.1	0.133	36	2	95	0.026	0.62	0.001
10/26/2012	12/21/2012	56	1344	951,486	0	0.0	0.000	92	15	84	0.000	0.62	0.000
12/21/2012	1/30/2013	40	960	1,789,194	11,387	0.2	0.012	26	0	100	0.002	0.63	0.000
1/30/2013	2/26/2013	27	648	1,905,916	13,303	0.3	0.022	96	114	-19	-0.002	0.63	0.000
2/26/2013	3/21/2013	23	552	1,925,225	19,309	0.6	0.037	32	0	100	0.005	0.63	0.000
3/21/2013	5/23/2013	63	1512	1,941,137	15,912	0.2	0.011	123	17	86	0.014	0.65	0.000
5/23/2013	6/26/2013	34	816	1,954,470	13,333	0.3	0.017	56	0	100	0.006	0.65	0.000
6/26/2013	8/26/2013	61	1464	1,981,481	27,011	0.3	0.019	37	7	81	0.007	0.66	0.000
10/13/2015	10/13/2015	0.25	6	1,982,572	1,091	3.0	0.191	101	0	100	0.001	0.66	0.004
12/15/2015	12/15/2015			1,982,639	67								
12/15/2015	1/12/2016	28.00	672	1,993,342	10,703	0.3	0.017	21	56	-166	-0.003	0.66	0.000
1/12/2016	2/24/2016	43.00	1032	2,232,374	10,703	0.2	0.011	144	344	-140	-0.018	0.65	0.000
2/24/2016	3/30/2016	35.00	840	2,489,395	10,703	0.2	0.013	98	71	28	0.002	0.65	0.000
3/30/2016	4/20/2016	21.00	504	2,716,043	10,703	0.4	0.022	160	121	24	0.003	0.65	0.000
4/20/2016	5/18/2016	28.00	672	3,068,238	10,703	0.3	0.017	28	45	-57	-0.001	0.65	0.000
5/18/2016	7/28/2016	71.00	1704	3,740,682	21,406	0.2	0.013	93	145	-55	-0.009	0.64	0.000
7/28/2016	8/10/2016	13.00	312	3,841,318	5,351	0.3	0.018	21	0	100	0.001	0.64	0.000

Notes:

- The initial reading of the transfer pump totalizer was 68 gallons.
- Initial sampling event to determine if groundwater treatment was necessary.
- Increase in total VOCs was from PVC glue and cement that was used during the construction of the DPE system and air stripper.
- Based on the PCE concentrations in the AS-Influent and AS-Effluent samples, it appears as if the samples were mislabeled or mixed up at the lab. Therefore, the influent and effluent total VOC data in this table has been changed to show the highest total VOC concentration data as the influent data and the lowest total VOC concentration as the effluent data.

- Increase in total VOCs was from PVC glue and cement that was used during installation of the secondary demister moisture separator.
- Flow totalizer reading switched from the analog flow meter reading to the field totalizer reading for better accuracy.
- Discharge flow meter malfunction caused invalid field totalizer reading; therefore, analog flow totalizer was used starting on 4/22/11.
- Analog flow totalizer reading on 10/27/11 was estimated from field readings from Oct. 27 and Sept 29, 2011.

Flow meter and totalizer not working. The DPE system was off from Oct. 26 through Dec. 21, 2012; therefore, the volume discharged during this period was 0 gallons.

Gallons treated during periods ending on Jan. 30 and Feb. 26, 2013, were calculated from field totalizer.

Flow meter failing therefore assumed same discharge volume on Feb. 24, March 30, April 20, and May 18, 2016, as the Jan. 12, 2016, value of 10,703 gallons. For the July 28 visit the assumed discharge of 10,703 gallons used for the previous couple visits was doubled to 21,406 gallons because it was a two month gap between the May 18 and July 28 visit. The August 10th visit was only a 13 day gap from the July 28th visit so the assumed discharge of 10,703 gallons was cut in half to 5,351 gallons.

Attachments

Attachment A

August 04, 2016

Aaron Kuck
Landmark Environmental
2042 W 98th St.
Bloomington, MN 55431

RE: Project: CrC
Pace Project No.: 10357224

Dear Aaron Kuck:

Enclosed are the analytical results for sample(s) received by the laboratory on July 29, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Oyeyemi Odujole
oyeyemi.odujole@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: CrC
Pace Project No.: 10357224

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414
525 N 8th Street, Salina, KS 67401
A2LA Certification #: 2926.01
Alaska Certification #: UST-078
Alaska Certification #MN00064
Alabama Certification #40770
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
Colorado Certification #Pace
Connecticut Certification #: PH-0256
EPA Region 8 Certification #: 8TMS-L
Florida/NELAP Certification #: E87605
Guam Certification #:14-008r
Georgia Certification #: 959
Georgia EPD #: Pace
Idaho Certification #: MN00064
Hawaii Certification #MN00064
Illinois Certification #: 200011
Indiana Certification#C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky Dept of Envi. Protection - DW #90062
Kentucky Dept of Envi. Protection - WW #:90062
Louisiana DEQ Certification #: 3086
Louisiana DHH #: LA140001
Maine Certification #: 2013011
Maryland Certification #: 322
Michigan DEPH Certification #: 9909

Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT0092
Nevada Certification #: MN_00064
Nebraska Certification #: Pace
New Jersey Certification #: MN-002
New York Certification #: 11647
North Carolina Certification #: 530
North Carolina State Public Health #: 27700
North Dakota Certification #: R-036
Ohio EPA #: 4150
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Oregon Certification #: MN300001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Saipan (CNMI) #:MP0003
South Carolina #:74003001
Texas Certification #: T104704192
Tennessee Certification #: 02818
Utah Certification #: MN000642013-4
Virginia DGS Certification #: 251
Virginia/VELAP Certification #: Pace
Washington Certification #: C486
West Virginia Certification #: 382
West Virginia DHHR #:9952C
Wisconsin Certification #: 999407970

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: CrC
Pace Project No.: 10357224

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10357224001	AS-Influent	Water	07/28/16 17:30	07/29/16 12:20
10357224002	AS-Effluent	Water	07/28/16 17:40	07/29/16 12:20

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SAMPLE ANALYTE COUNT

Project: CrC
Pace Project No.: 10357224

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10357224001	AS-Influent	EPA 624	DJB	73
10357224002	AS-Effluent	EPA 624	DJB	73

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10357224

Sample: AS-Influent	Lab ID: 10357224001	Collected: 07/28/16 17:30	Received: 07/29/16 12:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 MSV		Analytical Method: EPA 624						
Acetone	ND	ug/L	20.0	1		08/02/16 14:37	67-64-1	N2
Allyl chloride	ND	ug/L	4.0	1		08/02/16 14:37	107-05-1	N2
Benzene	ND	ug/L	1.0	1		08/02/16 14:37	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		08/02/16 14:37	108-86-1	N2
Bromochloromethane	ND	ug/L	1.0	1		08/02/16 14:37	74-97-5	N2
Bromodichloromethane	ND	ug/L	1.0	1		08/02/16 14:37	75-27-4	
Bromoform	ND	ug/L	4.0	1		08/02/16 14:37	75-25-2	
Bromomethane	ND	ug/L	4.0	1		08/02/16 14:37	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		08/02/16 14:37	78-93-3	N2
n-Butylbenzene	ND	ug/L	1.0	1		08/02/16 14:37	104-51-8	N2
sec-Butylbenzene	ND	ug/L	1.0	1		08/02/16 14:37	135-98-8	N2
tert-Butylbenzene	ND	ug/L	1.0	1		08/02/16 14:37	98-06-6	
Carbon tetrachloride	ND	ug/L	1.0	1		08/02/16 14:37	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		08/02/16 14:37	108-90-7	
Chloroethane	ND	ug/L	1.0	1		08/02/16 14:37	75-00-3	
2-Chloroethylvinyl ether	ND	ug/L	10.0	1		08/02/16 14:37	110-75-8	P5, c2
Chloroform	ND	ug/L	1.0	1		08/02/16 14:37	67-66-3	
Chloromethane	ND	ug/L	4.0	1		08/02/16 14:37	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		08/02/16 14:37	95-49-8	N2
4-Chlorotoluene	ND	ug/L	1.0	1		08/02/16 14:37	106-43-4	N2
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	1		08/02/16 14:37	96-12-8	N2
Dibromochloromethane	ND	ug/L	1.0	1		08/02/16 14:37	124-48-1	N2
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		08/02/16 14:37	106-93-4	N2
Dibromomethane	ND	ug/L	4.0	1		08/02/16 14:37	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		08/02/16 14:37	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		08/02/16 14:37	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		08/02/16 14:37	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		08/02/16 14:37	75-71-8	N2
1,1-Dichloroethane	ND	ug/L	1.0	1		08/02/16 14:37	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/02/16 14:37	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/02/16 14:37	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/02/16 14:37	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/02/16 14:37	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	1		08/02/16 14:37	75-43-4	N2
1,2-Dichloropropane	ND	ug/L	4.0	1		08/02/16 14:37	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		08/02/16 14:37	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	1		08/02/16 14:37	594-20-7	N2
1,1-Dichloropropene	ND	ug/L	1.0	1		08/02/16 14:37	563-58-6	N2
cis-1,3-Dichloropropene	ND	ug/L	4.0	1		08/02/16 14:37	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	1		08/02/16 14:37	10061-02-6	N2
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	1		08/02/16 14:37	60-29-7	N2
Ethylbenzene	ND	ug/L	1.0	1		08/02/16 14:37	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		08/02/16 14:37	87-68-3	N2
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		08/02/16 14:37	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		08/02/16 14:37	99-87-6	N2
Methylene Chloride	ND	ug/L	4.0	1		08/02/16 14:37	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		08/02/16 14:37	108-10-1	N2

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10357224

Sample: AS-Influent	Lab ID: 10357224001	Collected: 07/28/16 17:30	Received: 07/29/16 12:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 MSV		Analytical Method: EPA 624						
Methyl-tert-butyl ether	ND	ug/L	1.0	1		08/02/16 14:37	1634-04-4	N2
Naphthalene	ND	ug/L	4.0	1		08/02/16 14:37	91-20-3	N2
n-Propylbenzene	ND	ug/L	1.0	1		08/02/16 14:37	103-65-1	N2
Styrene	ND	ug/L	1.0	1		08/02/16 14:37	100-42-5	N2
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		08/02/16 14:37	630-20-6	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		08/02/16 14:37	79-34-5	
Tetrachloroethene	93.3	ug/L	1.0	1		08/02/16 14:37	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		08/02/16 14:37	109-99-9	N2
Toluene	ND	ug/L	1.0	1		08/02/16 14:37	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		08/02/16 14:37	87-61-6	N2
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		08/02/16 14:37	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/02/16 14:37	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		08/02/16 14:37	79-00-5	
Trichloroethene	ND	ug/L	0.40	1		08/02/16 14:37	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		08/02/16 14:37	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	1		08/02/16 14:37	96-18-4	N2
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		08/02/16 14:37	76-13-1	N2
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		08/02/16 14:37	95-63-6	N2
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		08/02/16 14:37	108-67-8	N2
Vinyl chloride	ND	ug/L	0.40	1		08/02/16 14:37	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		08/02/16 14:37	1330-20-7	N2
m&p-Xylene	ND	ug/L	2.0	1		08/02/16 14:37	179601-23-1	N2
o-Xylene	ND	ug/L	1.0	1		08/02/16 14:37	95-47-6	N2
Surrogates								
1,2-Dichloroethane-d4 (S)	110	%.	75-125	1		08/02/16 14:37	17060-07-0	
Toluene-d8 (S)	109	%.	75-125	1		08/02/16 14:37	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	75-125	1		08/02/16 14:37	460-00-4	

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10357224

Sample: AS-Effluent	Lab ID: 10357224002	Collected: 07/28/16 17:40	Received: 07/29/16 12:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 MSV		Analytical Method: EPA 624						
Acetone	60.3	ug/L	20.0	1		08/02/16 14:59	67-64-1	N2
Allyl chloride	ND	ug/L	4.0	1		08/02/16 14:59	107-05-1	N2
Benzene	ND	ug/L	1.0	1		08/02/16 14:59	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		08/02/16 14:59	108-86-1	N2
Bromochloromethane	ND	ug/L	1.0	1		08/02/16 14:59	74-97-5	N2
Bromodichloromethane	ND	ug/L	1.0	1		08/02/16 14:59	75-27-4	
Bromoform	ND	ug/L	4.0	1		08/02/16 14:59	75-25-2	
Bromomethane	ND	ug/L	4.0	1		08/02/16 14:59	74-83-9	
2-Butanone (MEK)	34.6	ug/L	5.0	1		08/02/16 14:59	78-93-3	N2
n-Butylbenzene	ND	ug/L	1.0	1		08/02/16 14:59	104-51-8	N2
sec-Butylbenzene	ND	ug/L	1.0	1		08/02/16 14:59	135-98-8	N2
tert-Butylbenzene	ND	ug/L	1.0	1		08/02/16 14:59	98-06-6	
Carbon tetrachloride	ND	ug/L	1.0	1		08/02/16 14:59	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		08/02/16 14:59	108-90-7	
Chloroethane	ND	ug/L	1.0	1		08/02/16 14:59	75-00-3	
2-Chloroethylvinyl ether	ND	ug/L	10.0	1		08/02/16 14:59	110-75-8	c2
Chloroform	ND	ug/L	1.0	1		08/02/16 14:59	67-66-3	
Chloromethane	ND	ug/L	4.0	1		08/02/16 14:59	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		08/02/16 14:59	95-49-8	N2
4-Chlorotoluene	ND	ug/L	1.0	1		08/02/16 14:59	106-43-4	N2
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	1		08/02/16 14:59	96-12-8	N2
Dibromochloromethane	ND	ug/L	1.0	1		08/02/16 14:59	124-48-1	N2
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		08/02/16 14:59	106-93-4	N2
Dibromomethane	ND	ug/L	4.0	1		08/02/16 14:59	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		08/02/16 14:59	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		08/02/16 14:59	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		08/02/16 14:59	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		08/02/16 14:59	75-71-8	N2
1,1-Dichloroethane	ND	ug/L	1.0	1		08/02/16 14:59	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/02/16 14:59	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/02/16 14:59	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/02/16 14:59	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/02/16 14:59	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	1		08/02/16 14:59	75-43-4	N2
1,2-Dichloropropane	ND	ug/L	4.0	1		08/02/16 14:59	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		08/02/16 14:59	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	1		08/02/16 14:59	594-20-7	N2
1,1-Dichloropropene	ND	ug/L	1.0	1		08/02/16 14:59	563-58-6	N2
cis-1,3-Dichloropropene	ND	ug/L	4.0	1		08/02/16 14:59	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	1		08/02/16 14:59	10061-02-6	N2
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	1		08/02/16 14:59	60-29-7	N2
Ethylbenzene	ND	ug/L	1.0	1		08/02/16 14:59	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		08/02/16 14:59	87-68-3	N2
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		08/02/16 14:59	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		08/02/16 14:59	99-87-6	N2
Methylene Chloride	ND	ug/L	4.0	1		08/02/16 14:59	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		08/02/16 14:59	108-10-1	N2

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10357224

Sample: AS-Effluent		Lab ID: 10357224002	Collected: 07/28/16 17:40	Received: 07/29/16 12:20	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 MSV		Analytical Method: EPA 624						
Methyl-tert-butyl ether	ND	ug/L	1.0	1		08/02/16 14:59	1634-04-4	N2
Naphthalene	ND	ug/L	4.0	1		08/02/16 14:59	91-20-3	N2
n-Propylbenzene	ND	ug/L	1.0	1		08/02/16 14:59	103-65-1	N2
Styrene	ND	ug/L	1.0	1		08/02/16 14:59	100-42-5	N2
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		08/02/16 14:59	630-20-6	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		08/02/16 14:59	79-34-5	
Tetrachloroethene	3.3	ug/L	1.0	1		08/02/16 14:59	127-18-4	
Tetrahydrofuran	46.3	ug/L	10.0	1		08/02/16 14:59	109-99-9	N2
Toluene	ND	ug/L	1.0	1		08/02/16 14:59	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		08/02/16 14:59	87-61-6	N2
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		08/02/16 14:59	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/02/16 14:59	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		08/02/16 14:59	79-00-5	
Trichloroethene	ND	ug/L	0.40	1		08/02/16 14:59	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		08/02/16 14:59	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	1		08/02/16 14:59	96-18-4	N2
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		08/02/16 14:59	76-13-1	N2
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		08/02/16 14:59	95-63-6	N2
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		08/02/16 14:59	108-67-8	N2
Vinyl chloride	ND	ug/L	0.40	1		08/02/16 14:59	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		08/02/16 14:59	1330-20-7	N2
m&p-Xylene	ND	ug/L	2.0	1		08/02/16 14:59	179601-23-1	N2
o-Xylene	ND	ug/L	1.0	1		08/02/16 14:59	95-47-6	N2
Surrogates								
1,2-Dichloroethane-d4 (S)	111	%.	75-125	1		08/02/16 14:59	17060-07-0	
Toluene-d8 (S)	107	%.	75-125	1		08/02/16 14:59	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125	1		08/02/16 14:59	460-00-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10357224

QC Batch: 428416 Analysis Method: EPA 624
QC Batch Method: EPA 624 Analysis Description: 624 MSV
Associated Lab Samples: 10357224001, 10357224002

METHOD BLANK: 2331582 Matrix: Water
Associated Lab Samples: 10357224001, 10357224002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	08/02/16 12:02	N2
1,1,1-Trichloroethane	ug/L	ND	1.0	08/02/16 12:02	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	08/02/16 12:02	
1,1,2-Trichloroethane	ug/L	ND	1.0	08/02/16 12:02	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	08/02/16 12:02	N2
1,1-Dichloroethane	ug/L	ND	1.0	08/02/16 12:02	
1,1-Dichloroethene	ug/L	ND	1.0	08/02/16 12:02	
1,1-Dichloropropene	ug/L	ND	1.0	08/02/16 12:02	N2
1,2,3-Trichlorobenzene	ug/L	ND	1.0	08/02/16 12:02	N2
1,2,3-Trichloropropane	ug/L	ND	4.0	08/02/16 12:02	N2
1,2,4-Trichlorobenzene	ug/L	ND	1.0	08/02/16 12:02	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	08/02/16 12:02	N2
1,2-Dibromo-3-chloropropane	ug/L	ND	4.0	08/02/16 12:02	N2
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	08/02/16 12:02	N2
1,2-Dichlorobenzene	ug/L	ND	1.0	08/02/16 12:02	
1,2-Dichloroethane	ug/L	ND	1.0	08/02/16 12:02	
1,2-Dichloropropane	ug/L	ND	4.0	08/02/16 12:02	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	08/02/16 12:02	N2
1,3-Dichlorobenzene	ug/L	ND	1.0	08/02/16 12:02	
1,3-Dichloropropane	ug/L	ND	1.0	08/02/16 12:02	
1,4-Dichlorobenzene	ug/L	ND	1.0	08/02/16 12:02	
2,2-Dichloropropane	ug/L	ND	4.0	08/02/16 12:02	N2
2-Butanone (MEK)	ug/L	ND	5.0	08/02/16 12:02	N2
2-Chloroethylvinyl ether	ug/L	ND	10.0	08/02/16 12:02	
2-Chlorotoluene	ug/L	ND	1.0	08/02/16 12:02	N2
4-Chlorotoluene	ug/L	ND	1.0	08/02/16 12:02	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	08/02/16 12:02	N2
Acetone	ug/L	ND	20.0	08/02/16 12:02	N2
Allyl chloride	ug/L	ND	4.0	08/02/16 12:02	N2
Benzene	ug/L	ND	1.0	08/02/16 12:02	
Bromobenzene	ug/L	ND	1.0	08/02/16 12:02	N2
Bromochloromethane	ug/L	ND	1.0	08/02/16 12:02	N2
Bromodichloromethane	ug/L	ND	1.0	08/02/16 12:02	
Bromoform	ug/L	ND	4.0	08/02/16 12:02	
Bromomethane	ug/L	ND	4.0	08/02/16 12:02	
Carbon tetrachloride	ug/L	ND	1.0	08/02/16 12:02	
Chlorobenzene	ug/L	ND	1.0	08/02/16 12:02	
Chloroethane	ug/L	ND	1.0	08/02/16 12:02	
Chloroform	ug/L	ND	1.0	08/02/16 12:02	
Chloromethane	ug/L	ND	4.0	08/02/16 12:02	
cis-1,2-Dichloroethene	ug/L	ND	1.0	08/02/16 12:02	N2

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10357224

METHOD BLANK: 2331582 Matrix: Water

Associated Lab Samples: 10357224001, 10357224002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,3-Dichloropropene	ug/L	ND	4.0	08/02/16 12:02	
Dibromochloromethane	ug/L	ND	1.0	08/02/16 12:02	N2
Dibromomethane	ug/L	ND	4.0	08/02/16 12:02	
Dichlorodifluoromethane	ug/L	ND	1.0	08/02/16 12:02	N2
Dichlorofluoromethane	ug/L	ND	1.0	08/02/16 12:02	N2
Diethyl ether (Ethyl ether)	ug/L	ND	4.0	08/02/16 12:02	N2
Ethylbenzene	ug/L	ND	1.0	08/02/16 12:02	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	08/02/16 12:02	N2
Isopropylbenzene (Cumene)	ug/L	ND	1.0	08/02/16 12:02	
m&p-Xylene	ug/L	ND	2.0	08/02/16 12:02	N2
Methyl-tert-butyl ether	ug/L	ND	1.0	08/02/16 12:02	N2
Methylene Chloride	ug/L	ND	4.0	08/02/16 12:02	
n-Butylbenzene	ug/L	ND	1.0	08/02/16 12:02	N2
n-Propylbenzene	ug/L	ND	1.0	08/02/16 12:02	N2
Naphthalene	ug/L	ND	4.0	08/02/16 12:02	N2
o-Xylene	ug/L	ND	1.0	08/02/16 12:02	N2
p-Isopropyltoluene	ug/L	ND	1.0	08/02/16 12:02	N2
sec-Butylbenzene	ug/L	ND	1.0	08/02/16 12:02	N2
Styrene	ug/L	ND	1.0	08/02/16 12:02	N2
tert-Butylbenzene	ug/L	ND	1.0	08/02/16 12:02	
Tetrachloroethene	ug/L	ND	1.0	08/02/16 12:02	
Tetrahydrofuran	ug/L	ND	10.0	08/02/16 12:02	N2
Toluene	ug/L	ND	1.0	08/02/16 12:02	
trans-1,2-Dichloroethene	ug/L	ND	1.0	08/02/16 12:02	
trans-1,3-Dichloropropene	ug/L	ND	4.0	08/02/16 12:02	N2
Trichloroethene	ug/L	ND	0.40	08/02/16 12:02	
Trichlorofluoromethane	ug/L	ND	1.0	08/02/16 12:02	
Vinyl chloride	ug/L	ND	0.40	08/02/16 12:02	
Xylene (Total)	ug/L	ND	3.0	08/02/16 12:02	N2
1,2-Dichloroethane-d4 (S)	%	116	75-125	08/02/16 12:02	
4-Bromofluorobenzene (S)	%	96	75-125	08/02/16 12:02	
Toluene-d8 (S)	%	113	75-125	08/02/16 12:02	

LABORATORY CONTROL SAMPLE & LCSD: 2331583

2331584

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	22.0	20.5	110	103	75-126	7	20	N2
1,1,1-Trichloroethane	ug/L	20	19.5	17.2	97	86	72-125	13	20	
1,1,2,2-Tetrachloroethane	ug/L	20	24.0	23.8	120	119	68-125	1	20	
1,1,2-Trichloroethane	ug/L	20	20.1	19.4	101	97	75-125	4	20	
1,1,2-Trichlorotrifluoroethane	ug/L	20	20.2	18.1	101	90	66-132	11	20	N2
1,1-Dichloroethane	ug/L	20	17.8	16.3	89	82	68-126	8	20	
1,1-Dichloroethene	ug/L	20	18.3	16.9	92	85	67-127	8	20	
1,1-Dichloropropene	ug/L	20	18.6	16.6	93	83	71-126	11	20	N2

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10357224

LABORATORY CONTROL SAMPLE & LCSD: 2331583		2331584									
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers	
1,2,3-Trichlorobenzene	ug/L	20	21.8	22.9	109	114	63-132	5	20	N2	
1,2,3-Trichloropropane	ug/L	20	23.1	23.6	116	118	72-125	2	20	N2	
1,2,4-Trichlorobenzene	ug/L	20	21.7	23.1	108	115	59-135	6	20		
1,2,4-Trimethylbenzene	ug/L	20	23.3	22.1	117	111	70-132	5	20	N2	
1,2-Dibromo-3-chloropropane	ug/L	50	57.2	56.9	114	114	58-130	0	20	N2	
1,2-Dibromoethane (EDB)	ug/L	20	20.8	20.1	104	101	75-125	3	20	N2	
1,2-Dichlorobenzene	ug/L	20	22.7	22.1	113	110	74-125	3	20		
1,2-Dichloroethane	ug/L	20	18.9	18.5	95	92	71-125	3	20		
1,2-Dichloropropane	ug/L	20	19.4	18.1	97	90	72-125	7	20		
1,3,5-Trimethylbenzene	ug/L	20	23.1	22.0	116	110	73-125	5	20	N2	
1,3-Dichlorobenzene	ug/L	20	21.6	21.5	108	108	74-125	0	20		
1,3-Dichloropropane	ug/L	20	21.3	20.3	107	101	75-125	5	20		
1,4-Dichlorobenzene	ug/L	20	21.5	20.9	108	105	74-125	3	20		
2,2-Dichloropropane	ug/L	20	19.0	17.2	95	86	64-138	10	20	N2	
2-Butanone (MEK)	ug/L	100	93.6	98.7	94	99	61-129	5	20	N2	
2-Chloroethylvinyl ether	ug/L	50	36.8	36.1	74	72	30-150	2	20		
2-Chlorotoluene	ug/L	20	22.7	22.0	113	110	70-126	3	20	N2	
4-Chlorotoluene	ug/L	20	21.4	20.6	107	103	73-125	4	20	N2	
4-Methyl-2-pentanone (MIBK)	ug/L	100	111	108	111	108	63-135	2	20	N2	
Acetone	ug/L	100	76.9	84.7	77	85	66-150	10	20	N2	
Allyl chloride	ug/L	20	17.8	16.5	89	83	62-139	7	20	N2	
Benzene	ug/L	20	19.0	17.6	95	88	67-126	8	20		
Bromobenzene	ug/L	20	23.4	22.2	117	111	72-125	5	20	N2	
Bromochloromethane	ug/L	20	20.3	18.9	101	94	73-125	7	20	N2	
Bromodichloromethane	ug/L	20	19.7	18.8	99	94	71-126	5	20		
Bromoform	ug/L	20	19.5	18.8	98	94	64-130	4	20		
Bromomethane	ug/L	20	13.7	16.1	69	80	30-150	16	20		
Carbon tetrachloride	ug/L	20	19.2	17.5	96	88	71-128	9	20		
Chlorobenzene	ug/L	20	21.3	19.6	106	98	75-125	8	20		
Chloroethane	ug/L	20	20.3	18.7	101	94	60-130	8	20		
Chloroform	ug/L	20	19.2	18.4	96	92	73-125	4	20		
Chloromethane	ug/L	20	18.6	17.0	93	85	49-146	9	20		
cis-1,2-Dichloroethene	ug/L	20	18.7	17.9	94	89	68-131	5	20	N2	
cis-1,3-Dichloropropene	ug/L	20	19.1	18.9	96	94	73-125	1	20		
Dibromochloromethane	ug/L	20	21.8	20.3	109	101	71-125	7	20	N2	
Dibromomethane	ug/L	20	20.4	19.5	102	98	71-131	5	20		
Dichlorodifluoromethane	ug/L	20	18.2	16.6	91	83	56-145	9	20	N2	
Dichlorofluoromethane	ug/L	20	18.8	17.8	94	89	69-128	6	20	N2	
Diethyl ether (Ethyl ether)	ug/L	20	18.6	18.9	93	94	65-127	2	20	N2	
Ethylbenzene	ug/L	20	20.4	18.8	102	94	75-125	8	20		
Hexachloro-1,3-butadiene	ug/L	20	24.0	22.4	120	112	62-145	7	20	N2	
Isopropylbenzene (Cumene)	ug/L	20	20.8	19.0	104	95	75-133	9	20		
m&p-Xylene	ug/L	40	42.5	38.9	106	97	75-126	9	20	N2	
Methyl-tert-butyl ether	ug/L	20	18.8	18.7	94	94	73-125	0	20	N2	
Methylene Chloride	ug/L	20	19.0	18.3	95	92	72-128	4	20		
n-Butylbenzene	ug/L	20	22.2	21.3	111	107	67-131	4	20	N2	
n-Propylbenzene	ug/L	20	21.8	20.2	109	101	70-128	8	20	N2	

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10357224

LABORATORY CONTROL SAMPLE & LCSD: 2331583		2331584								
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Naphthalene	ug/L	20	22.2	23.4	111	117	54-139	5	20	N2
o-Xylene	ug/L	20	20.9	19.5	105	97	75-125	7	20	N2
p-Isopropyltoluene	ug/L	20	24.1	23.4	120	117	71-128	3	20	N2
sec-Butylbenzene	ug/L	20	22.4	21.5	112	107	73-132	4	20	N2
Styrene	ug/L	20	22.4	21.0	112	105	75-128	7	20	N2
tert-Butylbenzene	ug/L	20	21.1	20.5	106	103	75-130	3	20	
Tetrachloroethene	ug/L	20	21.2	18.9	106	95	67-129	11	20	
Tetrahydrofuran	ug/L	200	162	177	81	88	73-137	9	20	N2
Toluene	ug/L	20	20.8	18.9	104	94	74-125	10	20	
trans-1,2-Dichloroethene	ug/L	20	18.1	16.7	90	84	65-128	8	20	
trans-1,3-Dichloropropene	ug/L	20	21.2	20.9	106	104	75-125	1	20	N2
Trichloroethene	ug/L	20	19.2	17.6	96	88	72-125	8	20	
Trichlorofluoromethane	ug/L	20	18.9	17.6	95	88	70-132	7	20	
Vinyl chloride	ug/L	20	17.9	16.4	90	82	69-130	9	20	
Xylene (Total)	ug/L	60	63.4	58.4	106	97	75-125	8	20	N2
1,2-Dichloroethane-d4 (S)	%				107	109	75-125			
4-Bromofluorobenzene (S)	%				97	100	75-125			
Toluene-d8 (S)	%				113	110	75-125			

MATRIX SPIKE SAMPLE: 2332591		10357224001		MS		MS		% Rec		Qualifiers
Parameter	Units	Result	Spike Conc.	Result	% Rec	Limit	Limit	Limit	Limit	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	20.8	104	55-147	104	55-147	104	N2
1,1,1-Trichloroethane	ug/L	ND	20	20.1	101	45-150	101	45-150	101	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	23.0	115	52-143	115	52-143	115	
1,1,2-Trichloroethane	ug/L	ND	20	19.5	98	57-139	98	57-139	98	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	20	24.7	121	40-150	121	40-150	121	N2
1,1-Dichloroethane	ug/L	ND	20	18.2	91	46-150	91	46-150	91	
1,1-Dichloroethene	ug/L	ND	20	20.3	102	42-150	102	42-150	102	
1,1-Dichloropropene	ug/L	ND	20	19.4	97	45-150	97	45-150	97	N2
1,2,3-Trichlorobenzene	ug/L	ND	20	22.2	111	51-142	111	51-142	111	N2
1,2,3-Trichloropropane	ug/L	ND	20	22.7	113	55-142	113	55-142	113	N2
1,2,4-Trichlorobenzene	ug/L	ND	20	22.2	111	50-143	111	50-143	111	
1,2,4-Trimethylbenzene	ug/L	ND	20	22.2	111	51-147	111	51-147	111	N2
1,2-Dibromo-3-chloropropane	ug/L	ND	50	54.3	109	44-149	109	44-149	109	N2
1,2-Dibromoethane (EDB)	ug/L	ND	20	20.1	100	60-138	100	60-138	100	N2
1,2-Dichlorobenzene	ug/L	ND	20	21.5	108	55-137	108	55-137	108	
1,2-Dichloroethane	ug/L	ND	20	18.4	92	50-139	92	50-139	92	
1,2-Dichloropropane	ug/L	ND	20	18.8	94	61-145	94	61-145	94	
1,3,5-Trimethylbenzene	ug/L	ND	20	22.4	112	34-150	112	34-150	112	N2
1,3-Dichlorobenzene	ug/L	ND	20	21.1	106	53-138	106	53-138	106	
1,3-Dichloropropane	ug/L	ND	20	19.5	98	58-139	98	58-139	98	
1,4-Dichlorobenzene	ug/L	ND	20	20.5	103	52-135	103	52-135	103	
2,2-Dichloropropane	ug/L	ND	20	20.2	101	30-150	101	30-150	101	N2
2-Butanone (MEK)	ug/L	ND	100	91.0	88	30-150	88	30-150	88	N2

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10357224

MATRIX SPIKE SAMPLE:	2332591	10357224001	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
2-Chloroethylvinyl ether	ug/L	ND	50	3.2J	6	30-125	P5
2-Chlorotoluene	ug/L	ND	20	21.8	109	52-146	N2
4-Chlorotoluene	ug/L	ND	20	21.0	105	43-142	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	105	105	46-148	N2
Acetone	ug/L	ND	100	94.8	81	44-150	N2
Allyl chloride	ug/L	ND	20	18.2	91	40-150	N2
Benzene	ug/L	ND	20	18.1	90	49-143	
Bromobenzene	ug/L	ND	20	21.7	109	58-139	N2
Bromochloromethane	ug/L	ND	20	19.2	96	53-144	N2
Bromodichloromethane	ug/L	ND	20	19.1	96	49-145	
Bromoform	ug/L	ND	20	18.3	91	42-142	
Bromomethane	ug/L	ND	20	18.0	90	30-150	
Carbon tetrachloride	ug/L	ND	20	20.8	104	30-150	
Chlorobenzene	ug/L	ND	20	20.0	100	57-137	
Chloroethane	ug/L	ND	20	20.3	101	39-150	
Chloroform	ug/L	ND	20	19.4	97	52-147	
Chloromethane	ug/L	ND	20	18.7	94	45-150	
cis-1,2-Dichloroethene	ug/L	ND	20	19.6	98	44-149	N2
cis-1,3-Dichloropropene	ug/L	ND	20	18.3	92	45-140	
Dibromochloromethane	ug/L	ND	20	20.5	102	49-144	N2
Dibromomethane	ug/L	ND	20	18.9	94	59-142	
Dichlorodifluoromethane	ug/L	ND	20	21.4	107	46-150	N2
Dichlorofluoromethane	ug/L	ND	20	19.4	97	53-150	N2
Diethyl ether (Ethyl ether)	ug/L	ND	20	18.4	92	45-146	N2
Ethylbenzene	ug/L	ND	20	19.4	97	49-141	
Hexachloro-1,3-butadiene	ug/L	ND	20	27.5	137	33-150	N2
Isopropylbenzene (Cumene)	ug/L	ND	20	19.8	99	50-150	
m&p-Xylene	ug/L	ND	40	40.3	101	44-150	N2
Methyl-tert-butyl ether	ug/L	ND	20	18.6	93	52-138	N2
Methylene Chloride	ug/L	ND	20	19.1	96	43-149	
n-Butylbenzene	ug/L	ND	20	23.2	116	46-150	N2
n-Propylbenzene	ug/L	ND	20	20.7	104	44-150	N2
Naphthalene	ug/L	ND	20	22.2	111	45-149	N2
o-Xylene	ug/L	ND	20	19.4	97	48-146	N2
p-Isopropyltoluene	ug/L	ND	20	24.8	124	54-147	N2
sec-Butylbenzene	ug/L	ND	20	22.3	112	51-150	N2
Styrene	ug/L	ND	20	20.9	105	47-149	N2
tert-Butylbenzene	ug/L	ND	20	21.1	105	49-149	
Tetrachloroethene	ug/L	93.3	20	112	95	30-150	
Tetrahydrofuran	ug/L	ND	200	172	84	52-150	N2
Toluene	ug/L	ND	20	20.0	100	48-141	
trans-1,2-Dichloroethene	ug/L	ND	20	19.1	96	42-150	
trans-1,3-Dichloropropene	ug/L	ND	20	20.5	103	45-143	N2
Trichloroethene	ug/L	ND	20	19.6	98	38-150	
Trichlorofluoromethane	ug/L	ND	20	21.6	108	57-150	
Vinyl chloride	ug/L	ND	20	19.5	97	43-150	
Xylene (Total)	ug/L	ND	60	59.7	99	45-149	N2

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10357224

MATRIX SPIKE SAMPLE: 2332591		10357224001	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
1,2-Dichloroethane-d4 (S)	%.				110	75-125	
4-Bromofluorobenzene (S)	%.				98	75-125	
Toluene-d8 (S)	%.				109	75-125	

SAMPLE DUPLICATE: 2332592

Parameter	Units	10357224002	Dup	RPD	Max	Qualifiers
		Result	Result		RPD	
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		30	N2
1,1,1-Trichloroethane	ug/L	ND	ND		30	
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,2-Trichloroethane	ug/L	ND	ND		30	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	ND		30	N2
1,1-Dichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethene	ug/L	ND	ND		30	
1,1-Dichloropropene	ug/L	ND	ND		30	N2
1,2,3-Trichlorobenzene	ug/L	ND	ND		30	N2
1,2,3-Trichloropropane	ug/L	ND	ND		30	N2
1,2,4-Trichlorobenzene	ug/L	ND	ND		30	
1,2,4-Trimethylbenzene	ug/L	ND	ND		30	N2
1,2-Dibromo-3-chloropropane	ug/L	ND	ND		30	N2
1,2-Dibromoethane (EDB)	ug/L	ND	ND		30	N2
1,2-Dichlorobenzene	ug/L	ND	ND		30	
1,2-Dichloroethane	ug/L	ND	ND		30	
1,2-Dichloropropane	ug/L	ND	ND		30	
1,3,5-Trimethylbenzene	ug/L	ND	ND		30	N2
1,3-Dichlorobenzene	ug/L	ND	ND		30	
1,3-Dichloropropane	ug/L	ND	ND		30	
1,4-Dichlorobenzene	ug/L	ND	ND		30	
2,2-Dichloropropane	ug/L	ND	ND		30	N2
2-Butanone (MEK)	ug/L	34.6	36.2	4	30	N2
2-Chloroethylvinyl ether	ug/L	ND	ND		30	
2-Chlorotoluene	ug/L	ND	ND		30	N2
4-Chlorotoluene	ug/L	ND	ND		30	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND		30	N2
Acetone	ug/L	60.3	61.1	1	30	N2
Allyl chloride	ug/L	ND	ND		30	N2
Benzene	ug/L	ND	ND		30	
Bromobenzene	ug/L	ND	ND		30	N2
Bromochloromethane	ug/L	ND	ND		30	N2
Bromodichloromethane	ug/L	ND	ND		30	
Bromoform	ug/L	ND	ND		30	
Bromomethane	ug/L	ND	ND		30	
Carbon tetrachloride	ug/L	ND	ND		30	
Chlorobenzene	ug/L	ND	ND		30	
Chloroethane	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10357224

SAMPLE DUPLICATE: 2332592

Parameter	Units	10357224002 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloroform	ug/L	ND	ND		30	
Chloromethane	ug/L	ND	ND		30	
cis-1,2-Dichloroethene	ug/L	ND	ND		30	N2
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	N2
Dibromomethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	N2
Dichlorofluoromethane	ug/L	ND	ND		30	N2
Diethyl ether (Ethyl ether)	ug/L	ND	ND		30	N2
Ethylbenzene	ug/L	ND	ND		30	
Hexachloro-1,3-butadiene	ug/L	ND	ND		30	N2
Isopropylbenzene (Cumene)	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	N2
Methyl-tert-butyl ether	ug/L	ND	ND		30	N2
Methylene Chloride	ug/L	ND	ND		30	
n-Butylbenzene	ug/L	ND	ND		30	N2
n-Propylbenzene	ug/L	ND	ND		30	N2
Naphthalene	ug/L	ND	ND		30	N2
o-Xylene	ug/L	ND	ND		30	N2
p-Isopropyltoluene	ug/L	ND	ND		30	N2
sec-Butylbenzene	ug/L	ND	ND		30	N2
Styrene	ug/L	ND	ND		30	N2
tert-Butylbenzene	ug/L	ND	ND		30	
Tetrachloroethene	ug/L	3.3	4.0	21	30	
Tetrahydrofuran	ug/L	46.3	49.4	6	30	N2
Toluene	ug/L	ND	ND		30	
trans-1,2-Dichloroethene	ug/L	ND	ND		30	
trans-1,3-Dichloropropene	ug/L	ND	ND		30	N2
Trichloroethene	ug/L	ND	ND		30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	N2
1,2-Dichloroethane-d4 (S)	%	111	110	1		
4-Bromofluorobenzene (S)	%	100	102	2		
Toluene-d8 (S)	%	107	108	1		

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: CrC
Pace Project No.: 10357224

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

- | | |
|----|---|
| N2 | The lab does not hold TNI accreditation for this parameter. |
| P5 | The EPA or method required sample preservation degrades this compound, therefore acceptable recoveries may not be achieved in sample matrix spikes. |
| c2 | Acid preservation may not be appropriate for the analysis of 2-Chloroethylvinyl ether. |

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CrC
Pace Project No.: 10357224

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10357224001	AS-Influent	EPA 624	428416		
10357224002	AS-Effluent	EPA 624	428416		

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY / Analytical Request Document
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

10357224

Section A Required Client Information:
 Company: Landsmark Environmental
 Address: 2042 W 96th St
Blanco, MN
 Email To: aknick@landmarkenv.com
 Phone: _____ Fax: _____
 Requested Due Date/TAT: _____

Section B Required Project Information:
 Report To: aknick@landmarkenv.com
 Copy To: aknick@landmarkenv.com
 Purchase Order No.: _____
 Project Name: CR
 Project Number: _____

Section C Invoices Information:
 Attention: Sharon Paradise
 Company Name: Landsmark Environmental
 Address: _____
 Pace Quote Reference: _____
 Pace Project Manager: _____
 Pace Profile #: _____

Section D Regulatory Agency:
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER _____
 Site Location: _____
 STATE: _____

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	MATRIX CODE (see yield codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		# OF CONTAINERS	Preservatives	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
					COMPOSITE START	COMPOSITE END/GRAB					
1	AS - Influent	DW	WT 6	G	7/21/16	5:30	3		Y		001
2	AS - Effluent	WT	WT 6	G	7/21/16	5:40	3		Y		002
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											

ADDITIONAL COMMENTS
Client

RELINQUISHED BY / AFFILIATION
[Signature] 7/21/16

ACCEPTED BY / AFFILIATION
[Signature] 7/21/16

DATE 7/21/16

TIME 12:00

DATE 7/29/16

TIME 8:00

TEMP IN °C

RECEIVED ON

ICE (Y/N)

SEALED COOLER (Y/N)

SAMPLES INTACT (Y/N)

DATE SIGNED (MM/DD/YY) 07/29/16

PRINT NAME OF SAMPLER Sharon Knick

SIGNATURE OF SAMPLER [Signature]

SAMPLER NAME AND SIGNATURE

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.
 F-ALL-Q-020rev.07, 15-May-2007

Sample Condition Upon Receipt

Client Name: Landmark Environmental **Project #:** _____

WO#: 10357224



10357224

Courier: Fed Ex UPS USPS Client
 Commercial Pace Speedee Other: _____

Tracking Number: _____

Custody Seal on Cooler/Box Present? Yes No **Seals Intact?** Yes No Optional: Proj. Due Date: Proj. Name:

Packing Material: Bubble Wrap Bubble Bags None Other: _____ **Temp Blank?** Yes No

Thermometer Used: 151401163 B88A912167504 **Type of Ice:** Wet Blue None Samples on ice, cooling process has begun
 151401164 B88A0143310098

Cooler Temp Read (°C): 8.0 **Cooler Temp Corrected (°C):** 8.0 **Biological Tissue Frozen?** Yes No N/A
 Temp should be above freezing to 6°C **Correction Factor:** true **Date and Initials of Person Examining Contents:** 7-29-16 AA

USDA Regulated Soil (N/A, water sample)
 Did samples originate in a quarantine zone within the United States: AL, AR, AZ, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? Yes No Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

	COMMENTS:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name and/or Signature on COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72 hr)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered Volume Received for Dissolved Tests? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11. Note if sediment is visible in the dissolved container
Sample Labels Match COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes Date/Time/ID/Analysis Matrix: <u>WT</u>	
All containers needing acid/base preservation have been checked? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> HCl
All containers needing preservation are found to be in compliance with EPA recommendation? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Sample #
(HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide) <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Initial when completed: Lot # of added preservative: _____
Exceptions: (VOA) Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Headspace in VOA Vials (>6mm)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14.
Trip Blank Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____	

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? Yes No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: _____

Date: 7/29/16

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

August 16, 2016

Aaron Kuck
Landmark Environmental
2042 W 98th St.
Bloomington, MN 55431

RE: Project: CrC
Pace Project No.: 10358799

Dear Aaron Kuck:

Enclosed are the analytical results for sample(s) received by the laboratory on August 11, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Oyeyemi Odujole
oyeyemi.odujole@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: CrC
Pace Project No.: 10358799

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414
525 N 8th Street, Salina, KS 67401
A2LA Certification #: 2926.01
Alaska Certification #: UST-078
Alaska Certification #MN00064
Alabama Certification #40770
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
Colorado Certification #Pace
Connecticut Certification #: PH-0256
EPA Region 8 Certification #: 8TMS-L
Florida/NELAP Certification #: E87605
Guam Certification #:14-008r
Georgia Certification #: 959
Georgia EPD #: Pace
Idaho Certification #: MN00064
Hawaii Certification #MN00064
Illinois Certification #: 200011
Indiana Certification#C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky Dept of Envi. Protection - DW #90062
Kentucky Dept of Envi. Protection - WW #:90062
Louisiana DEQ Certification #: 3086
Louisiana DHH #: LA140001
Maine Certification #: 2013011
Maryland Certification #: 322
Michigan DEPH Certification #: 9909

Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT0092
Nevada Certification #: MN_00064
Nebraska Certification #: Pace
New Jersey Certification #: MN-002
New York Certification #: 11647
North Carolina Certification #: 530
North Carolina State Public Health #: 27700
North Dakota Certification #: R-036
Ohio EPA #: 4150
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Oregon Certification #: MN300001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Saipan (CNMI) #:MP0003
South Carolina #:74003001
Texas Certification #: T104704192
Tennessee Certification #: 02818
Utah Certification #: MN000642013-4
Virginia DGS Certification #: 251
Virginia/VELAP Certification #: Pace
Washington Certification #: C486
West Virginia Certification #: 382
West Virginia DHHR #:9952C
Wisconsin Certification #: 999407970

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SAMPLE SUMMARY

Project: CrC
Pace Project No.: 10358799

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10358799001	AS-INFLUENT	Water	08/10/16 10:30	08/11/16 11:26
10358799002	AS-EFFLUENT	Water	08/10/16 10:35	08/11/16 11:26
10358799003	DPE-1	Water	08/10/16 11:40	08/11/16 11:26
10358799004	DPE-2	Water	08/10/16 11:50	08/11/16 11:26
10358799005	DPE-3	Water	08/10/16 11:55	08/11/16 11:26
10358799006	DPE-4	Water	08/10/16 12:10	08/11/16 11:26
10358799007	DPE-5	Water	08/10/16 12:25	08/11/16 11:26
10358799008	DPE-6	Water	08/10/16 12:35	08/11/16 11:26
10358799009	DPE-7	Water	08/10/16 12:40	08/11/16 11:26
10358799010	DPE-8	Water	08/10/16 12:55	08/11/16 11:26

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SAMPLE ANALYTE COUNT

Project: CrC
Pace Project No.: 10358799

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10358799001	AS-INFLUENT	EPA 624	DJB	73
10358799002	AS-EFFLUENT	EPA 624	DJB	73
10358799003	DPE-1	EPA 8260B	EMC	70
10358799004	DPE-2	EPA 8260B	EMC	70
10358799005	DPE-3	EPA 8260B	EMC	70
10358799006	DPE-4	EPA 8260B	EMC	70
10358799007	DPE-5	EPA 8260B	EMC	70
10358799008	DPE-6	EPA 8260B	PRD	70
10358799009	DPE-7	EPA 8260B	PRD	70
10358799010	DPE-8	EPA 8260B	EMC	70

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358799

Sample: AS-INFLUENT	Lab ID: 10358799001	Collected: 08/10/16 10:30	Received: 08/11/16 11:26	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 MSV		Analytical Method: EPA 624						
Acetone	ND	ug/L	20.0	1		08/12/16 16:44	67-64-1	N2
Allyl chloride	ND	ug/L	4.0	1		08/12/16 16:44	107-05-1	N2
Benzene	ND	ug/L	1.0	1		08/12/16 16:44	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		08/12/16 16:44	108-86-1	N2
Bromochloromethane	ND	ug/L	1.0	1		08/12/16 16:44	74-97-5	N2
Bromodichloromethane	ND	ug/L	1.0	1		08/12/16 16:44	75-27-4	
Bromoform	ND	ug/L	4.0	1		08/12/16 16:44	75-25-2	
Bromomethane	ND	ug/L	4.0	1		08/12/16 16:44	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		08/12/16 16:44	78-93-3	N2
n-Butylbenzene	ND	ug/L	1.0	1		08/12/16 16:44	104-51-8	N2
sec-Butylbenzene	ND	ug/L	1.0	1		08/12/16 16:44	135-98-8	N2
tert-Butylbenzene	ND	ug/L	1.0	1		08/12/16 16:44	98-06-6	
Carbon tetrachloride	ND	ug/L	1.0	1		08/12/16 16:44	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		08/12/16 16:44	108-90-7	
Chloroethane	ND	ug/L	1.0	1		08/12/16 16:44	75-00-3	
2-Chloroethylvinyl ether	ND	ug/L	10.0	1		08/12/16 16:44	110-75-8	P5,c2
Chloroform	ND	ug/L	1.0	1		08/12/16 16:44	67-66-3	
Chloromethane	ND	ug/L	4.0	1		08/12/16 16:44	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		08/12/16 16:44	95-49-8	N2
4-Chlorotoluene	ND	ug/L	1.0	1		08/12/16 16:44	106-43-4	N2
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	1		08/12/16 16:44	96-12-8	N2
Dibromochloromethane	ND	ug/L	1.0	1		08/12/16 16:44	124-48-1	N2
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		08/12/16 16:44	106-93-4	N2
Dibromomethane	ND	ug/L	4.0	1		08/12/16 16:44	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		08/12/16 16:44	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		08/12/16 16:44	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		08/12/16 16:44	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		08/12/16 16:44	75-71-8	N2
1,1-Dichloroethane	ND	ug/L	1.0	1		08/12/16 16:44	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/12/16 16:44	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/12/16 16:44	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/12/16 16:44	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/12/16 16:44	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	1		08/12/16 16:44	75-43-4	N2
1,2-Dichloropropane	ND	ug/L	4.0	1		08/12/16 16:44	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		08/12/16 16:44	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	1		08/12/16 16:44	594-20-7	N2
1,1-Dichloropropene	ND	ug/L	1.0	1		08/12/16 16:44	563-58-6	N2
cis-1,3-Dichloropropene	ND	ug/L	4.0	1		08/12/16 16:44	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	1		08/12/16 16:44	10061-02-6	N2
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	1		08/12/16 16:44	60-29-7	N2
Ethylbenzene	ND	ug/L	1.0	1		08/12/16 16:44	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		08/12/16 16:44	87-68-3	N2
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		08/12/16 16:44	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		08/12/16 16:44	99-87-6	N2
Methylene Chloride	ND	ug/L	4.0	1		08/12/16 16:44	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		08/12/16 16:44	108-10-1	N2

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358799

Sample: AS-INFLUENT	Lab ID: 10358799001	Collected: 08/10/16 10:30	Received: 08/11/16 11:26	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 MSV		Analytical Method: EPA 624						
Methyl-tert-butyl ether	ND	ug/L	1.0	1		08/12/16 16:44	1634-04-4	N2
Naphthalene	ND	ug/L	4.0	1		08/12/16 16:44	91-20-3	N2
n-Propylbenzene	ND	ug/L	1.0	1		08/12/16 16:44	103-65-1	N2
Styrene	ND	ug/L	1.0	1		08/12/16 16:44	100-42-5	N2
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		08/12/16 16:44	630-20-6	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		08/12/16 16:44	79-34-5	
Tetrachloroethene	21.1	ug/L	1.0	1		08/12/16 16:44	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		08/12/16 16:44	109-99-9	N2
Toluene	ND	ug/L	1.0	1		08/12/16 16:44	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		08/12/16 16:44	87-61-6	N2
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		08/12/16 16:44	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/12/16 16:44	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		08/12/16 16:44	79-00-5	
Trichloroethene	ND	ug/L	0.40	1		08/12/16 16:44	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		08/12/16 16:44	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	1		08/12/16 16:44	96-18-4	N2
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		08/12/16 16:44	76-13-1	N2
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		08/12/16 16:44	95-63-6	N2
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		08/12/16 16:44	108-67-8	N2
Vinyl chloride	ND	ug/L	0.40	1		08/12/16 16:44	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		08/12/16 16:44	1330-20-7	N2
m&p-Xylene	ND	ug/L	2.0	1		08/12/16 16:44	179601-23-1	N2
o-Xylene	ND	ug/L	1.0	1		08/12/16 16:44	95-47-6	N2
Surrogates								
1,2-Dichloroethane-d4 (S)	98	%.	75-125	1		08/12/16 16:44	17060-07-0	
Toluene-d8 (S)	96	%.	75-125	1		08/12/16 16:44	2037-26-5	
4-Bromofluorobenzene (S)	98	%.	75-125	1		08/12/16 16:44	460-00-4	

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358799

Sample: AS-EFFLUENT	Lab ID: 10358799002	Collected: 08/10/16 10:35	Received: 08/11/16 11:26	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 MSV		Analytical Method: EPA 624						
Acetone	ND	ug/L	20.0	1		08/12/16 17:06	67-64-1	N2
Allyl chloride	ND	ug/L	4.0	1		08/12/16 17:06	107-05-1	N2
Benzene	ND	ug/L	1.0	1		08/12/16 17:06	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		08/12/16 17:06	108-86-1	N2
Bromochloromethane	ND	ug/L	1.0	1		08/12/16 17:06	74-97-5	N2
Bromodichloromethane	ND	ug/L	1.0	1		08/12/16 17:06	75-27-4	
Bromoform	ND	ug/L	4.0	1		08/12/16 17:06	75-25-2	
Bromomethane	ND	ug/L	4.0	1		08/12/16 17:06	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		08/12/16 17:06	78-93-3	N2
n-Butylbenzene	ND	ug/L	1.0	1		08/12/16 17:06	104-51-8	N2
sec-Butylbenzene	ND	ug/L	1.0	1		08/12/16 17:06	135-98-8	N2
tert-Butylbenzene	ND	ug/L	1.0	1		08/12/16 17:06	98-06-6	
Carbon tetrachloride	ND	ug/L	1.0	1		08/12/16 17:06	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		08/12/16 17:06	108-90-7	
Chloroethane	ND	ug/L	1.0	1		08/12/16 17:06	75-00-3	
2-Chloroethylvinyl ether	ND	ug/L	10.0	1		08/12/16 17:06	110-75-8	c2
Chloroform	ND	ug/L	1.0	1		08/12/16 17:06	67-66-3	
Chloromethane	ND	ug/L	4.0	1		08/12/16 17:06	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		08/12/16 17:06	95-49-8	N2
4-Chlorotoluene	ND	ug/L	1.0	1		08/12/16 17:06	106-43-4	N2
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	1		08/12/16 17:06	96-12-8	N2
Dibromochloromethane	ND	ug/L	1.0	1		08/12/16 17:06	124-48-1	N2
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		08/12/16 17:06	106-93-4	N2
Dibromomethane	ND	ug/L	4.0	1		08/12/16 17:06	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		08/12/16 17:06	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		08/12/16 17:06	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		08/12/16 17:06	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		08/12/16 17:06	75-71-8	N2
1,1-Dichloroethane	ND	ug/L	1.0	1		08/12/16 17:06	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/12/16 17:06	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/12/16 17:06	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/12/16 17:06	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/12/16 17:06	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	1		08/12/16 17:06	75-43-4	N2
1,2-Dichloropropane	ND	ug/L	4.0	1		08/12/16 17:06	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		08/12/16 17:06	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	1		08/12/16 17:06	594-20-7	N2
1,1-Dichloropropene	ND	ug/L	1.0	1		08/12/16 17:06	563-58-6	N2
cis-1,3-Dichloropropene	ND	ug/L	4.0	1		08/12/16 17:06	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	1		08/12/16 17:06	10061-02-6	N2
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	1		08/12/16 17:06	60-29-7	N2
Ethylbenzene	ND	ug/L	1.0	1		08/12/16 17:06	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		08/12/16 17:06	87-68-3	N2
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		08/12/16 17:06	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		08/12/16 17:06	99-87-6	N2
Methylene Chloride	ND	ug/L	4.0	1		08/12/16 17:06	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		08/12/16 17:06	108-10-1	N2

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358799

Sample: AS-EFFLUENT		Lab ID: 10358799002	Collected: 08/10/16 10:35	Received: 08/11/16 11:26	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 MSV		Analytical Method: EPA 624						
Methyl-tert-butyl ether	ND	ug/L	1.0	1		08/12/16 17:06	1634-04-4	N2
Naphthalene	ND	ug/L	4.0	1		08/12/16 17:06	91-20-3	N2
n-Propylbenzene	ND	ug/L	1.0	1		08/12/16 17:06	103-65-1	N2
Styrene	ND	ug/L	1.0	1		08/12/16 17:06	100-42-5	N2
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		08/12/16 17:06	630-20-6	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		08/12/16 17:06	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		08/12/16 17:06	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		08/12/16 17:06	109-99-9	N2
Toluene	ND	ug/L	1.0	1		08/12/16 17:06	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		08/12/16 17:06	87-61-6	N2
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		08/12/16 17:06	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/12/16 17:06	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		08/12/16 17:06	79-00-5	
Trichloroethene	ND	ug/L	0.40	1		08/12/16 17:06	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		08/12/16 17:06	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	1		08/12/16 17:06	96-18-4	N2
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		08/12/16 17:06	76-13-1	N2
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		08/12/16 17:06	95-63-6	N2
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		08/12/16 17:06	108-67-8	N2
Vinyl chloride	ND	ug/L	0.40	1		08/12/16 17:06	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		08/12/16 17:06	1330-20-7	N2
m&p-Xylene	ND	ug/L	2.0	1		08/12/16 17:06	179601-23-1	N2
o-Xylene	ND	ug/L	1.0	1		08/12/16 17:06	95-47-6	N2
Surrogates								
1,2-Dichloroethane-d4 (S)	99	%.	75-125	1		08/12/16 17:06	17060-07-0	
Toluene-d8 (S)	95	%.	75-125	1		08/12/16 17:06	2037-26-5	
4-Bromofluorobenzene (S)	96	%.	75-125	1		08/12/16 17:06	460-00-4	

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358799

Sample: DPE-1		Lab ID: 10358799003	Collected: 08/10/16 11:40	Received: 08/11/16 11:26	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Acetone	ND	ug/L	20.0	1		08/13/16 20:36	67-64-1	
Allyl chloride	ND	ug/L	4.0	1		08/13/16 20:36	107-05-1	
Benzene	ND	ug/L	1.0	1		08/13/16 20:36	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		08/13/16 20:36	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		08/13/16 20:36	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		08/13/16 20:36	75-27-4	
Bromoform	ND	ug/L	10.0	1		08/13/16 20:36	75-25-2	
Bromomethane	ND	ug/L	4.0	1		08/13/16 20:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		08/13/16 20:36	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		08/13/16 20:36	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		08/13/16 20:36	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		08/13/16 20:36	98-06-6	
Carbon tetrachloride	ND	ug/L	4.0	1		08/13/16 20:36	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		08/13/16 20:36	108-90-7	
Chloroethane	ND	ug/L	4.0	1		08/13/16 20:36	75-00-3	
Chloroform	ND	ug/L	1.0	1		08/13/16 20:36	67-66-3	
Chloromethane	ND	ug/L	4.0	1		08/13/16 20:36	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		08/13/16 20:36	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		08/13/16 20:36	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	10.0	1		08/13/16 20:36	96-12-8	
Dibromochloromethane	ND	ug/L	4.0	1		08/13/16 20:36	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		08/13/16 20:36	106-93-4	
Dibromomethane	ND	ug/L	4.0	1		08/13/16 20:36	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		08/13/16 20:36	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		08/13/16 20:36	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		08/13/16 20:36	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		08/13/16 20:36	75-71-8	
1,1-Dichloroethane	ND	ug/L	4.0	1		08/13/16 20:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/13/16 20:36	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/13/16 20:36	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/13/16 20:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/13/16 20:36	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	1		08/13/16 20:36	75-43-4	
1,2-Dichloropropane	ND	ug/L	4.0	1		08/13/16 20:36	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		08/13/16 20:36	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	1		08/13/16 20:36	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		08/13/16 20:36	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	1		08/13/16 20:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	1		08/13/16 20:36	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	1		08/13/16 20:36	60-29-7	
Ethylbenzene	ND	ug/L	1.0	1		08/13/16 20:36	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	4.0	1		08/13/16 20:36	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		08/13/16 20:36	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		08/13/16 20:36	99-87-6	
Methylene Chloride	ND	ug/L	4.0	1		08/13/16 20:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		08/13/16 20:36	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		08/13/16 20:36	1634-04-4	

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358799

Sample: DPE-1		Lab ID: 10358799003	Collected: 08/10/16 11:40	Received: 08/11/16 11:26	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Naphthalene	ND	ug/L	4.0	1		08/13/16 20:36	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		08/13/16 20:36	103-65-1	
Styrene	ND	ug/L	1.0	1		08/13/16 20:36	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	4.0	1		08/13/16 20:36	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		08/13/16 20:36	79-34-5	
Tetrachloroethene	207	ug/L	1.0	1		08/13/16 20:36	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		08/13/16 20:36	109-99-9	
Toluene	ND	ug/L	1.0	1		08/13/16 20:36	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		08/13/16 20:36	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		08/13/16 20:36	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/13/16 20:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		08/13/16 20:36	79-00-5	
Trichloroethene	ND	ug/L	0.40	1		08/13/16 20:36	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		08/13/16 20:36	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	1		08/13/16 20:36	96-18-4	
1,1,2-Trichlorotrifluoroethane	10.9	ug/L	1.0	1		08/13/16 20:36	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		08/13/16 20:36	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		08/13/16 20:36	108-67-8	
Vinyl chloride	ND	ug/L	0.40	1		08/13/16 20:36	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		08/13/16 20:36	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	113	%.	75-125	1		08/13/16 20:36	17060-07-0	
Toluene-d8 (S)	103	%.	75-125	1		08/13/16 20:36	2037-26-5	
4-Bromofluorobenzene (S)	104	%.	75-125	1		08/13/16 20:36	460-00-4	

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358799

Sample: DPE-2	Lab ID: 10358799004	Collected: 08/10/16 11:50	Received: 08/11/16 11:26	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Acetone	ND	ug/L	400	20		08/13/16 19:20	67-64-1	
Allyl chloride	ND	ug/L	80.0	20		08/13/16 19:20	107-05-1	
Benzene	ND	ug/L	20.0	20		08/13/16 19:20	71-43-2	
Bromobenzene	ND	ug/L	20.0	20		08/13/16 19:20	108-86-1	
Bromochloromethane	ND	ug/L	20.0	20		08/13/16 19:20	74-97-5	
Bromodichloromethane	ND	ug/L	20.0	20		08/13/16 19:20	75-27-4	
Bromoform	ND	ug/L	200	20		08/13/16 19:20	75-25-2	
Bromomethane	ND	ug/L	80.0	20		08/13/16 19:20	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	20		08/13/16 19:20	78-93-3	
n-Butylbenzene	ND	ug/L	20.0	20		08/13/16 19:20	104-51-8	
sec-Butylbenzene	ND	ug/L	20.0	20		08/13/16 19:20	135-98-8	
tert-Butylbenzene	ND	ug/L	20.0	20		08/13/16 19:20	98-06-6	
Carbon tetrachloride	ND	ug/L	80.0	20		08/13/16 19:20	56-23-5	
Chlorobenzene	ND	ug/L	20.0	20		08/13/16 19:20	108-90-7	
Chloroethane	ND	ug/L	80.0	20		08/13/16 19:20	75-00-3	
Chloroform	ND	ug/L	20.0	20		08/13/16 19:20	67-66-3	
Chloromethane	ND	ug/L	80.0	20		08/13/16 19:20	74-87-3	
2-Chlorotoluene	ND	ug/L	20.0	20		08/13/16 19:20	95-49-8	
4-Chlorotoluene	ND	ug/L	20.0	20		08/13/16 19:20	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	200	20		08/13/16 19:20	96-12-8	
Dibromochloromethane	ND	ug/L	80.0	20		08/13/16 19:20	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	20.0	20		08/13/16 19:20	106-93-4	
Dibromomethane	ND	ug/L	80.0	20		08/13/16 19:20	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	20.0	20		08/13/16 19:20	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	20.0	20		08/13/16 19:20	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	20.0	20		08/13/16 19:20	106-46-7	
Dichlorodifluoromethane	ND	ug/L	20.0	20		08/13/16 19:20	75-71-8	
1,1-Dichloroethane	ND	ug/L	80.0	20		08/13/16 19:20	75-34-3	
1,2-Dichloroethane	ND	ug/L	20.0	20		08/13/16 19:20	107-06-2	
1,1-Dichloroethene	ND	ug/L	20.0	20		08/13/16 19:20	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	20.0	20		08/13/16 19:20	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	20.0	20		08/13/16 19:20	156-60-5	
Dichlorofluoromethane	ND	ug/L	20.0	20		08/13/16 19:20	75-43-4	
1,2-Dichloropropane	ND	ug/L	80.0	20		08/13/16 19:20	78-87-5	
1,3-Dichloropropane	ND	ug/L	20.0	20		08/13/16 19:20	142-28-9	
2,2-Dichloropropane	ND	ug/L	80.0	20		08/13/16 19:20	594-20-7	
1,1-Dichloropropene	ND	ug/L	20.0	20		08/13/16 19:20	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	80.0	20		08/13/16 19:20	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	80.0	20		08/13/16 19:20	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	80.0	20		08/13/16 19:20	60-29-7	
Ethylbenzene	ND	ug/L	20.0	20		08/13/16 19:20	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	80.0	20		08/13/16 19:20	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	20.0	20		08/13/16 19:20	98-82-8	
p-Isopropyltoluene	ND	ug/L	20.0	20		08/13/16 19:20	99-87-6	
Methylene Chloride	ND	ug/L	80.0	20		08/13/16 19:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	20		08/13/16 19:20	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	20.0	20		08/13/16 19:20	1634-04-4	

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358799

Sample: DPE-2		Lab ID: 10358799004	Collected: 08/10/16 11:50	Received: 08/11/16 11:26	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Naphthalene	ND	ug/L	80.0	20		08/13/16 19:20	91-20-3	
n-Propylbenzene	ND	ug/L	20.0	20		08/13/16 19:20	103-65-1	
Styrene	ND	ug/L	20.0	20		08/13/16 19:20	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	80.0	20		08/13/16 19:20	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	20.0	20		08/13/16 19:20	79-34-5	
Tetrachloroethene	1260	ug/L	20.0	20		08/13/16 19:20	127-18-4	
Tetrahydrofuran	ND	ug/L	200	20		08/13/16 19:20	109-99-9	
Toluene	ND	ug/L	20.0	20		08/13/16 19:20	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	20.0	20		08/13/16 19:20	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	20.0	20		08/13/16 19:20	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	20.0	20		08/13/16 19:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	20.0	20		08/13/16 19:20	79-00-5	
Trichloroethene	ND	ug/L	8.0	20		08/13/16 19:20	79-01-6	
Trichlorofluoromethane	ND	ug/L	20.0	20		08/13/16 19:20	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	80.0	20		08/13/16 19:20	96-18-4	
1,1,2-Trichlorotrifluoroethane	128	ug/L	20.0	20		08/13/16 19:20	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	20.0	20		08/13/16 19:20	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	20.0	20		08/13/16 19:20	108-67-8	
Vinyl chloride	ND	ug/L	8.0	20		08/13/16 19:20	75-01-4	
Xylene (Total)	ND	ug/L	60.0	20		08/13/16 19:20	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	112	%.	75-125	20		08/13/16 19:20	17060-07-0	
Toluene-d8 (S)	105	%.	75-125	20		08/13/16 19:20	2037-26-5	
4-Bromofluorobenzene (S)	105	%.	75-125	20		08/13/16 19:20	460-00-4	

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358799

Sample: DPE-3	Lab ID: 10358799005	Collected: 08/10/16 11:55	Received: 08/11/16 11:26	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC								
Analytical Method: EPA 8260B								
Acetone	ND	ug/L	400	20		08/13/16 20:21	67-64-1	
Allyl chloride	ND	ug/L	80.0	20		08/13/16 20:21	107-05-1	
Benzene	ND	ug/L	20.0	20		08/13/16 20:21	71-43-2	
Bromobenzene	ND	ug/L	20.0	20		08/13/16 20:21	108-86-1	
Bromochloromethane	ND	ug/L	20.0	20		08/13/16 20:21	74-97-5	
Bromodichloromethane	ND	ug/L	20.0	20		08/13/16 20:21	75-27-4	
Bromoform	ND	ug/L	200	20		08/13/16 20:21	75-25-2	
Bromomethane	ND	ug/L	80.0	20		08/13/16 20:21	74-83-9	
2-Butanone (MEK)	ND	ug/L	100	20		08/13/16 20:21	78-93-3	
n-Butylbenzene	ND	ug/L	20.0	20		08/13/16 20:21	104-51-8	
sec-Butylbenzene	ND	ug/L	20.0	20		08/13/16 20:21	135-98-8	
tert-Butylbenzene	ND	ug/L	20.0	20		08/13/16 20:21	98-06-6	
Carbon tetrachloride	ND	ug/L	80.0	20		08/13/16 20:21	56-23-5	
Chlorobenzene	ND	ug/L	20.0	20		08/13/16 20:21	108-90-7	
Chloroethane	ND	ug/L	80.0	20		08/13/16 20:21	75-00-3	
Chloroform	ND	ug/L	20.0	20		08/13/16 20:21	67-66-3	
Chloromethane	ND	ug/L	80.0	20		08/13/16 20:21	74-87-3	
2-Chlorotoluene	ND	ug/L	20.0	20		08/13/16 20:21	95-49-8	
4-Chlorotoluene	ND	ug/L	20.0	20		08/13/16 20:21	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	200	20		08/13/16 20:21	96-12-8	
Dibromochloromethane	ND	ug/L	80.0	20		08/13/16 20:21	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	20.0	20		08/13/16 20:21	106-93-4	
Dibromomethane	ND	ug/L	80.0	20		08/13/16 20:21	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	20.0	20		08/13/16 20:21	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	20.0	20		08/13/16 20:21	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	20.0	20		08/13/16 20:21	106-46-7	
Dichlorodifluoromethane	ND	ug/L	20.0	20		08/13/16 20:21	75-71-8	
1,1-Dichloroethane	ND	ug/L	80.0	20		08/13/16 20:21	75-34-3	
1,2-Dichloroethane	ND	ug/L	20.0	20		08/13/16 20:21	107-06-2	
1,1-Dichloroethene	ND	ug/L	20.0	20		08/13/16 20:21	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	20.0	20		08/13/16 20:21	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	20.0	20		08/13/16 20:21	156-60-5	
Dichlorofluoromethane	ND	ug/L	20.0	20		08/13/16 20:21	75-43-4	
1,2-Dichloropropane	ND	ug/L	80.0	20		08/13/16 20:21	78-87-5	
1,3-Dichloropropane	ND	ug/L	20.0	20		08/13/16 20:21	142-28-9	
2,2-Dichloropropane	ND	ug/L	80.0	20		08/13/16 20:21	594-20-7	
1,1-Dichloropropene	ND	ug/L	20.0	20		08/13/16 20:21	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	80.0	20		08/13/16 20:21	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	80.0	20		08/13/16 20:21	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	80.0	20		08/13/16 20:21	60-29-7	
Ethylbenzene	ND	ug/L	20.0	20		08/13/16 20:21	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	80.0	20		08/13/16 20:21	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	20.0	20		08/13/16 20:21	98-82-8	
p-Isopropyltoluene	ND	ug/L	20.0	20		08/13/16 20:21	99-87-6	
Methylene Chloride	ND	ug/L	80.0	20		08/13/16 20:21	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	20		08/13/16 20:21	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	20.0	20		08/13/16 20:21	1634-04-4	

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358799

Sample: DPE-3		Lab ID: 10358799005	Collected: 08/10/16 11:55	Received: 08/11/16 11:26	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Naphthalene	ND	ug/L	80.0	20		08/13/16 20:21	91-20-3	
n-Propylbenzene	ND	ug/L	20.0	20		08/13/16 20:21	103-65-1	
Styrene	ND	ug/L	20.0	20		08/13/16 20:21	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	80.0	20		08/13/16 20:21	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	20.0	20		08/13/16 20:21	79-34-5	
Tetrachloroethene	2590	ug/L	20.0	20		08/13/16 20:21	127-18-4	
Tetrahydrofuran	ND	ug/L	200	20		08/13/16 20:21	109-99-9	
Toluene	ND	ug/L	20.0	20		08/13/16 20:21	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	20.0	20		08/13/16 20:21	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	20.0	20		08/13/16 20:21	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	20.0	20		08/13/16 20:21	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	20.0	20		08/13/16 20:21	79-00-5	
Trichloroethene	ND	ug/L	8.0	20		08/13/16 20:21	79-01-6	
Trichlorofluoromethane	ND	ug/L	20.0	20		08/13/16 20:21	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	80.0	20		08/13/16 20:21	96-18-4	
1,1,2-Trichlorotrifluoroethane	98.6	ug/L	20.0	20		08/13/16 20:21	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	20.0	20		08/13/16 20:21	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	20.0	20		08/13/16 20:21	108-67-8	
Vinyl chloride	ND	ug/L	8.0	20		08/13/16 20:21	75-01-4	
Xylene (Total)	ND	ug/L	60.0	20		08/13/16 20:21	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	114	%.	75-125	20		08/13/16 20:21	17060-07-0	
Toluene-d8 (S)	105	%.	75-125	20		08/13/16 20:21	2037-26-5	
4-Bromofluorobenzene (S)	103	%.	75-125	20		08/13/16 20:21	460-00-4	

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358799

Sample: DPE-4	Lab ID: 10358799006	Collected: 08/10/16 12:10	Received: 08/11/16 11:26	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Acetone	ND	ug/L	100	5		08/13/16 19:35	67-64-1	
Allyl chloride	ND	ug/L	20.0	5		08/13/16 19:35	107-05-1	
Benzene	ND	ug/L	5.0	5		08/13/16 19:35	71-43-2	
Bromobenzene	ND	ug/L	5.0	5		08/13/16 19:35	108-86-1	
Bromochloromethane	ND	ug/L	5.0	5		08/13/16 19:35	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	5		08/13/16 19:35	75-27-4	
Bromoform	ND	ug/L	50.0	5		08/13/16 19:35	75-25-2	
Bromomethane	ND	ug/L	20.0	5		08/13/16 19:35	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	5		08/13/16 19:35	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	5		08/13/16 19:35	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	5		08/13/16 19:35	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	5		08/13/16 19:35	98-06-6	
Carbon tetrachloride	ND	ug/L	20.0	5		08/13/16 19:35	56-23-5	
Chlorobenzene	ND	ug/L	5.0	5		08/13/16 19:35	108-90-7	
Chloroethane	ND	ug/L	20.0	5		08/13/16 19:35	75-00-3	
Chloroform	ND	ug/L	5.0	5		08/13/16 19:35	67-66-3	
Chloromethane	ND	ug/L	20.0	5		08/13/16 19:35	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	5		08/13/16 19:35	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	5		08/13/16 19:35	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	50.0	5		08/13/16 19:35	96-12-8	
Dibromochloromethane	ND	ug/L	20.0	5		08/13/16 19:35	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	5		08/13/16 19:35	106-93-4	
Dibromomethane	ND	ug/L	20.0	5		08/13/16 19:35	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	5		08/13/16 19:35	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	5		08/13/16 19:35	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	5		08/13/16 19:35	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	5		08/13/16 19:35	75-71-8	
1,1-Dichloroethane	ND	ug/L	20.0	5		08/13/16 19:35	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	5		08/13/16 19:35	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	5		08/13/16 19:35	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	5		08/13/16 19:35	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	5		08/13/16 19:35	156-60-5	
Dichlorofluoromethane	ND	ug/L	5.0	5		08/13/16 19:35	75-43-4	
1,2-Dichloropropane	ND	ug/L	20.0	5		08/13/16 19:35	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	5		08/13/16 19:35	142-28-9	
2,2-Dichloropropane	ND	ug/L	20.0	5		08/13/16 19:35	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	5		08/13/16 19:35	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	20.0	5		08/13/16 19:35	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	20.0	5		08/13/16 19:35	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	20.0	5		08/13/16 19:35	60-29-7	
Ethylbenzene	ND	ug/L	5.0	5		08/13/16 19:35	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	20.0	5		08/13/16 19:35	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	5		08/13/16 19:35	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	5		08/13/16 19:35	99-87-6	
Methylene Chloride	ND	ug/L	20.0	5		08/13/16 19:35	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	5		08/13/16 19:35	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	5		08/13/16 19:35	1634-04-4	

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358799

Sample: DPE-4		Lab ID: 10358799006	Collected: 08/10/16 12:10	Received: 08/11/16 11:26	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Naphthalene	ND	ug/L	20.0	5		08/13/16 19:35	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	5		08/13/16 19:35	103-65-1	
Styrene	ND	ug/L	5.0	5		08/13/16 19:35	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	20.0	5		08/13/16 19:35	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	5		08/13/16 19:35	79-34-5	
Tetrachloroethene	400	ug/L	5.0	5		08/13/16 19:35	127-18-4	
Tetrahydrofuran	ND	ug/L	50.0	5		08/13/16 19:35	109-99-9	
Toluene	ND	ug/L	5.0	5		08/13/16 19:35	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	5		08/13/16 19:35	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	5		08/13/16 19:35	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	5		08/13/16 19:35	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	5		08/13/16 19:35	79-00-5	
Trichloroethene	ND	ug/L	2.0	5		08/13/16 19:35	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	5		08/13/16 19:35	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	20.0	5		08/13/16 19:35	96-18-4	
1,1,2-Trichlorotrifluoroethane	21.8	ug/L	5.0	5		08/13/16 19:35	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	5		08/13/16 19:35	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	5		08/13/16 19:35	108-67-8	
Vinyl chloride	ND	ug/L	2.0	5		08/13/16 19:35	75-01-4	
Xylene (Total)	ND	ug/L	15.0	5		08/13/16 19:35	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	115	%.	75-125	5		08/13/16 19:35	17060-07-0	
Toluene-d8 (S)	104	%.	75-125	5		08/13/16 19:35	2037-26-5	
4-Bromofluorobenzene (S)	104	%.	75-125	5		08/13/16 19:35	460-00-4	

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358799

Sample: DPE-5	Lab ID: 10358799007	Collected: 08/10/16 12:25	Received: 08/11/16 11:26	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Acetone	50.4	ug/L	20.0	1		08/13/16 19:05	67-64-1	
Allyl chloride	ND	ug/L	4.0	1		08/13/16 19:05	107-05-1	
Benzene	ND	ug/L	1.0	1		08/13/16 19:05	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		08/13/16 19:05	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		08/13/16 19:05	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		08/13/16 19:05	75-27-4	
Bromoform	ND	ug/L	10.0	1		08/13/16 19:05	75-25-2	
Bromomethane	ND	ug/L	4.0	1		08/13/16 19:05	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		08/13/16 19:05	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		08/13/16 19:05	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		08/13/16 19:05	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		08/13/16 19:05	98-06-6	
Carbon tetrachloride	ND	ug/L	4.0	1		08/13/16 19:05	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		08/13/16 19:05	108-90-7	
Chloroethane	ND	ug/L	4.0	1		08/13/16 19:05	75-00-3	
Chloroform	ND	ug/L	1.0	1		08/13/16 19:05	67-66-3	
Chloromethane	ND	ug/L	4.0	1		08/13/16 19:05	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		08/13/16 19:05	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		08/13/16 19:05	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	10.0	1		08/13/16 19:05	96-12-8	
Dibromochloromethane	ND	ug/L	4.0	1		08/13/16 19:05	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		08/13/16 19:05	106-93-4	
Dibromomethane	ND	ug/L	4.0	1		08/13/16 19:05	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		08/13/16 19:05	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		08/13/16 19:05	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		08/13/16 19:05	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		08/13/16 19:05	75-71-8	
1,1-Dichloroethane	ND	ug/L	4.0	1		08/13/16 19:05	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/13/16 19:05	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/13/16 19:05	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/13/16 19:05	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/13/16 19:05	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	1		08/13/16 19:05	75-43-4	
1,2-Dichloropropane	ND	ug/L	4.0	1		08/13/16 19:05	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		08/13/16 19:05	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	1		08/13/16 19:05	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		08/13/16 19:05	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	1		08/13/16 19:05	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	1		08/13/16 19:05	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	1		08/13/16 19:05	60-29-7	
Ethylbenzene	ND	ug/L	1.0	1		08/13/16 19:05	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	4.0	1		08/13/16 19:05	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		08/13/16 19:05	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		08/13/16 19:05	99-87-6	
Methylene Chloride	ND	ug/L	4.0	1		08/13/16 19:05	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		08/13/16 19:05	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		08/13/16 19:05	1634-04-4	

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358799

Sample: DPE-5		Lab ID: 10358799007	Collected: 08/10/16 12:25	Received: 08/11/16 11:26	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Naphthalene	ND	ug/L	4.0	1		08/13/16 19:05	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		08/13/16 19:05	103-65-1	
Styrene	ND	ug/L	1.0	1		08/13/16 19:05	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	4.0	1		08/13/16 19:05	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		08/13/16 19:05	79-34-5	
Tetrachloroethene	85.0	ug/L	1.0	1		08/13/16 19:05	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		08/13/16 19:05	109-99-9	
Toluene	ND	ug/L	1.0	1		08/13/16 19:05	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		08/13/16 19:05	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		08/13/16 19:05	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/13/16 19:05	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		08/13/16 19:05	79-00-5	
Trichloroethene	ND	ug/L	0.40	1		08/13/16 19:05	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		08/13/16 19:05	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	1		08/13/16 19:05	96-18-4	
1,1,2-Trichlorotrifluoroethane	2.4	ug/L	1.0	1		08/13/16 19:05	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		08/13/16 19:05	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		08/13/16 19:05	108-67-8	
Vinyl chloride	ND	ug/L	0.40	1		08/13/16 19:05	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		08/13/16 19:05	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	112	%.	75-125	1		08/13/16 19:05	17060-07-0	
Toluene-d8 (S)	104	%.	75-125	1		08/13/16 19:05	2037-26-5	
4-Bromofluorobenzene (S)	105	%.	75-125	1		08/13/16 19:05	460-00-4	

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358799

Sample: DPE-6	Lab ID: 10358799008	Collected: 08/10/16 12:35	Received: 08/11/16 11:26	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Acetone	ND	ug/L	20.0	1		08/12/16 15:52	67-64-1	
Allyl chloride	ND	ug/L	4.0	1		08/12/16 15:52	107-05-1	
Benzene	ND	ug/L	1.0	1		08/12/16 15:52	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		08/12/16 15:52	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		08/12/16 15:52	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		08/12/16 15:52	75-27-4	
Bromoform	ND	ug/L	4.0	1		08/12/16 15:52	75-25-2	
Bromomethane	ND	ug/L	4.0	1		08/12/16 15:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		08/12/16 15:52	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		08/12/16 15:52	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		08/12/16 15:52	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		08/12/16 15:52	98-06-6	
Carbon tetrachloride	ND	ug/L	4.0	1		08/12/16 15:52	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		08/12/16 15:52	108-90-7	
Chloroethane	ND	ug/L	1.0	1		08/12/16 15:52	75-00-3	
Chloroform	ND	ug/L	1.0	1		08/12/16 15:52	67-66-3	
Chloromethane	ND	ug/L	4.0	1		08/12/16 15:52	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		08/12/16 15:52	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		08/12/16 15:52	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	10.0	1		08/12/16 15:52	96-12-8	
Dibromochloromethane	ND	ug/L	4.0	1		08/12/16 15:52	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		08/12/16 15:52	106-93-4	
Dibromomethane	ND	ug/L	4.0	1		08/12/16 15:52	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		08/12/16 15:52	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		08/12/16 15:52	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		08/12/16 15:52	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		08/12/16 15:52	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/12/16 15:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/12/16 15:52	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/12/16 15:52	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/12/16 15:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/12/16 15:52	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	1		08/12/16 15:52	75-43-4	
1,2-Dichloropropane	ND	ug/L	4.0	1		08/12/16 15:52	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		08/12/16 15:52	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	1		08/12/16 15:52	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		08/12/16 15:52	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	1		08/12/16 15:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	1		08/12/16 15:52	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	1		08/12/16 15:52	60-29-7	
Ethylbenzene	ND	ug/L	1.0	1		08/12/16 15:52	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		08/12/16 15:52	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		08/12/16 15:52	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		08/12/16 15:52	99-87-6	
Methylene Chloride	ND	ug/L	4.0	1		08/12/16 15:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		08/12/16 15:52	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		08/12/16 15:52	1634-04-4	

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358799

Sample: DPE-6		Lab ID: 10358799008		Collected: 08/10/16 12:35		Received: 08/11/16 11:26		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260B VOC		Analytical Method: EPA 8260B							
Naphthalene	ND	ug/L	4.0	1		08/12/16 15:52	91-20-3		
n-Propylbenzene	ND	ug/L	1.0	1		08/12/16 15:52	103-65-1		
Styrene	ND	ug/L	1.0	1		08/12/16 15:52	100-42-5		
1,1,1,2-Tetrachloroethane	ND	ug/L	4.0	1		08/12/16 15:52	630-20-6		
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		08/12/16 15:52	79-34-5		
Tetrachloroethene	2.4	ug/L	1.0	1		08/12/16 15:52	127-18-4		
Tetrahydrofuran	ND	ug/L	10.0	1		08/12/16 15:52	109-99-9		
Toluene	ND	ug/L	1.0	1		08/12/16 15:52	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		08/12/16 15:52	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		08/12/16 15:52	120-82-1		
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/12/16 15:52	71-55-6		
1,1,2-Trichloroethane	ND	ug/L	1.0	1		08/12/16 15:52	79-00-5		
Trichloroethene	ND	ug/L	0.40	1		08/12/16 15:52	79-01-6		
Trichlorofluoromethane	ND	ug/L	1.0	1		08/12/16 15:52	75-69-4	L3	
1,2,3-Trichloropropane	ND	ug/L	4.0	1		08/12/16 15:52	96-18-4		
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		08/12/16 15:52	76-13-1		
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		08/12/16 15:52	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		08/12/16 15:52	108-67-8		
Vinyl chloride	ND	ug/L	1.0	1		08/12/16 15:52	75-01-4		
Xylene (Total)	ND	ug/L	3.0	1		08/12/16 15:52	1330-20-7		
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%.	75-125	1		08/12/16 15:52	17060-07-0		
Toluene-d8 (S)	98	%.	75-125	1		08/12/16 15:52	2037-26-5		
4-Bromofluorobenzene (S)	101	%.	75-125	1		08/12/16 15:52	460-00-4		

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358799

Sample: DPE-7	Lab ID: 10358799009	Collected: 08/10/16 12:40	Received: 08/11/16 11:26	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Acetone	ND	ug/L	20.0	1		08/12/16 16:08	67-64-1	
Allyl chloride	ND	ug/L	4.0	1		08/12/16 16:08	107-05-1	
Benzene	ND	ug/L	1.0	1		08/12/16 16:08	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		08/12/16 16:08	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		08/12/16 16:08	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		08/12/16 16:08	75-27-4	
Bromoform	ND	ug/L	4.0	1		08/12/16 16:08	75-25-2	
Bromomethane	ND	ug/L	4.0	1		08/12/16 16:08	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		08/12/16 16:08	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		08/12/16 16:08	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		08/12/16 16:08	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		08/12/16 16:08	98-06-6	
Carbon tetrachloride	ND	ug/L	4.0	1		08/12/16 16:08	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		08/12/16 16:08	108-90-7	
Chloroethane	ND	ug/L	1.0	1		08/12/16 16:08	75-00-3	
Chloroform	ND	ug/L	1.0	1		08/12/16 16:08	67-66-3	
Chloromethane	ND	ug/L	4.0	1		08/12/16 16:08	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		08/12/16 16:08	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		08/12/16 16:08	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	10.0	1		08/12/16 16:08	96-12-8	
Dibromochloromethane	ND	ug/L	4.0	1		08/12/16 16:08	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		08/12/16 16:08	106-93-4	
Dibromomethane	ND	ug/L	4.0	1		08/12/16 16:08	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		08/12/16 16:08	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		08/12/16 16:08	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		08/12/16 16:08	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		08/12/16 16:08	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/12/16 16:08	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/12/16 16:08	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/12/16 16:08	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/12/16 16:08	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/12/16 16:08	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	1		08/12/16 16:08	75-43-4	
1,2-Dichloropropane	ND	ug/L	4.0	1		08/12/16 16:08	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		08/12/16 16:08	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	1		08/12/16 16:08	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		08/12/16 16:08	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	1		08/12/16 16:08	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	1		08/12/16 16:08	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	1		08/12/16 16:08	60-29-7	
Ethylbenzene	ND	ug/L	1.0	1		08/12/16 16:08	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		08/12/16 16:08	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		08/12/16 16:08	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		08/12/16 16:08	99-87-6	
Methylene Chloride	ND	ug/L	4.0	1		08/12/16 16:08	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		08/12/16 16:08	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		08/12/16 16:08	1634-04-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358799

Sample: DPE-7		Lab ID: 10358799009	Collected: 08/10/16 12:40	Received: 08/11/16 11:26	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Naphthalene	ND	ug/L	4.0	1		08/12/16 16:08	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		08/12/16 16:08	103-65-1	
Styrene	ND	ug/L	1.0	1		08/12/16 16:08	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	4.0	1		08/12/16 16:08	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		08/12/16 16:08	79-34-5	
Tetrachloroethene	5.3	ug/L	1.0	1		08/12/16 16:08	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		08/12/16 16:08	109-99-9	
Toluene	ND	ug/L	1.0	1		08/12/16 16:08	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		08/12/16 16:08	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		08/12/16 16:08	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/12/16 16:08	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		08/12/16 16:08	79-00-5	
Trichloroethene	ND	ug/L	0.40	1		08/12/16 16:08	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		08/12/16 16:08	75-69-4	L3
1,2,3-Trichloropropane	ND	ug/L	4.0	1		08/12/16 16:08	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		08/12/16 16:08	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		08/12/16 16:08	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		08/12/16 16:08	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		08/12/16 16:08	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		08/12/16 16:08	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	102	%.	75-125	1		08/12/16 16:08	17060-07-0	
Toluene-d8 (S)	99	%.	75-125	1		08/12/16 16:08	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	75-125	1		08/12/16 16:08	460-00-4	

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358799

Sample: DPE-8	Lab ID: 10358799010	Collected: 08/10/16 12:55	Received: 08/11/16 11:26	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Acetone	ND	ug/L	100	5		08/15/16 20:38	67-64-1	
Allyl chloride	ND	ug/L	20.0	5		08/15/16 20:38	107-05-1	
Benzene	ND	ug/L	5.0	5		08/15/16 20:38	71-43-2	
Bromobenzene	ND	ug/L	5.0	5		08/15/16 20:38	108-86-1	
Bromochloromethane	ND	ug/L	5.0	5		08/15/16 20:38	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	5		08/15/16 20:38	75-27-4	
Bromoform	ND	ug/L	20.0	5		08/15/16 20:38	75-25-2	
Bromomethane	ND	ug/L	20.0	5		08/15/16 20:38	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	5		08/15/16 20:38	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	5		08/15/16 20:38	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	5		08/15/16 20:38	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	5		08/15/16 20:38	98-06-6	
Carbon tetrachloride	ND	ug/L	20.0	5		08/15/16 20:38	56-23-5	
Chlorobenzene	ND	ug/L	5.0	5		08/15/16 20:38	108-90-7	
Chloroethane	ND	ug/L	5.0	5		08/15/16 20:38	75-00-3	
Chloroform	ND	ug/L	5.0	5		08/15/16 20:38	67-66-3	
Chloromethane	ND	ug/L	20.0	5		08/15/16 20:38	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	5		08/15/16 20:38	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	5		08/15/16 20:38	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	50.0	5		08/15/16 20:38	96-12-8	
Dibromochloromethane	ND	ug/L	20.0	5		08/15/16 20:38	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	5		08/15/16 20:38	106-93-4	
Dibromomethane	ND	ug/L	20.0	5		08/15/16 20:38	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	5		08/15/16 20:38	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	5		08/15/16 20:38	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	5		08/15/16 20:38	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	5		08/15/16 20:38	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	5		08/15/16 20:38	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	5		08/15/16 20:38	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	5		08/15/16 20:38	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	5		08/15/16 20:38	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	5		08/15/16 20:38	156-60-5	
Dichlorofluoromethane	ND	ug/L	5.0	5		08/15/16 20:38	75-43-4	
1,2-Dichloropropane	ND	ug/L	20.0	5		08/15/16 20:38	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	5		08/15/16 20:38	142-28-9	
2,2-Dichloropropane	ND	ug/L	20.0	5		08/15/16 20:38	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	5		08/15/16 20:38	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	20.0	5		08/15/16 20:38	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	20.0	5		08/15/16 20:38	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	20.0	5		08/15/16 20:38	60-29-7	
Ethylbenzene	ND	ug/L	5.0	5		08/15/16 20:38	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	5		08/15/16 20:38	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	5		08/15/16 20:38	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	5		08/15/16 20:38	99-87-6	
Methylene Chloride	ND	ug/L	20.0	5		08/15/16 20:38	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	5		08/15/16 20:38	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	5		08/15/16 20:38	1634-04-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358799

Sample: DPE-8		Lab ID: 10358799010	Collected: 08/10/16 12:55	Received: 08/11/16 11:26	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Naphthalene	ND	ug/L	20.0	5		08/15/16 20:38	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	5		08/15/16 20:38	103-65-1	
Styrene	ND	ug/L	5.0	5		08/15/16 20:38	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	20.0	5		08/15/16 20:38	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	5		08/15/16 20:38	79-34-5	
Tetrachloroethene	429	ug/L	5.0	5		08/15/16 20:38	127-18-4	
Tetrahydrofuran	ND	ug/L	50.0	5		08/15/16 20:38	109-99-9	
Toluene	ND	ug/L	5.0	5		08/15/16 20:38	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	5		08/15/16 20:38	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	5		08/15/16 20:38	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	5		08/15/16 20:38	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	5		08/15/16 20:38	79-00-5	
Trichloroethene	ND	ug/L	2.0	5		08/15/16 20:38	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	5		08/15/16 20:38	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	20.0	5		08/15/16 20:38	96-18-4	
1,1,2-Trichlorotrifluoroethane	45.8	ug/L	5.0	5		08/15/16 20:38	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	5		08/15/16 20:38	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	5		08/15/16 20:38	108-67-8	
Vinyl chloride	ND	ug/L	5.0	5		08/15/16 20:38	75-01-4	
Xylene (Total)	ND	ug/L	15.0	5		08/15/16 20:38	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	100	%.	75-125	5		08/15/16 20:38	17060-07-0	
Toluene-d8 (S)	98	%.	75-125	5		08/15/16 20:38	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125	5		08/15/16 20:38	460-00-4	

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358799

METHOD BLANK: 2341017 Matrix: Water

Associated Lab Samples: 10358799001, 10358799002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,3-Dichloropropene	ug/L	ND	4.0	08/12/16 12:18	
Dibromochloromethane	ug/L	ND	1.0	08/12/16 12:18	N2
Dibromomethane	ug/L	ND	4.0	08/12/16 12:18	
Dichlorodifluoromethane	ug/L	ND	1.0	08/12/16 12:18	N2
Dichlorofluoromethane	ug/L	ND	1.0	08/12/16 12:18	N2
Diethyl ether (Ethyl ether)	ug/L	ND	4.0	08/12/16 12:18	N2
Ethylbenzene	ug/L	ND	1.0	08/12/16 12:18	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	08/12/16 12:18	N2
Isopropylbenzene (Cumene)	ug/L	ND	1.0	08/12/16 12:18	
m&p-Xylene	ug/L	ND	2.0	08/12/16 12:18	N2
Methyl-tert-butyl ether	ug/L	ND	1.0	08/12/16 12:18	N2
Methylene Chloride	ug/L	ND	4.0	08/12/16 12:18	
n-Butylbenzene	ug/L	ND	1.0	08/12/16 12:18	N2
n-Propylbenzene	ug/L	ND	1.0	08/12/16 12:18	N2
Naphthalene	ug/L	ND	4.0	08/12/16 12:18	N2
o-Xylene	ug/L	ND	1.0	08/12/16 12:18	N2
p-Isopropyltoluene	ug/L	ND	1.0	08/12/16 12:18	N2
sec-Butylbenzene	ug/L	ND	1.0	08/12/16 12:18	N2
Styrene	ug/L	ND	1.0	08/12/16 12:18	N2
tert-Butylbenzene	ug/L	ND	1.0	08/12/16 12:18	
Tetrachloroethene	ug/L	ND	1.0	08/12/16 12:18	
Tetrahydrofuran	ug/L	ND	10.0	08/12/16 12:18	N2
Toluene	ug/L	ND	1.0	08/12/16 12:18	
trans-1,2-Dichloroethene	ug/L	ND	1.0	08/12/16 12:18	
trans-1,3-Dichloropropene	ug/L	ND	4.0	08/12/16 12:18	N2
Trichloroethene	ug/L	ND	0.40	08/12/16 12:18	
Trichlorofluoromethane	ug/L	ND	1.0	08/12/16 12:18	
Vinyl chloride	ug/L	ND	0.40	08/12/16 12:18	
Xylene (Total)	ug/L	ND	3.0	08/12/16 12:18	N2
1,2-Dichloroethane-d4 (S)	%	102	75-125	08/12/16 12:18	
4-Bromofluorobenzene (S)	%	99	75-125	08/12/16 12:18	
Toluene-d8 (S)	%	96	75-125	08/12/16 12:18	

LABORATORY CONTROL SAMPLE & LCSD: 2341018 2341019

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	21.4	21.0	107	105	75-126	2	20	N2
1,1,1-Trichloroethane	ug/L	20	20.3	18.9	102	95	72-125	7	20	
1,1,2,2-Tetrachloroethane	ug/L	20	19.5	19.1	98	96	68-125	2	20	
1,1,2-Trichloroethane	ug/L	20	20.3	20.1	101	101	75-125	1	20	
1,1,2-Trichlorotrifluoroethane	ug/L	20	20.5	19.0	102	95	66-132	8	20	N2
1,1-Dichloroethane	ug/L	20	18.2	17.1	91	86	68-126	6	20	
1,1-Dichloroethene	ug/L	20	18.4	17.1	92	85	67-127	7	20	
1,1-Dichloropropene	ug/L	20	18.5	17.1	93	86	71-126	8	20	N2

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358799

LABORATORY CONTROL SAMPLE & LCSD: 2341018		2341019									
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers	
1,2,3-Trichlorobenzene	ug/L	20	21.0	22.2	105	111	63-132	5	20	N2	
1,2,3-Trichloropropane	ug/L	20	20.7	20.7	104	103	72-125	0	20	N2	
1,2,4-Trichlorobenzene	ug/L	20	20.4	20.1	102	101	59-135	1	20		
1,2,4-Trimethylbenzene	ug/L	20	21.9	21.0	110	105	70-132	4	20	N2	
1,2-Dibromo-3-chloropropane	ug/L	50	53.0	51.6	106	103	58-130	3	20	N2	
1,2-Dibromoethane (EDB)	ug/L	20	20.9	20.9	105	104	75-125	0	20	N2	
1,2-Dichlorobenzene	ug/L	20	20.6	20.3	103	102	74-125	1	20		
1,2-Dichloroethane	ug/L	20	19.1	18.1	96	90	71-125	5	20		
1,2-Dichloropropane	ug/L	20	19.4	19.2	97	96	72-125	1	20		
1,3,5-Trimethylbenzene	ug/L	20	21.7	20.9	108	105	73-125	3	20	N2	
1,3-Dichlorobenzene	ug/L	20	20.4	20.2	102	101	74-125	1	20		
1,3-Dichloropropane	ug/L	20	19.7	18.9	99	95	75-125	4	20		
1,4-Dichlorobenzene	ug/L	20	19.4	19.0	97	95	74-125	2	20		
2,2-Dichloropropane	ug/L	20	21.1	20.1	106	101	64-138	5	20	N2	
2-Butanone (MEK)	ug/L	100	97.5	89.6	97	90	61-129	8	20	N2	
2-Chloroethylvinyl ether	ug/L	50	43.4	42.7	87	85	30-150	1	20		
2-Chlorotoluene	ug/L	20	19.7	19.2	99	96	70-126	3	20	N2	
4-Chlorotoluene	ug/L	20	20.1	19.5	100	97	73-125	3	20	N2	
4-Methyl-2-pentanone (MIBK)	ug/L	100	106	104	106	104	63-135	2	20	N2	
Acetone	ug/L	100	88.6	96.0	89	96	66-150	8	20	N2	
Allyl chloride	ug/L	20	17.2	15.8	86	79	62-139	9	20	N2	
Benzene	ug/L	20	19.4	18.1	97	91	67-126	7	20		
Bromobenzene	ug/L	20	21.0	20.5	105	103	72-125	3	20	N2	
Bromochloromethane	ug/L	20	21.6	20.0	108	100	73-125	8	20	N2	
Bromodichloromethane	ug/L	20	20.6	21.5	103	108	71-126	4	20		
Bromoform	ug/L	20	19.1	19.5	96	97	64-130	2	20		
Bromomethane	ug/L	20	12.2	15.1	61	76	30-150	21	20	R1	
Carbon tetrachloride	ug/L	20	21.1	20.2	105	101	71-128	4	20		
Chlorobenzene	ug/L	20	19.7	19.6	99	98	75-125	1	20		
Chloroethane	ug/L	20	19.5	18.9	98	94	60-130	3	20		
Chloroform	ug/L	20	19.9	18.8	100	94	73-125	6	20		
Chloromethane	ug/L	20	17.6	17.2	88	86	49-146	2	20		
cis-1,2-Dichloroethene	ug/L	20	19.0	18.1	95	90	68-131	5	20	N2	
cis-1,3-Dichloropropene	ug/L	20	21.2	21.5	106	108	73-125	2	20		
Dibromochloromethane	ug/L	20	21.4	21.8	107	109	71-125	2	20	N2	
Dibromomethane	ug/L	20	21.1	21.0	106	105	71-131	1	20		
Dichlorodifluoromethane	ug/L	20	17.9	17.1	89	86	56-145	4	20	N2	
Dichlorofluoromethane	ug/L	20	20.4	19.0	102	95	69-128	7	20	N2	
Diethyl ether (Ethyl ether)	ug/L	20	18.3	17.6	91	88	65-127	4	20	N2	
Ethylbenzene	ug/L	20	19.5	19.2	98	96	75-125	2	20		
Hexachloro-1,3-butadiene	ug/L	20	22.5	22.1	112	111	62-145	1	20	N2	
Isopropylbenzene (Cumene)	ug/L	20	20.4	20.3	102	102	75-133	0	20		
m&p-Xylene	ug/L	40	41.4	39.7	103	99	75-126	4	20	N2	
Methyl-tert-butyl ether	ug/L	20	19.1	18.8	95	94	73-125	1	20	N2	
Methylene Chloride	ug/L	20	18.7	17.5	94	87	72-128	7	20		
n-Butylbenzene	ug/L	20	20.5	20.3	103	102	67-131	1	20	N2	
n-Propylbenzene	ug/L	20	19.3	18.5	96	92	70-128	4	20	N2	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358799

LABORATORY CONTROL SAMPLE & LCSD: 2341018		2341019								
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Naphthalene	ug/L	20	18.7	18.9	94	95	54-139	1	20	N2
o-Xylene	ug/L	20	19.9	19.5	100	97	75-125	2	20	N2
p-Isopropyltoluene	ug/L	20	22.2	21.8	111	109	71-128	2	20	N2
sec-Butylbenzene	ug/L	20	19.6	19.3	98	96	73-132	2	20	N2
Styrene	ug/L	20	19.6	19.5	98	98	75-128	0	20	N2
tert-Butylbenzene	ug/L	20	19.5	19.0	97	95	75-130	3	20	
Tetrachloroethene	ug/L	20	20.7	20.1	104	100	67-129	3	20	
Tetrahydrofuran	ug/L	200	180	200	90	100	73-137	11	20	N2
Toluene	ug/L	20	18.9	18.1	94	91	74-125	4	20	
trans-1,2-Dichloroethene	ug/L	20	18.9	17.5	95	88	65-128	8	20	
trans-1,3-Dichloropropene	ug/L	20	19.8	19.6	99	98	75-125	1	20	N2
Trichloroethene	ug/L	20	20.7	20.2	104	101	72-125	3	20	
Trichlorofluoromethane	ug/L	20	19.5	18.6	98	93	70-132	5	20	
Vinyl chloride	ug/L	20	17.9	17.0	90	85	69-130	5	20	
Xylene (Total)	ug/L	60	61.3	59.2	102	99	75-125	4	20	N2
1,2-Dichloroethane-d4 (S)	%				97	94	75-125			
4-Bromofluorobenzene (S)	%				96	94	75-125			
Toluene-d8 (S)	%				96	97	75-125			

MATRIX SPIKE SAMPLE: 2341035		10358799001	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	20.5	103	55-147	N2
1,1,1-Trichloroethane	ug/L	ND	20	20.8	104	45-150	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	19.1	95	52-143	
1,1,2-Trichloroethane	ug/L	ND	20	19.2	96	57-139	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	20	25.2	126	40-150	N2
1,1-Dichloroethane	ug/L	ND	20	17.8	89	46-150	
1,1-Dichloroethene	ug/L	ND	20	19.2	96	42-150	
1,1-Dichloropropene	ug/L	ND	20	19.1	96	45-150	N2
1,2,3-Trichlorobenzene	ug/L	ND	20	21.9	110	51-142	N2
1,2,3-Trichloropropane	ug/L	ND	20	20.4	102	55-142	N2
1,2,4-Trichlorobenzene	ug/L	ND	20	21.3	106	50-143	
1,2,4-Trimethylbenzene	ug/L	ND	20	21.2	106	51-147	N2
1,2-Dibromo-3-chloropropane	ug/L	ND	50	53.2	106	44-149	N2
1,2-Dibromoethane (EDB)	ug/L	ND	20	19.9	99	60-138	N2
1,2-Dichlorobenzene	ug/L	ND	20	20.2	101	55-137	
1,2-Dichloroethane	ug/L	ND	20	17.7	89	50-139	
1,2-Dichloropropane	ug/L	ND	20	19.4	97	61-145	
1,3,5-Trimethylbenzene	ug/L	ND	20	21.4	107	34-150	N2
1,3-Dichlorobenzene	ug/L	ND	20	20.5	102	53-138	
1,3-Dichloropropane	ug/L	ND	20	19.0	95	58-139	
1,4-Dichlorobenzene	ug/L	ND	20	19.1	95	52-135	
2,2-Dichloropropane	ug/L	ND	20	21.2	106	30-150	N2
2-Butanone (MEK)	ug/L	ND	100	88.9	89	30-150	N2

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358799

MATRIX SPIKE SAMPLE:	2341035	10358799001	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
2-Chloroethylvinyl ether	ug/L	ND	50	3.4J	7	30-125	P5
2-Chlorotoluene	ug/L	ND	20	19.7	98	52-146	N2
4-Chlorotoluene	ug/L	ND	20	19.9	99	43-142	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	102	102	46-148	N2
Acetone	ug/L	ND	100	98.9	93	44-150	N2
Allyl chloride	ug/L	ND	20	17.0	85	40-150	N2
Benzene	ug/L	ND	20	18.4	92	49-143	
Bromobenzene	ug/L	ND	20	21.2	106	58-139	N2
Bromochloromethane	ug/L	ND	20	20.7	103	53-144	N2
Bromodichloromethane	ug/L	ND	20	21.1	105	49-145	
Bromoform	ug/L	ND	20	19.4	97	42-142	
Bromomethane	ug/L	ND	20	18.3	91	30-150	
Carbon tetrachloride	ug/L	ND	20	22.1	110	30-150	
Chlorobenzene	ug/L	ND	20	19.7	99	57-137	
Chloroethane	ug/L	ND	20	20.5	103	39-150	
Chloroform	ug/L	ND	20	19.3	96	52-147	
Chloromethane	ug/L	ND	20	17.3	87	45-150	
cis-1,2-Dichloroethene	ug/L	ND	20	18.4	92	44-149	N2
cis-1,3-Dichloropropene	ug/L	ND	20	20.6	103	45-140	
Dibromochloromethane	ug/L	ND	20	22.1	110	49-144	N2
Dibromomethane	ug/L	ND	20	20.3	102	59-142	
Dichlorodifluoromethane	ug/L	ND	20	22.2	111	46-150	N2
Dichlorofluoromethane	ug/L	ND	20	20.4	102	53-150	N2
Diethyl ether (Ethyl ether)	ug/L	ND	20	17.4	87	45-146	N2
Ethylbenzene	ug/L	ND	20	19.5	98	49-141	
Hexachloro-1,3-butadiene	ug/L	ND	20	25.4	127	33-150	N2
Isopropylbenzene (Cumene)	ug/L	ND	20	20.5	103	50-150	
m&p-Xylene	ug/L	ND	40	40.1	100	44-150	N2
Methyl-tert-butyl ether	ug/L	ND	20	18.2	91	52-138	N2
Methylene Chloride	ug/L	ND	20	17.4	87	43-149	
n-Butylbenzene	ug/L	ND	20	22.0	110	46-150	N2
n-Propylbenzene	ug/L	ND	20	19.1	96	44-150	N2
Naphthalene	ug/L	ND	20	19.0	95	45-149	N2
o-Xylene	ug/L	ND	20	19.6	98	48-146	N2
p-Isopropyltoluene	ug/L	ND	20	23.0	115	54-147	N2
sec-Butylbenzene	ug/L	ND	20	20.5	102	51-150	N2
Styrene	ug/L	ND	20	19.3	96	47-149	N2
tert-Butylbenzene	ug/L	ND	20	20.2	101	49-149	
Tetrachloroethene	ug/L	21.1	20	42.1	105	30-150	
Tetrahydrofuran	ug/L	ND	200	195	97	52-150	N2
Toluene	ug/L	ND	20	19.2	96	48-141	
trans-1,2-Dichloroethene	ug/L	ND	20	19.2	96	42-150	
trans-1,3-Dichloropropene	ug/L	ND	20	19.3	96	45-143	N2
Trichloroethene	ug/L	ND	20	21.9	109	38-150	
Trichlorofluoromethane	ug/L	ND	20	22.7	113	57-150	
Vinyl chloride	ug/L	ND	20	19.3	97	43-150	
Xylene (Total)	ug/L	ND	60	59.7	99	45-149	N2

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358799

MATRIX SPIKE SAMPLE: 2341035		10358799001	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
1,2-Dichloroethane-d4 (S)	%.				93	75-125	
4-Bromofluorobenzene (S)	%.				98	75-125	
Toluene-d8 (S)	%.				96	75-125	

SAMPLE DUPLICATE: 2341036

Parameter	Units	10358799002	Dup	RPD	Max	Qualifiers
		Result	Result		RPD	
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		30	N2
1,1,1-Trichloroethane	ug/L	ND	ND		30	
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,2-Trichloroethane	ug/L	ND	ND		30	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	ND		30	N2
1,1-Dichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethene	ug/L	ND	ND		30	
1,1-Dichloropropene	ug/L	ND	ND		30	N2
1,2,3-Trichlorobenzene	ug/L	ND	ND		30	N2
1,2,3-Trichloropropane	ug/L	ND	ND		30	N2
1,2,4-Trichlorobenzene	ug/L	ND	ND		30	
1,2,4-Trimethylbenzene	ug/L	ND	ND		30	N2
1,2-Dibromo-3-chloropropane	ug/L	ND	ND		30	N2
1,2-Dibromoethane (EDB)	ug/L	ND	ND		30	N2
1,2-Dichlorobenzene	ug/L	ND	ND		30	
1,2-Dichloroethane	ug/L	ND	ND		30	
1,2-Dichloropropane	ug/L	ND	ND		30	
1,3,5-Trimethylbenzene	ug/L	ND	ND		30	N2
1,3-Dichlorobenzene	ug/L	ND	ND		30	
1,3-Dichloropropane	ug/L	ND	ND		30	
1,4-Dichlorobenzene	ug/L	ND	ND		30	
2,2-Dichloropropane	ug/L	ND	ND		30	N2
2-Butanone (MEK)	ug/L	ND	ND		30	N2
2-Chloroethylvinyl ether	ug/L	ND	ND		30	
2-Chlorotoluene	ug/L	ND	ND		30	N2
4-Chlorotoluene	ug/L	ND	ND		30	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND		30	N2
Acetone	ug/L	ND	10J		30	N2
Allyl chloride	ug/L	ND	ND		30	N2
Benzene	ug/L	ND	ND		30	
Bromobenzene	ug/L	ND	ND		30	N2
Bromochloromethane	ug/L	ND	ND		30	N2
Bromodichloromethane	ug/L	ND	ND		30	
Bromoform	ug/L	ND	ND		30	
Bromomethane	ug/L	ND	ND		30	
Carbon tetrachloride	ug/L	ND	ND		30	
Chlorobenzene	ug/L	ND	ND		30	
Chloroethane	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358799

SAMPLE DUPLICATE: 2341036

Parameter	Units	10358799002 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloroform	ug/L	ND	ND		30	
Chloromethane	ug/L	ND	ND		30	
cis-1,2-Dichloroethene	ug/L	ND	ND		30	N2
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	N2
Dibromomethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	N2
Dichlorofluoromethane	ug/L	ND	ND		30	N2
Diethyl ether (Ethyl ether)	ug/L	ND	ND		30	N2
Ethylbenzene	ug/L	ND	ND		30	
Hexachloro-1,3-butadiene	ug/L	ND	ND		30	N2
Isopropylbenzene (Cumene)	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	N2
Methyl-tert-butyl ether	ug/L	ND	ND		30	N2
Methylene Chloride	ug/L	ND	ND		30	
n-Butylbenzene	ug/L	ND	ND		30	N2
n-Propylbenzene	ug/L	ND	ND		30	N2
Naphthalene	ug/L	ND	ND		30	N2
o-Xylene	ug/L	ND	ND		30	N2
p-Isopropyltoluene	ug/L	ND	ND		30	N2
sec-Butylbenzene	ug/L	ND	ND		30	N2
Styrene	ug/L	ND	ND		30	N2
tert-Butylbenzene	ug/L	ND	ND		30	
Tetrachloroethene	ug/L	ND	.36J		30	
Tetrahydrofuran	ug/L	ND	ND		30	N2
Toluene	ug/L	ND	ND		30	
trans-1,2-Dichloroethene	ug/L	ND	ND		30	
trans-1,3-Dichloropropene	ug/L	ND	ND		30	N2
Trichloroethene	ug/L	ND	ND		30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	N2
1,2-Dichloroethane-d4 (S)	%	99	102	3		
4-Bromofluorobenzene (S)	%	96	95	1		
Toluene-d8 (S)	%	95	95	1		

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358799

METHOD BLANK: 2341044 Matrix: Water
Associated Lab Samples: 10358799008, 10358799009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromochloromethane	ug/L	ND	4.0	08/12/16 10:57	
Dibromomethane	ug/L	ND	4.0	08/12/16 10:57	
Dichlorodifluoromethane	ug/L	ND	1.0	08/12/16 10:57	
Dichlorofluoromethane	ug/L	ND	1.0	08/12/16 10:57	
Diethyl ether (Ethyl ether)	ug/L	ND	4.0	08/12/16 10:57	
Ethylbenzene	ug/L	ND	1.0	08/12/16 10:57	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	08/12/16 10:57	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	08/12/16 10:57	
Methyl-tert-butyl ether	ug/L	ND	1.0	08/12/16 10:57	
Methylene Chloride	ug/L	ND	4.0	08/12/16 10:57	
n-Butylbenzene	ug/L	ND	1.0	08/12/16 10:57	
n-Propylbenzene	ug/L	ND	1.0	08/12/16 10:57	
Naphthalene	ug/L	ND	4.0	08/12/16 10:57	
p-Isopropyltoluene	ug/L	ND	1.0	08/12/16 10:57	
sec-Butylbenzene	ug/L	ND	1.0	08/12/16 10:57	
Styrene	ug/L	ND	1.0	08/12/16 10:57	
tert-Butylbenzene	ug/L	ND	1.0	08/12/16 10:57	
Tetrachloroethene	ug/L	ND	1.0	08/12/16 10:57	
Tetrahydrofuran	ug/L	ND	10.0	08/12/16 10:57	
Toluene	ug/L	ND	1.0	08/12/16 10:57	
trans-1,2-Dichloroethene	ug/L	ND	1.0	08/12/16 10:57	
trans-1,3-Dichloropropene	ug/L	ND	4.0	08/12/16 10:57	
Trichloroethene	ug/L	ND	0.40	08/12/16 10:57	
Trichlorofluoromethane	ug/L	ND	1.0	08/12/16 10:57	
Vinyl chloride	ug/L	ND	1.0	08/12/16 10:57	D1
Xylene (Total)	ug/L	ND	3.0	08/12/16 10:57	
1,2-Dichloroethane-d4 (S)	%	98	75-125	08/12/16 10:57	
4-Bromofluorobenzene (S)	%	99	75-125	08/12/16 10:57	
Toluene-d8 (S)	%	98	75-125	08/12/16 10:57	

LABORATORY CONTROL SAMPLE & LCSD: 2341045

Parameter	Units	Spike Conc.	2341046				% Rec Limits	RPD	Max RPD	Qualifiers
			LCS Result	LCSD Result	LCS % Rec	LCSD % Rec				
1,1,1,2-Tetrachloroethane	ug/L	20	21.2	21.9	106	109	75-125	3	20	
1,1,1-Trichloroethane	ug/L	20	20.2	21.3	101	106	73-125	5	20	
1,1,2,2-Tetrachloroethane	ug/L	20	18.9	21.1	95	105	75-128	11	20	
1,1,2-Trichloroethane	ug/L	20	20.0	21.1	100	105	75-129	5	20	
1,1,2-Trichlorotrifluoroethane	ug/L	20	20.2	22.4	101	112	69-125	10	20	
1,1-Dichloroethane	ug/L	20	18.8	20.2	94	101	75-131	7	20	
1,1-Dichloroethene	ug/L	20	18.8	20.8	94	104	72-125	10	20	
1,1-Dichloropropene	ug/L	20	19.3	20.7	96	104	74-125	7	20	
1,2,3-Trichlorobenzene	ug/L	20	18.4	19.7	92	99	68-127	7	20	
1,2,3-Trichloropropane	ug/L	20	18.7	20.2	94	101	75-125	8	20	
1,2,4-Trichlorobenzene	ug/L	20	19.0	19.8	95	99	70-125	4	20	

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358799

LABORATORY CONTROL SAMPLE & LCSD: 2341045		2341046								
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	20.0	21.5	100	108	75-130	7	20	
1,2-Dibromo-3-chloropropane	ug/L	50	48.0	51.6	96	103	74-125	7	20	
1,2-Dibromoethane (EDB)	ug/L	20	20.0	21.1	100	106	75-125	5	20	
1,2-Dichlorobenzene	ug/L	20	18.9	20.4	94	102	75-125	8	20	
1,2-Dichloroethane	ug/L	20	18.1	19.7	91	98	72-129	8	20	
1,2-Dichloropropane	ug/L	20	19.3	20.3	97	102	71-129	5	20	
1,3,5-Trimethylbenzene	ug/L	20	19.2	20.3	96	102	75-127	6	20	
1,3-Dichlorobenzene	ug/L	20	18.2	19.7	91	99	75-125	8	20	
1,3-Dichloropropane	ug/L	20	19.5	20.3	98	101	75-125	4	20	
1,4-Dichlorobenzene	ug/L	20	17.6	18.4	88	92	75-125	4	20	
2,2-Dichloropropane	ug/L	20	20.6	22.2	103	111	71-125	8	20	
2-Butanone (MEK)	ug/L	100	96.4	103	96	103	58-150	7	20	
2-Chlorotoluene	ug/L	20	19.0	20.3	95	101	75-125	7	20	
4-Chlorotoluene	ug/L	20	18.4	19.3	92	97	75-130	5	20	
4-Methyl-2-pentanone (MIBK)	ug/L	100	98.4	104	98	104	72-140	6	20	
Acetone	ug/L	100	99.6	106	100	106	69-137	6	20	
Allyl chloride	ug/L	20	21.0	22.8	105	114	68-132	8	20	
Benzene	ug/L	20	19.3	20.9	97	104	75-125	7	20	
Bromobenzene	ug/L	20	20.2	21.7	101	109	75-125	7	20	
Bromochloromethane	ug/L	20	20.6	23.3	103	117	75-125	12	20	
Bromodichloromethane	ug/L	20	21.4	21.7	107	109	69-128	1	20	
Bromoform	ug/L	20	18.5	18.5	93	92	75-125	0	20	
Bromomethane	ug/L	20	24.7	25.4	123	127	30-150	3	20	
Carbon tetrachloride	ug/L	20	21.2	22.4	106	112	74-125	6	20	
Chlorobenzene	ug/L	20	19.3	20.3	97	101	75-125	5	20	
Chloroethane	ug/L	20	22.4	25.0	112	125	60-150	11	20	
Chloroform	ug/L	20	21.0	22.8	105	114	75-126	8	20	
Chloromethane	ug/L	20	25.4	22.0	127	110	46-150	15	20	
cis-1,2-Dichloroethene	ug/L	20	18.7	19.8	93	99	75-126	6	20	
cis-1,3-Dichloropropene	ug/L	20	20.8	20.9	104	105	75-125	0	20	
Dibromochloromethane	ug/L	20	19.1	19.2	96	96	75-125	0	20	
Dibromomethane	ug/L	20	20.5	20.8	103	104	72-127	1	20	
Dichlorodifluoromethane	ug/L	20	21.4	22.1	107	110	58-135	3	20	
Dichlorofluoromethane	ug/L	20	21.4	23.5	107	117	68-149	10	20	
Diethyl ether (Ethyl ether)	ug/L	20	19.6	20.9	98	104	66-144	6	20	
Ethylbenzene	ug/L	20	18.9	19.6	95	98	75-125	4	20	
Hexachloro-1,3-butadiene	ug/L	20	20.5	21.0	103	105	73-125	3	20	
Isopropylbenzene (Cumene)	ug/L	20	19.3	20.0	97	100	69-140	4	20	
Methyl-tert-butyl ether	ug/L	20	18.8	21.1	94	105	75-126	12	20	
Methylene Chloride	ug/L	20	18.7	20.3	94	101	71-130	8	20	
n-Butylbenzene	ug/L	20	20.2	20.7	101	103	71-129	2	20	
n-Propylbenzene	ug/L	20	18.6	20.0	93	100	71-133	7	20	
Naphthalene	ug/L	20	17.4	18.3	87	92	59-137	5	20	
p-Isopropyltoluene	ug/L	20	20.7	21.5	104	107	74-127	3	20	
sec-Butylbenzene	ug/L	20	18.9	19.4	94	97	66-140	3	20	
Styrene	ug/L	20	19.0	19.9	95	99	75-125	4	20	
tert-Butylbenzene	ug/L	20	18.4	19.6	92	98	73-129	7	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358799

LABORATORY CONTROL SAMPLE & LCSD: 2341045		2341046								
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Tetrachloroethene	ug/L	20	20.2	20.5	101	102	75-125	1	20	
Tetrahydrofuran	ug/L	200	193	210	97	105	71-129	8	20	
Toluene	ug/L	20	19.3	20.5	97	102	75-125	6	20	
trans-1,2-Dichloroethene	ug/L	20	19.5	21.1	98	105	75-125	8	20	
trans-1,3-Dichloropropene	ug/L	20	18.5	19.2	92	96	75-125	4	20	
Trichloroethene	ug/L	20	20.7	21.4	104	107	75-125	3	20	
Trichlorofluoromethane	ug/L	20	24.1	25.8	121	129	74-128	7	20 LO	
Vinyl chloride	ug/L	20	20.5	21.7	103	108	71-131	6	20	
Xylene (Total)	ug/L	60	56.8	59.9	95	100	75-125	5	20	
1,2-Dichloroethane-d4 (S)	%				99	104	75-125			
4-Bromofluorobenzene (S)	%				98	100	75-125			
Toluene-d8 (S)	%				100	101	75-125			

MATRIX SPIKE SAMPLE: 2342113		10358800005		Spike		MS		% Rec		Qualifiers
Parameter	Units	Result	Conc.	Result	% Rec	Limit	Qualifiers			
1,1,1,2-Tetrachloroethane	ug/L	ND	20	22.0	110	75-125				
1,1,1-Trichloroethane	ug/L	ND	20	24.5	122	71-144				
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20.1	101	75-131				
1,1,2-Trichloroethane	ug/L	ND	20	21.2	106	75-125				
1,1,2-Trichlorotrifluoroethane	ug/L	ND	20	25.7	128	75-150				
1,1-Dichloroethane	ug/L	ND	20	23.0	115	64-150				
1,1-Dichloroethene	ug/L	ND	20	23.8	119	68-150				
1,1-Dichloropropene	ug/L	ND	20	24.2	121	68-145				
1,2,3-Trichlorobenzene	ug/L	ND	20	18.2	91	57-142				
1,2,3-Trichloropropane	ug/L	ND	20	20.7	103	75-125				
1,2,4-Trichlorobenzene	ug/L	ND	20	19.1	96	60-135				
1,2,4-Trimethylbenzene	ug/L	ND	20	21.1	105	67-148				
1,2-Dibromo-3-chloropropane	ug/L	ND	50	45.2	90	32-137				
1,2-Dibromoethane (EDB)	ug/L	ND	20	21.1	106	75-125				
1,2-Dichlorobenzene	ug/L	ND	20	19.5	97	75-125				
1,2-Dichloroethane	ug/L	ND	20	20.3	101	62-138				
1,2-Dichloropropane	ug/L	ND	20	21.7	109	62-144				
1,3,5-Trimethylbenzene	ug/L	ND	20	19.9	100	67-148				
1,3-Dichlorobenzene	ug/L	ND	20	19.7	98	74-131				
1,3-Dichloropropane	ug/L	ND	20	20.7	104	75-127				
1,4-Dichlorobenzene	ug/L	ND	20	18.7	94	74-126				
2,2-Dichloropropane	ug/L	ND	20	24.9	125	56-146				
2-Butanone (MEK)	ug/L	ND	100	94.2	94	47-150				
2-Chlorotoluene	ug/L	ND	20	20.9	104	74-137				
4-Chlorotoluene	ug/L	ND	20	19.9	100	72-138				
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	96.0	96	60-147				
Acetone	ug/L	ND	100	98.7	99	61-150				
Allyl chloride	ug/L	ND	20	23.0	115	53-150				
Benzene	ug/L	ND	20	21.2	106	52-147				

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358799

MATRIX SPIKE SAMPLE:	2342113	10358800005	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Bromobenzene	ug/L	ND	20	21.0	105	75-129	
Bromochloromethane	ug/L	ND	20	22.7	113	72-128	
Bromodichloromethane	ug/L	ND	20	21.6	108	65-137	
Bromoform	ug/L	ND	20	18.3	91	59-133	
Bromomethane	ug/L	ND	20	14.7	74	30-150	
Carbon tetrachloride	ug/L	ND	20	23.7	119	73-144	
Chlorobenzene	ug/L	ND	20	20.6	103	75-126	
Chloroethane	ug/L	ND	20	41.3	207	55-150	M1
Chloroform	ug/L	ND	20	23.1	111	66-143	
Chloromethane	ug/L	ND	20	23.3	113	42-150	
cis-1,2-Dichloroethene	ug/L	ND	20	21.1	106	65-143	
cis-1,3-Dichloropropene	ug/L	ND	20	21.1	105	75-125	
Dibromochloromethane	ug/L	ND	20	18.7	94	75-125	
Dibromomethane	ug/L	ND	20	21.0	105	66-133	
Dichlorodifluoromethane	ug/L	ND	20	27.4	137	74-150	
Dichlorofluoromethane	ug/L	ND	20	25.3	127	68-150	
Diethyl ether (Ethyl ether)	ug/L	ND	20	21.2	106	57-148	
Ethylbenzene	ug/L	ND	20	20.5	103	67-149	
Hexachloro-1,3-butadiene	ug/L	ND	20	22.0	110	65-143	
Isopropylbenzene (Cumene)	ug/L	ND	20	21.0	105	64-150	
Methyl-tert-butyl ether	ug/L	ND	20	20.5	103	71-130	
Methylene Chloride	ug/L	ND	20	20.4	102	67-137	
n-Butylbenzene	ug/L	ND	20	20.7	103	70-138	
n-Propylbenzene	ug/L	ND	20	20.8	104	70-148	
Naphthalene	ug/L	ND	20	16.3	82	39-150	
p-Isopropyltoluene	ug/L	ND	20	20.8	104	74-138	
sec-Butylbenzene	ug/L	ND	20	20.6	103	64-150	
Styrene	ug/L	ND	20	19.8	99	75-132	
tert-Butylbenzene	ug/L	ND	20	20.5	103	75-138	
Tetrachloroethene	ug/L	1.6	20	23.7	111	73-136	
Tetrahydrofuran	ug/L	ND	200	201	101	68-142	
Toluene	ug/L	ND	20	20.7	103	69-139	
trans-1,2-Dichloroethene	ug/L	ND	20	22.9	114	75-135	
trans-1,3-Dichloropropene	ug/L	ND	20	19.2	96	66-136	
Trichloroethene	ug/L	ND	20	22.7	113	74-135	
Trichlorofluoromethane	ug/L	ND	20	31.1	156	75-150	M1
Vinyl chloride	ug/L	ND	20	25.3	127	69-150	
Xylene (Total)	ug/L	ND	60	61.9	103	70-147	
1,2-Dichloroethane-d4 (S)	%				103	75-125	
4-Bromofluorobenzene (S)	%				102	75-125	
Toluene-d8 (S)	%				100	75-125	

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358799

SAMPLE DUPLICATE: 2342115

Parameter	Units	10358800006 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,1-Trichloroethane	ug/L	ND	ND		30	
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,2-Trichloroethane	ug/L	ND	ND		30	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	ND		30	
1,1-Dichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethene	ug/L	ND	ND		30	
1,1-Dichloropropene	ug/L	ND	ND		30	
1,2,3-Trichlorobenzene	ug/L	ND	ND		30	
1,2,3-Trichloropropane	ug/L	ND	ND		30	
1,2,4-Trichlorobenzene	ug/L	ND	ND		30	
1,2,4-Trimethylbenzene	ug/L	ND	ND		30	
1,2-Dibromo-3-chloropropane	ug/L	ND	ND		30	
1,2-Dibromoethane (EDB)	ug/L	ND	ND		30	
1,2-Dichlorobenzene	ug/L	ND	ND		30	
1,2-Dichloroethane	ug/L	ND	ND		30	
1,2-Dichloropropane	ug/L	ND	ND		30	
1,3,5-Trimethylbenzene	ug/L	ND	ND		30	
1,3-Dichlorobenzene	ug/L	ND	ND		30	
1,3-Dichloropropane	ug/L	ND	ND		30	
1,4-Dichlorobenzene	ug/L	ND	ND		30	
2,2-Dichloropropane	ug/L	ND	ND		30	
2-Butanone (MEK)	ug/L	ND	ND		30	
2-Chlorotoluene	ug/L	ND	ND		30	
4-Chlorotoluene	ug/L	ND	ND		30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND		30	
Acetone	ug/L	ND	ND		30	
Allyl chloride	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Bromobenzene	ug/L	ND	ND		30	
Bromochloromethane	ug/L	ND	ND		30	
Bromodichloromethane	ug/L	ND	ND		30	
Bromoform	ug/L	ND	ND		30	
Bromomethane	ug/L	ND	ND		30	
Carbon tetrachloride	ug/L	ND	ND		30	
Chlorobenzene	ug/L	ND	ND		30	
Chloroethane	ug/L	ND	ND		30	
Chloroform	ug/L	ND	ND		30	
Chloromethane	ug/L	ND	ND		30	
cis-1,2-Dichloroethene	ug/L	ND	ND		30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dibromomethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	
Dichlorofluoromethane	ug/L	ND	ND		30	
Diethyl ether (Ethyl ether)	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358799

SAMPLE DUPLICATE: 2342115

Parameter	Units	10358800006 Result	Dup Result	RPD	Max RPD	Qualifiers
Hexachloro-1,3-butadiene	ug/L	ND	ND		30	
Isopropylbenzene (Cumene)	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Methylene Chloride	ug/L	ND	ND		30	
n-Butylbenzene	ug/L	ND	ND		30	
n-Propylbenzene	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
p-Isopropyltoluene	ug/L	ND	ND		30	
sec-Butylbenzene	ug/L	ND	ND		30	
Styrene	ug/L	ND	ND		30	
tert-Butylbenzene	ug/L	ND	ND		30	
Tetrachloroethene	ug/L	1.8	2.0	8	30	
Tetrahydrofuran	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
trans-1,2-Dichloroethene	ug/L	ND	ND		30	
trans-1,3-Dichloropropene	ug/L	ND	ND		30	
Trichloroethene	ug/L	ND	ND		30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	101	103	2		
4-Bromofluorobenzene (S)	%	99	100	1		
Toluene-d8 (S)	%	99	99	0		

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358799

QC Batch: 430489 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260B MSV 465 W
Associated Lab Samples: 10358799003, 10358799004, 10358799005, 10358799006, 10358799007

METHOD BLANK: 2342120 Matrix: Water
Associated Lab Samples: 10358799003, 10358799004, 10358799005, 10358799006, 10358799007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	4.0	08/13/16 16:46	
1,1,1-Trichloroethane	ug/L	ND	1.0	08/13/16 16:46	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	08/13/16 16:46	
1,1,2-Trichloroethane	ug/L	ND	1.0	08/13/16 16:46	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	08/13/16 16:46	
1,1-Dichloroethane	ug/L	ND	4.0	08/13/16 16:46	
1,1-Dichloroethene	ug/L	ND	1.0	08/13/16 16:46	
1,1-Dichloropropene	ug/L	ND	1.0	08/13/16 16:46	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	08/13/16 16:46	
1,2,3-Trichloropropane	ug/L	ND	4.0	08/13/16 16:46	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	08/13/16 16:46	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	08/13/16 16:46	
1,2-Dibromo-3-chloropropane	ug/L	ND	10.0	08/13/16 16:46	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	08/13/16 16:46	
1,2-Dichlorobenzene	ug/L	ND	1.0	08/13/16 16:46	
1,2-Dichloroethane	ug/L	ND	1.0	08/13/16 16:46	
1,2-Dichloropropane	ug/L	ND	4.0	08/13/16 16:46	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	08/13/16 16:46	
1,3-Dichlorobenzene	ug/L	ND	1.0	08/13/16 16:46	
1,3-Dichloropropane	ug/L	ND	1.0	08/13/16 16:46	
1,4-Dichlorobenzene	ug/L	ND	1.0	08/13/16 16:46	
2,2-Dichloropropane	ug/L	ND	4.0	08/13/16 16:46	
2-Butanone (MEK)	ug/L	ND	5.0	08/13/16 16:46	
2-Chlorotoluene	ug/L	ND	1.0	08/13/16 16:46	
4-Chlorotoluene	ug/L	ND	1.0	08/13/16 16:46	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	08/13/16 16:46	
Acetone	ug/L	ND	20.0	08/13/16 16:46	
Allyl chloride	ug/L	ND	4.0	08/13/16 16:46	
Benzene	ug/L	ND	1.0	08/13/16 16:46	
Bromobenzene	ug/L	ND	1.0	08/13/16 16:46	
Bromochloromethane	ug/L	ND	1.0	08/13/16 16:46	
Bromodichloromethane	ug/L	ND	1.0	08/13/16 16:46	
Bromoform	ug/L	ND	10.0	08/13/16 16:46	
Bromomethane	ug/L	ND	4.0	08/13/16 16:46	
Carbon tetrachloride	ug/L	ND	4.0	08/13/16 16:46	
Chlorobenzene	ug/L	ND	1.0	08/13/16 16:46	
Chloroethane	ug/L	ND	4.0	08/13/16 16:46	
Chloroform	ug/L	ND	1.0	08/13/16 16:46	
Chloromethane	ug/L	ND	4.0	08/13/16 16:46	
cis-1,2-Dichloroethene	ug/L	ND	1.0	08/13/16 16:46	
cis-1,3-Dichloropropene	ug/L	ND	4.0	08/13/16 16:46	

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358799

METHOD BLANK: 2342120

Matrix: Water

Associated Lab Samples: 10358799003, 10358799004, 10358799005, 10358799006, 10358799007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromochloromethane	ug/L	ND	4.0	08/13/16 16:46	
Dibromomethane	ug/L	ND	4.0	08/13/16 16:46	
Dichlorodifluoromethane	ug/L	ND	1.0	08/13/16 16:46	
Dichlorofluoromethane	ug/L	ND	1.0	08/13/16 16:46	
Diethyl ether (Ethyl ether)	ug/L	ND	4.0	08/13/16 16:46	
Ethylbenzene	ug/L	ND	1.0	08/13/16 16:46	
Hexachloro-1,3-butadiene	ug/L	ND	4.0	08/13/16 16:46	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	08/13/16 16:46	
Methyl-tert-butyl ether	ug/L	ND	1.0	08/13/16 16:46	
Methylene Chloride	ug/L	ND	4.0	08/13/16 16:46	
n-Butylbenzene	ug/L	ND	1.0	08/13/16 16:46	
n-Propylbenzene	ug/L	ND	1.0	08/13/16 16:46	
Naphthalene	ug/L	ND	4.0	08/13/16 16:46	
p-Isopropyltoluene	ug/L	ND	1.0	08/13/16 16:46	
sec-Butylbenzene	ug/L	ND	1.0	08/13/16 16:46	
Styrene	ug/L	ND	1.0	08/13/16 16:46	
tert-Butylbenzene	ug/L	ND	1.0	08/13/16 16:46	
Tetrachloroethene	ug/L	ND	1.0	08/13/16 16:46	
Tetrahydrofuran	ug/L	ND	10.0	08/13/16 16:46	
Toluene	ug/L	ND	1.0	08/13/16 16:46	
trans-1,2-Dichloroethene	ug/L	ND	1.0	08/13/16 16:46	
trans-1,3-Dichloropropene	ug/L	ND	4.0	08/13/16 16:46	
Trichloroethene	ug/L	ND	0.40	08/13/16 16:46	
Trichlorofluoromethane	ug/L	ND	1.0	08/13/16 16:46	
Vinyl chloride	ug/L	ND	0.40	08/13/16 16:46	
Xylene (Total)	ug/L	ND	3.0	08/13/16 16:46	
1,2-Dichloroethane-d4 (S)	%	108	75-125	08/13/16 16:46	
4-Bromofluorobenzene (S)	%	104	75-125	08/13/16 16:46	
Toluene-d8 (S)	%	104	75-125	08/13/16 16:46	

LABORATORY CONTROL SAMPLE: 2342121

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	18.3	91	75-125	
1,1,1-Trichloroethane	ug/L	20	16.7	83	73-125	
1,1,2,2-Tetrachloroethane	ug/L	20	20.6	103	75-128	
1,1,2-Trichloroethane	ug/L	20	19.7	98	75-129	
1,1,2-Trichlorotrifluoroethane	ug/L	20	20.9	104	69-125	
1,1-Dichloroethane	ug/L	20	16.1	80	75-131	
1,1-Dichloroethene	ug/L	20	21.4	107	72-125	
1,1-Dichloropropene	ug/L	20	16.6	83	74-125	
1,2,3-Trichlorobenzene	ug/L	20	19.9	99	68-127	
1,2,3-Trichloropropane	ug/L	20	21.9	109	75-125	
1,2,4-Trichlorobenzene	ug/L	20	19.9	100	70-125	

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358799

LABORATORY CONTROL SAMPLE: 2342121

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	21.2	106	75-130	
1,2-Dibromo-3-chloropropane	ug/L	50	45.8	92	74-125	
1,2-Dibromoethane (EDB)	ug/L	20	20.2	101	75-125	
1,2-Dichlorobenzene	ug/L	20	20.8	104	75-125	
1,2-Dichloroethane	ug/L	20	17.2	86	72-129	
1,2-Dichloropropane	ug/L	20	17.4	87	71-129	
1,3,5-Trimethylbenzene	ug/L	20	21.6	108	75-127	
1,3-Dichlorobenzene	ug/L	20	19.7	99	75-125	
1,3-Dichloropropane	ug/L	20	19.7	99	75-125	
1,4-Dichlorobenzene	ug/L	20	19.8	99	75-125	
2,2-Dichloropropane	ug/L	20	17.2	86	71-125	
2-Butanone (MEK)	ug/L	100	84.8	85	58-150	
2-Chlorotoluene	ug/L	20	20.5	102	75-125	
4-Chlorotoluene	ug/L	20	20.4	102	75-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	94.8	95	72-140	
Acetone	ug/L	100	102	102	69-137	
Allyl chloride	ug/L	20	22.0	110	68-132	
Benzene	ug/L	20	17.7	89	75-125	
Bromobenzene	ug/L	20	20.2	101	75-125	
Bromochloromethane	ug/L	20	18.1	90	75-125	
Bromodichloromethane	ug/L	20	19.6	98	69-128	
Bromoform	ug/L	20	16.6	83	75-125	
Bromomethane	ug/L	20	22.4	112	30-150	
Carbon tetrachloride	ug/L	20	17.6	88	74-125	
Chlorobenzene	ug/L	20	19.0	95	75-125	
Chloroethane	ug/L	20	16.5	82	60-150	
Chloroform	ug/L	20	18.8	94	75-126	
Chloromethane	ug/L	20	19.2	96	46-150	
cis-1,2-Dichloroethene	ug/L	20	17.3	86	75-126	
cis-1,3-Dichloropropene	ug/L	20	17.8	89	75-125	
Dibromochloromethane	ug/L	20	18.2	91	75-125	
Dibromomethane	ug/L	20	19.2	96	72-127	
Dichlorodifluoromethane	ug/L	20	18.1	91	58-135	
Dichlorofluoromethane	ug/L	20	21.1	105	68-149	
Diethyl ether (Ethyl ether)	ug/L	20	28.2	141	66-144	CH
Ethylbenzene	ug/L	20	19.0	95	75-125	
Hexachloro-1,3-butadiene	ug/L	20	21.8	109	73-125	
Isopropylbenzene (Cumene)	ug/L	20	19.7	98	69-140	
Methyl-tert-butyl ether	ug/L	20	18.5	92	75-126	
Methylene Chloride	ug/L	20	19.8	99	71-130	
n-Butylbenzene	ug/L	20	21.1	106	71-129	
n-Propylbenzene	ug/L	20	19.7	98	71-133	
Naphthalene	ug/L	20	19.4	97	59-137	
p-Isopropyltoluene	ug/L	20	22.2	111	74-127	
sec-Butylbenzene	ug/L	20	20.6	103	66-140	
Styrene	ug/L	20	20.8	104	75-125	
tert-Butylbenzene	ug/L	20	20.4	102	73-129	

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358799

LABORATORY CONTROL SAMPLE: 2342121

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tetrachloroethene	ug/L	20	18.5	92	75-125	
Tetrahydrofuran	ug/L	200	219	110	71-129	
Toluene	ug/L	20	18.9	95	75-125	
trans-1,2-Dichloroethene	ug/L	20	18.7	93	75-125	
trans-1,3-Dichloropropene	ug/L	20	18.5	93	75-125	
Trichloroethene	ug/L	20	18.2	91	75-125	
Trichlorofluoromethane	ug/L	20	19.3	96	74-128	
Vinyl chloride	ug/L	20	16.7	84	71-131	
Xylene (Total)	ug/L	60	59.6	99	75-125	
1,2-Dichloroethane-d4 (S)	%			105	75-125	
4-Bromofluorobenzene (S)	%			100	75-125	
Toluene-d8 (S)	%			106	75-125	

MATRIX SPIKE SAMPLE: 2342126

Parameter	Units	10358930001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	24.0	120	75-125	
1,1,1-Trichloroethane	ug/L	ND	20	24.4	122	71-144	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	26.9	134	75-131	M1
1,1,2-Trichloroethane	ug/L	ND	20	26.4	132	75-125	M1
1,1,2-Trichlorotrifluoroethane	ug/L	ND	20	25.7	128	75-150	
1,1-Dichloroethane	ug/L	ND	20	27.0	135	64-150	
1,1-Dichloroethene	ug/L	ND	20	26.3	131	68-150	
1,1-Dichloropropene	ug/L	ND	20	25.0	125	68-145	
1,2,3-Trichlorobenzene	ug/L	ND	20	23.5	118	57-142	
1,2,3-Trichloropropane	ug/L	ND	20	29.0	145	75-125	M1
1,2,4-Trichlorobenzene	ug/L	ND	20	22.9	114	60-135	
1,2,4-Trimethylbenzene	ug/L	ND	20	26.4	132	67-148	
1,2-Dibromo-3-chloropropane	ug/L	ND	50	52.6	105	32-137	
1,2-Dibromoethane (EDB)	ug/L	ND	20	26.0	130	75-125	M1
1,2-Dichlorobenzene	ug/L	ND	20	25.3	127	75-125	M1
1,2-Dichloroethane	ug/L	ND	20	22.5	113	62-138	
1,2-Dichloropropane	ug/L	ND	20	18.7	94	62-144	
1,3,5-Trimethylbenzene	ug/L	ND	20	26.8	134	67-148	
1,3-Dichlorobenzene	ug/L	ND	20	25.0	125	74-131	
1,3-Dichloropropane	ug/L	ND	20	27.2	136	75-127	M1
1,4-Dichlorobenzene	ug/L	ND	20	25.1	126	74-126	
2,2-Dichloropropane	ug/L	ND	20	25.1	126	56-146	
2-Butanone (MEK)	ug/L	ND	100	124	124	47-150	
2-Chlorotoluene	ug/L	ND	20	26.4	132	74-137	
4-Chlorotoluene	ug/L	ND	20	25.9	129	72-138	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	118	118	60-147	
Acetone	ug/L	ND	100	136	133	61-150	
Allyl chloride	ug/L	ND	20	27.9	139	53-150	
Benzene	ug/L	ND	20	25.3	127	52-147	

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358799

MATRIX SPIKE SAMPLE:	2342126	10358930001	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Bromobenzene	ug/L	ND	20	26.3	131	75-129	M1
Bromochloromethane	ug/L	ND	20	26.5	133	72-128	M1
Bromodichloromethane	ug/L	ND	20	19.9	99	65-137	
Bromoform	ug/L	ND	20	19.8	99	59-133	
Bromomethane	ug/L	ND	20	23.2	116	30-150	
Carbon tetrachloride	ug/L	ND	20	23.1	115	73-144	
Chlorobenzene	ug/L	ND	20	24.7	123	75-126	
Chloroethane	ug/L	ND	20	19.1	95	55-150	
Chloroform	ug/L	ND	20	25.7	128	66-143	
Chloromethane	ug/L	ND	20	22.4	112	42-150	
cis-1,2-Dichloroethene	ug/L	ND	20	24.3	121	65-143	
cis-1,3-Dichloropropene	ug/L	ND	20	18.4	92	75-125	
Dibromochloromethane	ug/L	ND	20	22.4	112	75-125	
Dibromomethane	ug/L	ND	20	19.6	98	66-133	
Dichlorodifluoromethane	ug/L	ND	20	23.1	115	74-150	
Dichlorofluoromethane	ug/L	ND	20	22.3	111	68-150	
Diethyl ether (Ethyl ether)	ug/L	ND	20	24.7	123	57-148	CH
Ethylbenzene	ug/L	ND	20	23.8	119	67-149	
Hexachloro-1,3-butadiene	ug/L	ND	20	30.0	150	65-143	M1
Isopropylbenzene (Cumene)	ug/L	ND	20	26.0	130	64-150	
Methyl-tert-butyl ether	ug/L	ND	20	22.7	114	71-130	
Methylene Chloride	ug/L	ND	20	23.9	120	67-137	
n-Butylbenzene	ug/L	ND	20	27.1	136	70-138	
n-Propylbenzene	ug/L	ND	20	26.4	132	70-148	
Naphthalene	ug/L	ND	20	22.2	111	39-150	
p-Isopropyltoluene	ug/L	ND	20	27.3	137	74-138	
sec-Butylbenzene	ug/L	ND	20	28.1	140	64-150	
Styrene	ug/L	ND	20	26.2	131	75-132	
tert-Butylbenzene	ug/L	ND	20	27.5	137	75-138	
Tetrachloroethene	ug/L	ND	20	25.1	126	73-136	
Tetrahydrofuran	ug/L	ND	200	317	158	68-142	M1
Toluene	ug/L	ND	20	24.0	120	69-139	
trans-1,2-Dichloroethene	ug/L	ND	20	23.0	115	75-135	
trans-1,3-Dichloropropene	ug/L	ND	20	25.1	125	66-136	
Trichloroethene	ug/L	ND	20	26.4	132	74-135	
Trichlorofluoromethane	ug/L	ND	20	24.1	121	75-150	
Vinyl chloride	ug/L	ND	20	21.3	107	69-150	
Xylene (Total)	ug/L	ND	60	75.0	125	70-147	
1,2-Dichloroethane-d4 (S)	%				105	75-125	
4-Bromofluorobenzene (S)	%				99	75-125	
Toluene-d8 (S)	%				105	75-125	

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358799

SAMPLE DUPLICATE: 2342127

Parameter	Units	10358932001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,1-Trichloroethane	ug/L	ND	ND		30	
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,2-Trichloroethane	ug/L	ND	ND		30	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	ND		30	
1,1-Dichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethene	ug/L	ND	ND		30	
1,1-Dichloropropene	ug/L	ND	ND		30	
1,2,3-Trichlorobenzene	ug/L	ND	ND		30	
1,2,3-Trichloropropane	ug/L	ND	ND		30	
1,2,4-Trichlorobenzene	ug/L	ND	ND		30	
1,2,4-Trimethylbenzene	ug/L	ND	ND		30	
1,2-Dibromo-3-chloropropane	ug/L	ND	ND		30	
1,2-Dibromoethane (EDB)	ug/L	ND	ND		30	
1,2-Dichlorobenzene	ug/L	ND	ND		30	
1,2-Dichloroethane	ug/L	ND	ND		30	
1,2-Dichloropropane	ug/L	ND	ND		30	
1,3,5-Trimethylbenzene	ug/L	ND	ND		30	
1,3-Dichlorobenzene	ug/L	ND	ND		30	
1,3-Dichloropropane	ug/L	ND	ND		30	
1,4-Dichlorobenzene	ug/L	ND	ND		30	
2,2-Dichloropropane	ug/L	ND	ND		30	
2-Butanone (MEK)	ug/L	ND	ND		30	
2-Chlorotoluene	ug/L	ND	ND		30	
4-Chlorotoluene	ug/L	ND	ND		30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND		30	
Acetone	ug/L	ND	ND		30	
Allyl chloride	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Bromobenzene	ug/L	ND	ND		30	
Bromochloromethane	ug/L	ND	ND		30	
Bromodichloromethane	ug/L	ND	ND		30	
Bromoform	ug/L	ND	ND		30	
Bromomethane	ug/L	ND	ND		30	
Carbon tetrachloride	ug/L	ND	ND		30	
Chlorobenzene	ug/L	ND	ND		30	
Chloroethane	ug/L	ND	ND		30	
Chloroform	ug/L	ND	ND		30	
Chloromethane	ug/L	ND	ND		30	
cis-1,2-Dichloroethene	ug/L	ND	ND		30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dibromomethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	
Dichlorofluoromethane	ug/L	ND	ND		30	
Diethyl ether (Ethyl ether)	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358799

SAMPLE DUPLICATE: 2342127

Parameter	Units	10358932001 Result	Dup Result	RPD	Max RPD	Qualifiers
Hexachloro-1,3-butadiene	ug/L	ND	ND		30	
Isopropylbenzene (Cumene)	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Methylene Chloride	ug/L	ND	ND		30	
n-Butylbenzene	ug/L	ND	ND		30	
n-Propylbenzene	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
p-Isopropyltoluene	ug/L	ND	ND		30	
sec-Butylbenzene	ug/L	ND	ND		30	
Styrene	ug/L	ND	ND		30	
tert-Butylbenzene	ug/L	ND	ND		30	
Tetrachloroethene	ug/L	2.2	2.2	4	30	
Tetrahydrofuran	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
trans-1,2-Dichloroethene	ug/L	ND	ND		30	
trans-1,3-Dichloropropene	ug/L	ND	ND		30	
Trichloroethene	ug/L	ND	ND		30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	115	115	1		
4-Bromofluorobenzene (S)	%	103	105	2		
Toluene-d8 (S)	%	106	107	1		

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358799

QC Batch: 430653 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260B MSV 465 W
Associated Lab Samples: 10358799010

METHOD BLANK: 2342965 Matrix: Water
Associated Lab Samples: 10358799010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	4.0	08/15/16 15:19	
1,1,1-Trichloroethane	ug/L	ND	1.0	08/15/16 15:19	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	08/15/16 15:19	
1,1,2-Trichloroethane	ug/L	ND	1.0	08/15/16 15:19	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	08/15/16 15:19	
1,1-Dichloroethane	ug/L	ND	1.0	08/15/16 15:19	
1,1-Dichloroethene	ug/L	ND	1.0	08/15/16 15:19	
1,1-Dichloropropene	ug/L	ND	1.0	08/15/16 15:19	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	08/15/16 15:19	
1,2,3-Trichloropropane	ug/L	ND	4.0	08/15/16 15:19	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	08/15/16 15:19	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	08/15/16 15:19	
1,2-Dibromo-3-chloropropane	ug/L	ND	10.0	08/15/16 15:19	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	08/15/16 15:19	
1,2-Dichlorobenzene	ug/L	ND	1.0	08/15/16 15:19	
1,2-Dichloroethane	ug/L	ND	1.0	08/15/16 15:19	
1,2-Dichloropropane	ug/L	ND	4.0	08/15/16 15:19	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	08/15/16 15:19	
1,3-Dichlorobenzene	ug/L	ND	1.0	08/15/16 15:19	
1,3-Dichloropropane	ug/L	ND	1.0	08/15/16 15:19	
1,4-Dichlorobenzene	ug/L	ND	1.0	08/15/16 15:19	
2,2-Dichloropropane	ug/L	ND	4.0	08/15/16 15:19	
2-Butanone (MEK)	ug/L	ND	5.0	08/15/16 15:19	
2-Chlorotoluene	ug/L	ND	1.0	08/15/16 15:19	
4-Chlorotoluene	ug/L	ND	1.0	08/15/16 15:19	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	08/15/16 15:19	
Acetone	ug/L	ND	20.0	08/15/16 15:19	
Allyl chloride	ug/L	ND	4.0	08/15/16 15:19	
Benzene	ug/L	ND	1.0	08/15/16 15:19	
Bromobenzene	ug/L	ND	1.0	08/15/16 15:19	
Bromochloromethane	ug/L	ND	1.0	08/15/16 15:19	
Bromodichloromethane	ug/L	ND	1.0	08/15/16 15:19	
Bromoform	ug/L	ND	4.0	08/15/16 15:19	
Bromomethane	ug/L	ND	4.0	08/15/16 15:19	
Carbon tetrachloride	ug/L	ND	4.0	08/15/16 15:19	
Chlorobenzene	ug/L	ND	1.0	08/15/16 15:19	
Chloroethane	ug/L	ND	1.0	08/15/16 15:19	
Chloroform	ug/L	ND	1.0	08/15/16 15:19	
Chloromethane	ug/L	ND	4.0	08/15/16 15:19	
cis-1,2-Dichloroethene	ug/L	ND	1.0	08/15/16 15:19	
cis-1,3-Dichloropropene	ug/L	ND	4.0	08/15/16 15:19	

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358799

METHOD BLANK: 2342965 Matrix: Water
Associated Lab Samples: 10358799010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromochloromethane	ug/L	ND	4.0	08/15/16 15:19	
Dibromomethane	ug/L	ND	4.0	08/15/16 15:19	
Dichlorodifluoromethane	ug/L	ND	1.0	08/15/16 15:19	
Dichlorofluoromethane	ug/L	ND	1.0	08/15/16 15:19	
Diethyl ether (Ethyl ether)	ug/L	ND	4.0	08/15/16 15:19	
Ethylbenzene	ug/L	ND	1.0	08/15/16 15:19	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	08/15/16 15:19	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	08/15/16 15:19	
Methyl-tert-butyl ether	ug/L	ND	1.0	08/15/16 15:19	
Methylene Chloride	ug/L	ND	4.0	08/15/16 15:19	
n-Butylbenzene	ug/L	ND	1.0	08/15/16 15:19	
n-Propylbenzene	ug/L	ND	1.0	08/15/16 15:19	
Naphthalene	ug/L	ND	4.0	08/15/16 15:19	
p-Isopropyltoluene	ug/L	ND	1.0	08/15/16 15:19	
sec-Butylbenzene	ug/L	ND	1.0	08/15/16 15:19	
Styrene	ug/L	ND	1.0	08/15/16 15:19	
tert-Butylbenzene	ug/L	ND	1.0	08/15/16 15:19	
Tetrachloroethene	ug/L	ND	1.0	08/15/16 15:19	
Tetrahydrofuran	ug/L	ND	10.0	08/15/16 15:19	
Toluene	ug/L	ND	1.0	08/15/16 15:19	
trans-1,2-Dichloroethene	ug/L	ND	1.0	08/15/16 15:19	
trans-1,3-Dichloropropene	ug/L	ND	4.0	08/15/16 15:19	
Trichloroethene	ug/L	ND	0.40	08/15/16 15:19	
Trichlorofluoromethane	ug/L	ND	1.0	08/15/16 15:19	
Vinyl chloride	ug/L	ND	1.0	08/15/16 15:19	
Xylene (Total)	ug/L	ND	3.0	08/15/16 15:19	
1,2-Dichloroethane-d4 (S)	%	98	75-125	08/15/16 15:19	
4-Bromofluorobenzene (S)	%	100	75-125	08/15/16 15:19	
Toluene-d8 (S)	%	98	75-125	08/15/16 15:19	

LABORATORY CONTROL SAMPLE: 2342966

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	21.7	109	75-125	
1,1,1-Trichloroethane	ug/L	20	20.8	104	73-125	
1,1,2,2-Tetrachloroethane	ug/L	20	20.5	102	75-128	
1,1,2-Trichloroethane	ug/L	20	20.7	104	75-129	
1,1,2-Trichlorotrifluoroethane	ug/L	20	19.6	98	69-125	
1,1-Dichloroethane	ug/L	20	20.2	101	75-131	
1,1-Dichloroethene	ug/L	20	19.9	100	72-125	
1,1-Dichloropropene	ug/L	20	20.7	103	74-125	
1,2,3-Trichlorobenzene	ug/L	20	19.4	97	68-127	
1,2,3-Trichloropropane	ug/L	20	20.7	103	75-125	
1,2,4-Trichlorobenzene	ug/L	20	19.9	99	70-125	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358799

LABORATORY CONTROL SAMPLE: 2342966

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	21.3	107	75-130	
1,2-Dibromo-3-chloropropane	ug/L	50	50.7	101	74-125	
1,2-Dibromoethane (EDB)	ug/L	20	21.3	107	75-125	
1,2-Dichlorobenzene	ug/L	20	20.0	100	75-125	
1,2-Dichloroethane	ug/L	20	18.6	93	72-129	
1,2-Dichloropropane	ug/L	20	19.8	99	71-129	
1,3,5-Trimethylbenzene	ug/L	20	20.7	104	75-127	
1,3-Dichlorobenzene	ug/L	20	19.5	97	75-125	
1,3-Dichloropropane	ug/L	20	20.1	101	75-125	
1,4-Dichlorobenzene	ug/L	20	18.5	93	75-125	
2,2-Dichloropropane	ug/L	20	21.6	108	71-125	
2-Butanone (MEK)	ug/L	100	94.3	94	58-150	
2-Chlorotoluene	ug/L	20	20.3	102	75-125	
4-Chlorotoluene	ug/L	20	19.4	97	75-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	99.4	99	72-140	
Acetone	ug/L	100	105	105	69-137	
Allyl chloride	ug/L	20	19.9	100	68-132	
Benzene	ug/L	20	20.2	101	75-125	
Bromobenzene	ug/L	20	21.7	108	75-125	
Bromochloromethane	ug/L	20	21.4	107	75-125	
Bromodichloromethane	ug/L	20	21.6	108	69-128	
Bromoform	ug/L	20	19.0	95	75-125	
Bromomethane	ug/L	20	16.8	84	30-150	
Carbon tetrachloride	ug/L	20	21.7	108	74-125	
Chlorobenzene	ug/L	20	20.4	102	75-125	
Chloroethane	ug/L	20	25.9	130	60-150	
Chloroform	ug/L	20	21.0	105	75-126	
Chloromethane	ug/L	20	16.4	82	46-150	
cis-1,2-Dichloroethene	ug/L	20	19.4	97	75-126	
cis-1,3-Dichloropropene	ug/L	20	20.9	105	75-125	
Dibromochloromethane	ug/L	20	19.7	98	75-125	
Dibromomethane	ug/L	20	21.0	105	72-127	
Dichlorodifluoromethane	ug/L	20	19.7	98	58-135	
Dichlorofluoromethane	ug/L	20	22.7	114	68-149	
Diethyl ether (Ethyl ether)	ug/L	20	20.0	100	66-144	
Ethylbenzene	ug/L	20	19.9	99	75-125	
Hexachloro-1,3-butadiene	ug/L	20	22.4	112	73-125	
Isopropylbenzene (Cumene)	ug/L	20	20.4	102	69-140	
Methyl-tert-butyl ether	ug/L	20	19.3	97	75-126	
Methylene Chloride	ug/L	20	19.9	99	71-130	
n-Butylbenzene	ug/L	20	20.9	104	71-129	
n-Propylbenzene	ug/L	20	19.8	99	71-133	
Naphthalene	ug/L	20	17.8	89	59-137	
p-Isopropyltoluene	ug/L	20	21.8	109	74-127	
sec-Butylbenzene	ug/L	20	19.7	99	66-140	
Styrene	ug/L	20	19.9	99	75-125	
tert-Butylbenzene	ug/L	20	19.7	99	73-129	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358799

LABORATORY CONTROL SAMPLE: 2342966

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tetrachloroethane	ug/L	20	21.4	107	75-125	
Tetrahydrofuran	ug/L	200	205	102	71-129	
Toluene	ug/L	20	20.4	102	75-125	
trans-1,2-Dichloroethene	ug/L	20	20.0	100	75-125	
trans-1,3-Dichloropropene	ug/L	20	19.0	95	75-125	
Trichloroethene	ug/L	20	21.7	109	75-125	
Trichlorofluoromethane	ug/L	20	23.7	119	74-128	
Vinyl chloride	ug/L	20	18.7	94	71-131	
Xylene (Total)	ug/L	60	60.8	101	75-125	
1,2-Dichloroethane-d4 (S)	%			99	75-125	
4-Bromofluorobenzene (S)	%			101	75-125	
Toluene-d8 (S)	%			100	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2343000 2343001

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		10358815016 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
1,1,1,2-Tetrachloroethane	ug/L	ND	20	20	21.2	18.7	106	93	75-125	13	30	
1,1,1-Trichloroethane	ug/L	ND	20	20	23.5	21.2	117	106	71-144	10	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	19.7	17.9	99	90	75-131	10	30	
1,1,2-Trichloroethane	ug/L	ND	20	20	20.5	18.2	103	91	75-125	12	30	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	20	20	24.7	21.7	123	109	75-150	13	30	
1,1-Dichloroethane	ug/L	ND	20	20	23.0	20.4	115	102	64-150	12	30	
1,1-Dichloroethene	ug/L	ND	20	20	23.8	21.5	119	107	68-150	10	30	
1,1-Dichloropropene	ug/L	ND	20	20	23.3	20.9	116	105	68-145	11	30	
1,2,3-Trichlorobenzene	ug/L	ND	20	20	12.2	15.3	61	76	57-142	23	30	
1,2,3-Trichloropropane	ug/L	ND	20	20	19.4	18.1	97	91	75-125	7	30	
1,2,4-Trichlorobenzene	ug/L	ND	20	20	12.5	15.9	63	79	60-135	23	30	
1,2,4-Trimethylbenzene	ug/L	ND	20	20	18.9	18.5	94	92	67-148	2	30	
1,2-Dibromo-3-chloropropane	ug/L	ND	50	50	44.4	41.3	89	83	32-137	7	30	
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	20.7	17.9	104	90	75-125	15	30	
1,2-Dichlorobenzene	ug/L	ND	20	20	17.8	17.5	89	87	75-125	2	30	
1,2-Dichloroethane	ug/L	ND	20	20	19.9	17.9	99	90	62-138	10	30	
1,2-Dichloropropane	ug/L	ND	20	20	20.5	18.0	102	90	62-144	13	30	
1,3,5-Trimethylbenzene	ug/L	ND	20	20	18.3	17.8	91	89	67-148	2	30	
1,3-Dichlorobenzene	ug/L	ND	20	20	17.4	17.0	87	85	74-131	3	30	
1,3-Dichloropropane	ug/L	ND	20	20	20.4	18.0	102	90	75-127	13	30	
1,4-Dichlorobenzene	ug/L	ND	20	20	16.7	16.6	83	83	74-126	0	30	
2,2-Dichloropropane	ug/L	ND	20	20	23.9	21.3	119	106	56-146	12	30	
2-Butanone (MEK)	ug/L	ND	100	100	94.1	85.7	94	86	47-150	9	30	
2-Chlorotoluene	ug/L	ND	20	20	18.8	18.0	94	90	74-137	4	30	
4-Chlorotoluene	ug/L	ND	20	20	17.9	17.6	89	88	72-138	2	30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	94.9	85.3	95	85	60-147	11	30	
Acetone	ug/L	ND	100	100	110	95.4	103	88	61-150	14	30	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358799

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		2343000		2343001									
Parameter	Units	10358815016	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	RPD	RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits				
Allyl chloride	ug/L	ND	20	20	24.0	20.0	120	100	53-150	18	30		
Benzene	ug/L	ND	20	20	21.4	19.0	106	94	52-147	12	30		
Bromobenzene	ug/L	ND	20	20	20.2	18.6	101	93	75-129	8	30		
Bromochloromethane	ug/L	ND	20	20	22.9	20.0	115	100	72-128	13	30		
Bromodichloromethane	ug/L	ND	20	20	20.9	18.6	104	93	65-137	12	30		
Bromoform	ug/L	ND	20	20	18.2	16.2	91	81	59-133	12	30		
Bromomethane	ug/L	ND	20	20	18.8	14.1	94	71	30-150	29	30		
Carbon tetrachloride	ug/L	ND	20	20	23.9	21.3	119	107	73-144	11	30		
Chlorobenzene	ug/L	ND	20	20	19.2	17.9	96	90	75-126	7	30		
Chloroethane	ug/L	ND	20	20	35.4	29.2	177	146	55-150	19	30	M1	
Chloroform	ug/L	ND	20	20	21.7	20.0	109	100	66-143	8	30		
Chloromethane	ug/L	ND	20	20	21.7	16.0	108	80	42-150	30	30		
cis-1,2-Dichloroethene	ug/L	ND	20	20	20.5	19.1	102	95	65-143	7	30		
cis-1,3-Dichloropropene	ug/L	ND	20	20	20.5	18.5	103	92	75-125	11	30		
Dibromochloromethane	ug/L	ND	20	20	18.4	16.4	92	82	75-125	12	30		
Dibromomethane	ug/L	ND	20	20	20.8	18.3	104	92	66-133	13	30		
Dichlorodifluoromethane	ug/L	ND	20	20	24.1	22.5	121	112	74-150	7	30		
Dichlorofluoromethane	ug/L	ND	20	20	23.7	22.5	118	112	68-150	5	30		
Diethyl ether (Ethyl ether)	ug/L	ND	20	20	22.5	19.9	113	99	57-148	12	30		
Ethylbenzene	ug/L	ND	20	20	19.3	17.7	96	89	67-149	8	30		
Hexachloro-1,3-butadiene	ug/L	ND	20	20	9.0	16.6	45	83	65-143	59	30	M1,R1	
Isopropylbenzene (Cumene)	ug/L	ND	20	20	19.3	18.5	97	92	64-150	4	30		
Methyl-tert-butyl ether	ug/L	ND	20	20	20.7	18.2	103	91	71-130	13	30		
Methylene Chloride	ug/L	ND	20	20	21.0	18.0	105	90	67-137	16	30		
n-Butylbenzene	ug/L	ND	20	20	15.1	17.4	76	87	70-138	14	30		
n-Propylbenzene	ug/L	ND	20	20	18.7	18.4	93	92	70-148	2	30		
Naphthalene	ug/L	ND	20	20	13.3	14.3	58	64	39-150	8	30		
p-Isopropyltoluene	ug/L	ND	20	20	17.6	18.3	88	91	74-138	4	30		
sec-Butylbenzene	ug/L	ND	20	20	17.1	17.9	85	90	64-150	5	30		
Styrene	ug/L	ND	20	20	17.7	17.2	89	86	75-132	3	30		
tert-Butylbenzene	ug/L	ND	20	20	18.3	18.2	92	91	75-138	1	30		
Tetrachloroethene	ug/L	ND	20	20	21.0	19.7	105	99	73-136	6	30		
Tetrahydrofuran	ug/L	ND	200	200	208	180	104	90	68-142	14	30		
Toluene	ug/L	ND	20	20	20.1	18.2	100	90	69-139	10	30		
trans-1,2-Dichloroethene	ug/L	ND	20	20	22.7	20.1	114	101	75-135	12	30		
trans-1,3-Dichloropropene	ug/L	ND	20	20	18.3	16.4	91	82	66-136	11	30		
Trichloroethene	ug/L	ND	20	20	21.4	19.8	107	99	74-135	8	30		
Trichlorofluoromethane	ug/L	ND	20	20	30.0	27.5	150	137	75-150	9	30		
Vinyl chloride	ug/L	ND	20	20	23.3	21.6	117	108	69-150	8	30		
Xylene (Total)	ug/L	ND	60	60	58.0	54.2	97	90	70-147	7	30		
1,2-Dichloroethane-d4 (S)	%						104	105	75-125				
4-Bromofluorobenzene (S)	%						102	101	75-125				
Toluene-d8 (S)	%						98	98	75-125				

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: CrC
Pace Project No.: 10358799

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: 430489

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

CH The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.

D1 Analyte not detected when evaluated to 1/2 the reporting limit.

L0 Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

L3 Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

N2 The lab does not hold TNI accreditation for this parameter.

P5 The EPA or method required sample preservation degrades this compound, therefore acceptable recoveries may not be achieved in sample matrix spikes.

R1 RPD value was outside control limits.

c2 Acid preservation may not be appropriate for the analysis of 2-Chloroethylvinyl ether.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CrC
Pace Project No.: 10358799

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10358799001	AS-INFLUENT	EPA 624	430287		
10358799002	AS-EFFLUENT	EPA 624	430287		
10358799003	DPE-1	EPA 8260B	430489		
10358799004	DPE-2	EPA 8260B	430489		
10358799005	DPE-3	EPA 8260B	430489		
10358799006	DPE-4	EPA 8260B	430489		
10358799007	DPE-5	EPA 8260B	430489		
10358799008	DPE-6	EPA 8260B	430295		
10358799009	DPE-7	EPA 8260B	430295		
10358799010	DPE-8	EPA 8260B	430653		

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: _____ of _____

2024996

10358799

Section A
 Required Client Information:
 Company: Leadmark Environmental
 Address: 2042 W 98th Street
 Bloomington, MN
 Email To: a.kucic@leadmarkenv.com
 Phone: _____ Fax: _____
 Requested Due Date/TAT: _____

Section B
 Required Project Information:
 Report To: a.kucic@leadmarkenv.com
 Copy To: jskramstad@leadmarkenv.com
 Purchase Order No.: _____
 Project Name: CAC
 Project Number: 35807

Section C
 Invoice Information:
 Attention: Sharon Paradise
 Company Name: _____
 Address: _____
 Pace Quote Reference: _____
 Pace Project Manager: _____
 Pace Profile #: 35807

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER _____

Site Location
 STATE: _____

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	COLLECTED		SAMPLE TYPE (G-GRAB C-COMP)	MATRIX CODE (see valid codes to left)	DATE	TIME	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
			COMPOSITE START	COMPOSITE END/GRAB														
1	AS-IMP LUMENT	Drinking Water			WT 6	WT 6	8/11/16	10:30				8/11/16	11:30	Sharon Paradise	0.4	Y	Y	Y
2	AS-EFFluent	Waste Water					10:35											
3	DPE-1	Product					1140											
4	DPE-2	Soil/Solid					1150											
5	DPE-3	Oil					1155											
6	DPE-4	Wipe					1210											
7	DPE-5	Air					1225											
8	DPE-6	Tissue					1235											
9	DPE-7	Other					1240											
10	DPE-8						1255											
11																		
12																		

Requested Analysis Filtered (Y/N)

Preservatives
 Unpreserved
 H₂SO₄
 HNO₃
 HCl
 NaOH
 Na₂S₂O₃
 Methanol
 Other

OF CONTAINERS

ANALYSIS TEST
 EPA 624 VOCs

Residual Chlorine (Y/N)

Pace Project No./ Lab I.D.
 001
 002
 003
 004
 005
 006
 007
 008
 009
 010

ADDITIONAL COMMENTS

RELINQUISHED BY / AFFILIATION
 [Signature]

DATE
 8/11/16

TIME
 11:30

ACCEPTED BY / AFFILIATION
 Sharon Paradise

DATE
 8/11/16

TIME
 11:26

SAMPLE CONDITIONS
 CS-31111111

Temp in °C
 0.4

Received on Ice (Y/N)
 Y

Custody Sealed Cooler (Y/N)
 Y


Samples Intact (Y/N)
 Y

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: Sharon Paradise
 SIGNATURE of SAMPLER: [Signature]

DATE SIGNED (MM/DD/YYYY)
 08/10/16

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Sample Condition Upon Receipt	Client Name: <u>Landmark Environmental</u>	Project #: WO# : 10358799
	Courier: <input type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> USPS <input checked="" type="checkbox"/> Client <input type="checkbox"/> Commercial <input type="checkbox"/> Pace <input type="checkbox"/> SpeedDee <input type="checkbox"/> Other: _____	 10358799
Tracking Number: _____		

Custody Seal on Cooler/Box Present? Yes No Seals Intact? Yes No Optional: Proj. Due Date: _____ Proj. Name: _____
 Packing Material: Bubble Wrap Bubble Bags None Other: _____ Temp Blank? Yes No
 Thermometer Used: 151401163 B88A912167504 151401164 B88A0143310098 Type of Ice: Wet Blue None Samples on ice, cooling process has begun
 Cooler Temp Read (°C): 0.4 Cooler Temp Corrected (°C): 0.4 Biological Tissue Frozen? Yes No N/A
 Temp should be above freezing to 6°C Correction Factor: +0.0 Date and Initials of Person Examining Contents: GS 8/11/16
 USDA Regulated Soil (N/A, water sample)
 Did samples originate in a quarantine zone within the United States: AL, AR, AZ, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? Yes No Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No
 If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

	COMMENTS:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name and/or Signature on COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72 hr)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered Volume Received for Dissolved Tests? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11. Note if sediment is visible in the dissolved container
Sample Labels Match COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes Date/Time/ID/Analysis Matrix: <u>WT</u>	
All containers needing acid/base preservation have been checked? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> HCl
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide) <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Sample #
Exceptions: <u>VOA</u> Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Initial when completed: _____ Lot # of added preservative: _____
Headspace in VOA Vials (>6mm)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14.
Trip Blank Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	15. <u>Shared trip blank</u>
Trip Blank Custody Seals Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): <u>052316-3B2A</u>	

CLIENT NOTIFICATION/RESOLUTION Field Data Required? Yes No
 Person Contacted: _____ Date/Time: _____
 Comments/Resolution: _____

Project Manager Review: _____ Date: 8/12/16

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers).

August 16, 2016

Aaron Kuck
Landmark Environmental
2042 W 98th St.
Bloomington, MN 55431

RE: Project: CrC
Pace Project No.: 10358800

Dear Aaron Kuck:

Enclosed are the analytical results for sample(s) received by the laboratory on August 11, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Oyeyemi Odujole
oyeyemi.odujole@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: CrC
Pace Project No.: 10358800

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414
525 N 8th Street, Salina, KS 67401
A2LA Certification #: 2926.01
Alaska Certification #: UST-078
Alaska Certification #MN00064
Alabama Certification #40770
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
Colorado Certification #Pace
Connecticut Certification #: PH-0256
EPA Region 8 Certification #: 8TMS-L
Florida/NELAP Certification #: E87605
Guam Certification #:14-008r
Georgia Certification #: 959
Georgia EPD #: Pace
Idaho Certification #: MN00064
Hawaii Certification #MN00064
Illinois Certification #: 200011
Indiana Certification#C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky Dept of Envi. Protection - DW #90062
Kentucky Dept of Envi. Protection - WW #:90062
Louisiana DEQ Certification #: 3086
Louisiana DHH #: LA140001
Maine Certification #: 2013011
Maryland Certification #: 322
Michigan DEPH Certification #: 9909

Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT0092
Nevada Certification #: MN_00064
Nebraska Certification #: Pace
New Jersey Certification #: MN-002
New York Certification #: 11647
North Carolina Certification #: 530
North Carolina State Public Health #: 27700
North Dakota Certification #: R-036
Ohio EPA #: 4150
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Oregon Certification #: MN300001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Saipan (CNMI) #:MP0003
South Carolina #:74003001
Texas Certification #: T104704192
Tennessee Certification #: 02818
Utah Certification #: MN000642013-4
Virginia DGS Certification #: 251
Virginia/VELAP Certification #: Pace
Washington Certification #: C486
West Virginia Certification #: 382
West Virginia DHHR #:9952C
Wisconsin Certification #: 999407970

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SAMPLE SUMMARY

Project: CrC
Pace Project No.: 10358800

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10358800001	MW14	Water	08/10/16 12:20	08/11/16 11:26
10358800002	MW15	Water	08/10/16 12:40	08/11/16 11:26
10358800003	MW16	Water	08/10/16 12:30	08/11/16 11:26
10358800004	MW17	Water	08/10/16 13:30	08/11/16 11:26
10358800005	MW18	Water	08/10/16 14:15	08/11/16 11:26
10358800006	MW19	Water	08/10/16 12:10	08/11/16 11:26
10358800007	MW20	Water	08/10/16 11:50	08/11/16 11:26
10358800008	Trip Blank	Water	08/10/16 00:00	08/11/16 11:26

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SAMPLE ANALYTE COUNT

Project: CrC
Pace Project No.: 10358800

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10358800001	MW14	EPA 8260B	PRD	70
10358800002	MW15	EPA 8260B	PRD	70
10358800003	MW16	EPA 8260B	EMC	70
10358800004	MW17	EPA 8260B	EMC	70
10358800005	MW18	EPA 8260B	PRD	70
10358800006	MW19	EPA 8260B	PRD	70
10358800007	MW20	EPA 8260B	PRD	70
10358800008	Trip Blank	EPA 8260B	PRD	70

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358800

Sample: MW14	Lab ID: 10358800001	Collected: 08/10/16 12:20	Received: 08/11/16 11:26	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Acetone	ND	ug/L	20.0	1		08/12/16 14:30	67-64-1	
Allyl chloride	ND	ug/L	4.0	1		08/12/16 14:30	107-05-1	
Benzene	ND	ug/L	1.0	1		08/12/16 14:30	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		08/12/16 14:30	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		08/12/16 14:30	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		08/12/16 14:30	75-27-4	
Bromoform	ND	ug/L	4.0	1		08/12/16 14:30	75-25-2	
Bromomethane	ND	ug/L	4.0	1		08/12/16 14:30	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		08/12/16 14:30	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		08/12/16 14:30	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		08/12/16 14:30	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		08/12/16 14:30	98-06-6	
Carbon tetrachloride	ND	ug/L	4.0	1		08/12/16 14:30	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		08/12/16 14:30	108-90-7	
Chloroethane	ND	ug/L	1.0	1		08/12/16 14:30	75-00-3	
Chloroform	ND	ug/L	1.0	1		08/12/16 14:30	67-66-3	
Chloromethane	ND	ug/L	4.0	1		08/12/16 14:30	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		08/12/16 14:30	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		08/12/16 14:30	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	10.0	1		08/12/16 14:30	96-12-8	
Dibromochloromethane	ND	ug/L	4.0	1		08/12/16 14:30	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		08/12/16 14:30	106-93-4	
Dibromomethane	ND	ug/L	4.0	1		08/12/16 14:30	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		08/12/16 14:30	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		08/12/16 14:30	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		08/12/16 14:30	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		08/12/16 14:30	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/12/16 14:30	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/12/16 14:30	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/12/16 14:30	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/12/16 14:30	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/12/16 14:30	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	1		08/12/16 14:30	75-43-4	
1,2-Dichloropropane	ND	ug/L	4.0	1		08/12/16 14:30	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		08/12/16 14:30	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	1		08/12/16 14:30	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		08/12/16 14:30	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	1		08/12/16 14:30	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	1		08/12/16 14:30	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	1		08/12/16 14:30	60-29-7	
Ethylbenzene	ND	ug/L	1.0	1		08/12/16 14:30	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		08/12/16 14:30	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		08/12/16 14:30	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		08/12/16 14:30	99-87-6	
Methylene Chloride	ND	ug/L	4.0	1		08/12/16 14:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		08/12/16 14:30	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		08/12/16 14:30	1634-04-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358800

Sample: MW14		Lab ID: 10358800001	Collected: 08/10/16 12:20	Received: 08/11/16 11:26	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Naphthalene	ND	ug/L	4.0	1		08/12/16 14:30	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		08/12/16 14:30	103-65-1	
Styrene	ND	ug/L	1.0	1		08/12/16 14:30	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	4.0	1		08/12/16 14:30	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		08/12/16 14:30	79-34-5	
Tetrachloroethene	1.1	ug/L	1.0	1		08/12/16 14:30	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		08/12/16 14:30	109-99-9	
Toluene	ND	ug/L	1.0	1		08/12/16 14:30	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		08/12/16 14:30	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		08/12/16 14:30	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/12/16 14:30	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		08/12/16 14:30	79-00-5	
Trichloroethene	ND	ug/L	0.40	1		08/12/16 14:30	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		08/12/16 14:30	75-69-4	L3
1,2,3-Trichloropropane	ND	ug/L	4.0	1		08/12/16 14:30	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		08/12/16 14:30	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		08/12/16 14:30	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		08/12/16 14:30	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		08/12/16 14:30	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		08/12/16 14:30	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	101	%.	75-125	1		08/12/16 14:30	17060-07-0	
Toluene-d8 (S)	98	%.	75-125	1		08/12/16 14:30	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125	1		08/12/16 14:30	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358800

Sample: MW15	Lab ID: 1035880002	Collected: 08/10/16 12:40	Received: 08/11/16 11:26	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Acetone	ND	ug/L	20.0	1		08/12/16 14:46	67-64-1	
Allyl chloride	ND	ug/L	4.0	1		08/12/16 14:46	107-05-1	
Benzene	ND	ug/L	1.0	1		08/12/16 14:46	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		08/12/16 14:46	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		08/12/16 14:46	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		08/12/16 14:46	75-27-4	
Bromoform	ND	ug/L	4.0	1		08/12/16 14:46	75-25-2	
Bromomethane	ND	ug/L	4.0	1		08/12/16 14:46	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		08/12/16 14:46	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		08/12/16 14:46	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		08/12/16 14:46	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		08/12/16 14:46	98-06-6	
Carbon tetrachloride	ND	ug/L	4.0	1		08/12/16 14:46	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		08/12/16 14:46	108-90-7	
Chloroethane	ND	ug/L	1.0	1		08/12/16 14:46	75-00-3	
Chloroform	ND	ug/L	1.0	1		08/12/16 14:46	67-66-3	
Chloromethane	ND	ug/L	4.0	1		08/12/16 14:46	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		08/12/16 14:46	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		08/12/16 14:46	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	10.0	1		08/12/16 14:46	96-12-8	
Dibromochloromethane	ND	ug/L	4.0	1		08/12/16 14:46	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		08/12/16 14:46	106-93-4	
Dibromomethane	ND	ug/L	4.0	1		08/12/16 14:46	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		08/12/16 14:46	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		08/12/16 14:46	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		08/12/16 14:46	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		08/12/16 14:46	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/12/16 14:46	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/12/16 14:46	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/12/16 14:46	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/12/16 14:46	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/12/16 14:46	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	1		08/12/16 14:46	75-43-4	
1,2-Dichloropropane	ND	ug/L	4.0	1		08/12/16 14:46	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		08/12/16 14:46	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	1		08/12/16 14:46	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		08/12/16 14:46	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	1		08/12/16 14:46	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	1		08/12/16 14:46	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	1		08/12/16 14:46	60-29-7	
Ethylbenzene	ND	ug/L	1.0	1		08/12/16 14:46	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		08/12/16 14:46	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		08/12/16 14:46	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		08/12/16 14:46	99-87-6	
Methylene Chloride	ND	ug/L	4.0	1		08/12/16 14:46	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		08/12/16 14:46	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		08/12/16 14:46	1634-04-4	

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358800

Sample: MW15		Lab ID: 1035880002		Collected: 08/10/16 12:40		Received: 08/11/16 11:26		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260B VOC		Analytical Method: EPA 8260B							
Naphthalene	ND	ug/L	4.0	1		08/12/16 14:46	91-20-3		
n-Propylbenzene	ND	ug/L	1.0	1		08/12/16 14:46	103-65-1		
Styrene	ND	ug/L	1.0	1		08/12/16 14:46	100-42-5		
1,1,1,2-Tetrachloroethane	ND	ug/L	4.0	1		08/12/16 14:46	630-20-6		
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		08/12/16 14:46	79-34-5		
Tetrachloroethene	3.6	ug/L	1.0	1		08/12/16 14:46	127-18-4		
Tetrahydrofuran	ND	ug/L	10.0	1		08/12/16 14:46	109-99-9		
Toluene	ND	ug/L	1.0	1		08/12/16 14:46	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		08/12/16 14:46	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		08/12/16 14:46	120-82-1		
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/12/16 14:46	71-55-6		
1,1,2-Trichloroethane	ND	ug/L	1.0	1		08/12/16 14:46	79-00-5		
Trichloroethene	ND	ug/L	0.40	1		08/12/16 14:46	79-01-6		
Trichlorofluoromethane	ND	ug/L	1.0	1		08/12/16 14:46	75-69-4	L3	
1,2,3-Trichloropropane	ND	ug/L	4.0	1		08/12/16 14:46	96-18-4		
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		08/12/16 14:46	76-13-1		
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		08/12/16 14:46	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		08/12/16 14:46	108-67-8		
Vinyl chloride	ND	ug/L	1.0	1		08/12/16 14:46	75-01-4		
Xylene (Total)	ND	ug/L	3.0	1		08/12/16 14:46	1330-20-7		
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%.	75-125	1		08/12/16 14:46	17060-07-0		
Toluene-d8 (S)	99	%.	75-125	1		08/12/16 14:46	2037-26-5		
4-Bromofluorobenzene (S)	101	%.	75-125	1		08/12/16 14:46	460-00-4		

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358800

Sample: MW16	Lab ID: 10358800003	Collected: 08/10/16 12:30	Received: 08/11/16 11:26	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Acetone	ND	ug/L	20.0	1		08/13/16 19:50	67-64-1	
Allyl chloride	ND	ug/L	4.0	1		08/13/16 19:50	107-05-1	
Benzene	ND	ug/L	1.0	1		08/13/16 19:50	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		08/13/16 19:50	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		08/13/16 19:50	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		08/13/16 19:50	75-27-4	
Bromoform	ND	ug/L	10.0	1		08/13/16 19:50	75-25-2	
Bromomethane	ND	ug/L	4.0	1		08/13/16 19:50	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		08/13/16 19:50	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		08/13/16 19:50	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		08/13/16 19:50	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		08/13/16 19:50	98-06-6	
Carbon tetrachloride	ND	ug/L	4.0	1		08/13/16 19:50	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		08/13/16 19:50	108-90-7	
Chloroethane	ND	ug/L	4.0	1		08/13/16 19:50	75-00-3	
Chloroform	ND	ug/L	1.0	1		08/13/16 19:50	67-66-3	
Chloromethane	ND	ug/L	4.0	1		08/13/16 19:50	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		08/13/16 19:50	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		08/13/16 19:50	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	10.0	1		08/13/16 19:50	96-12-8	
Dibromochloromethane	ND	ug/L	4.0	1		08/13/16 19:50	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		08/13/16 19:50	106-93-4	
Dibromomethane	ND	ug/L	4.0	1		08/13/16 19:50	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		08/13/16 19:50	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		08/13/16 19:50	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		08/13/16 19:50	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		08/13/16 19:50	75-71-8	
1,1-Dichloroethane	ND	ug/L	4.0	1		08/13/16 19:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/13/16 19:50	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/13/16 19:50	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/13/16 19:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/13/16 19:50	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	1		08/13/16 19:50	75-43-4	
1,2-Dichloropropane	ND	ug/L	4.0	1		08/13/16 19:50	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		08/13/16 19:50	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	1		08/13/16 19:50	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		08/13/16 19:50	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	1		08/13/16 19:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	1		08/13/16 19:50	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	1		08/13/16 19:50	60-29-7	
Ethylbenzene	ND	ug/L	1.0	1		08/13/16 19:50	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	4.0	1		08/13/16 19:50	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		08/13/16 19:50	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		08/13/16 19:50	99-87-6	
Methylene Chloride	ND	ug/L	4.0	1		08/13/16 19:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		08/13/16 19:50	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		08/13/16 19:50	1634-04-4	

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358800

Sample: MW16	Lab ID: 10358800003	Collected: 08/10/16 12:30		Received: 08/11/16 11:26		Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Naphthalene	ND	ug/L	4.0	1		08/13/16 19:50	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		08/13/16 19:50	103-65-1	
Styrene	ND	ug/L	1.0	1		08/13/16 19:50	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	4.0	1		08/13/16 19:50	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		08/13/16 19:50	79-34-5	
Tetrachloroethene	92.2	ug/L	1.0	1		08/13/16 19:50	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		08/13/16 19:50	109-99-9	
Toluene	ND	ug/L	1.0	1		08/13/16 19:50	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		08/13/16 19:50	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		08/13/16 19:50	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/13/16 19:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		08/13/16 19:50	79-00-5	
Trichloroethene	ND	ug/L	0.40	1		08/13/16 19:50	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		08/13/16 19:50	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	1		08/13/16 19:50	96-18-4	
1,1,2-Trichlorotrifluoroethane	3.8	ug/L	1.0	1		08/13/16 19:50	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		08/13/16 19:50	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		08/13/16 19:50	108-67-8	
Vinyl chloride	ND	ug/L	0.40	1		08/13/16 19:50	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		08/13/16 19:50	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	112	%.	75-125	1		08/13/16 19:50	17060-07-0	
Toluene-d8 (S)	103	%.	75-125	1		08/13/16 19:50	2037-26-5	
4-Bromofluorobenzene (S)	104	%.	75-125	1		08/13/16 19:50	460-00-4	

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358800

Sample: MW17	Lab ID: 10358800004	Collected: 08/10/16 13:30	Received: 08/11/16 11:26	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Acetone	ND	ug/L	20.0	1		08/13/16 18:50	67-64-1	
Allyl chloride	ND	ug/L	4.0	1		08/13/16 18:50	107-05-1	
Benzene	ND	ug/L	1.0	1		08/13/16 18:50	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		08/13/16 18:50	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		08/13/16 18:50	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		08/13/16 18:50	75-27-4	
Bromoform	ND	ug/L	10.0	1		08/13/16 18:50	75-25-2	
Bromomethane	ND	ug/L	4.0	1		08/13/16 18:50	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		08/13/16 18:50	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		08/13/16 18:50	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		08/13/16 18:50	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		08/13/16 18:50	98-06-6	
Carbon tetrachloride	ND	ug/L	4.0	1		08/13/16 18:50	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		08/13/16 18:50	108-90-7	
Chloroethane	ND	ug/L	4.0	1		08/13/16 18:50	75-00-3	
Chloroform	ND	ug/L	1.0	1		08/13/16 18:50	67-66-3	
Chloromethane	ND	ug/L	4.0	1		08/13/16 18:50	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		08/13/16 18:50	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		08/13/16 18:50	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	10.0	1		08/13/16 18:50	96-12-8	
Dibromochloromethane	ND	ug/L	4.0	1		08/13/16 18:50	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		08/13/16 18:50	106-93-4	
Dibromomethane	ND	ug/L	4.0	1		08/13/16 18:50	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		08/13/16 18:50	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		08/13/16 18:50	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		08/13/16 18:50	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		08/13/16 18:50	75-71-8	
1,1-Dichloroethane	ND	ug/L	4.0	1		08/13/16 18:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/13/16 18:50	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/13/16 18:50	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/13/16 18:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/13/16 18:50	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	1		08/13/16 18:50	75-43-4	
1,2-Dichloropropane	ND	ug/L	4.0	1		08/13/16 18:50	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		08/13/16 18:50	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	1		08/13/16 18:50	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		08/13/16 18:50	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	1		08/13/16 18:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	1		08/13/16 18:50	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	1		08/13/16 18:50	60-29-7	
Ethylbenzene	ND	ug/L	1.0	1		08/13/16 18:50	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	4.0	1		08/13/16 18:50	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		08/13/16 18:50	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		08/13/16 18:50	99-87-6	
Methylene Chloride	ND	ug/L	4.0	1		08/13/16 18:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		08/13/16 18:50	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		08/13/16 18:50	1634-04-4	

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358800

Sample: MW17		Lab ID: 10358800004	Collected: 08/10/16 13:30	Received: 08/11/16 11:26	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Naphthalene	ND	ug/L	4.0	1		08/13/16 18:50	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		08/13/16 18:50	103-65-1	
Styrene	ND	ug/L	1.0	1		08/13/16 18:50	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	4.0	1		08/13/16 18:50	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		08/13/16 18:50	79-34-5	
Tetrachloroethene	9.2	ug/L	1.0	1		08/13/16 18:50	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		08/13/16 18:50	109-99-9	
Toluene	ND	ug/L	1.0	1		08/13/16 18:50	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		08/13/16 18:50	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		08/13/16 18:50	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/13/16 18:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		08/13/16 18:50	79-00-5	
Trichloroethene	ND	ug/L	0.40	1		08/13/16 18:50	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		08/13/16 18:50	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	1		08/13/16 18:50	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		08/13/16 18:50	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		08/13/16 18:50	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		08/13/16 18:50	108-67-8	
Vinyl chloride	ND	ug/L	0.40	1		08/13/16 18:50	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		08/13/16 18:50	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	113	%.	75-125	1		08/13/16 18:50	17060-07-0	
Toluene-d8 (S)	104	%.	75-125	1		08/13/16 18:50	2037-26-5	
4-Bromofluorobenzene (S)	106	%.	75-125	1		08/13/16 18:50	460-00-4	

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358800

Sample: MW18	Lab ID: 10358800005	Collected: 08/10/16 14:15	Received: 08/11/16 11:26	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Acetone	ND	ug/L	20.0	1		08/12/16 13:08	67-64-1	
Allyl chloride	ND	ug/L	4.0	1		08/12/16 13:08	107-05-1	
Benzene	ND	ug/L	1.0	1		08/12/16 13:08	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		08/12/16 13:08	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		08/12/16 13:08	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		08/12/16 13:08	75-27-4	
Bromoform	ND	ug/L	4.0	1		08/12/16 13:08	75-25-2	
Bromomethane	ND	ug/L	4.0	1		08/12/16 13:08	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		08/12/16 13:08	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		08/12/16 13:08	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		08/12/16 13:08	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		08/12/16 13:08	98-06-6	
Carbon tetrachloride	ND	ug/L	4.0	1		08/12/16 13:08	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		08/12/16 13:08	108-90-7	
Chloroethane	ND	ug/L	1.0	1		08/12/16 13:08	75-00-3	M1
Chloroform	ND	ug/L	1.0	1		08/12/16 13:08	67-66-3	
Chloromethane	ND	ug/L	4.0	1		08/12/16 13:08	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		08/12/16 13:08	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		08/12/16 13:08	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	10.0	1		08/12/16 13:08	96-12-8	
Dibromochloromethane	ND	ug/L	4.0	1		08/12/16 13:08	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		08/12/16 13:08	106-93-4	
Dibromomethane	ND	ug/L	4.0	1		08/12/16 13:08	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		08/12/16 13:08	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		08/12/16 13:08	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		08/12/16 13:08	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		08/12/16 13:08	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/12/16 13:08	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/12/16 13:08	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/12/16 13:08	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/12/16 13:08	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/12/16 13:08	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	1		08/12/16 13:08	75-43-4	
1,2-Dichloropropane	ND	ug/L	4.0	1		08/12/16 13:08	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		08/12/16 13:08	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	1		08/12/16 13:08	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		08/12/16 13:08	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	1		08/12/16 13:08	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	1		08/12/16 13:08	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	1		08/12/16 13:08	60-29-7	
Ethylbenzene	ND	ug/L	1.0	1		08/12/16 13:08	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		08/12/16 13:08	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		08/12/16 13:08	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		08/12/16 13:08	99-87-6	
Methylene Chloride	ND	ug/L	4.0	1		08/12/16 13:08	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		08/12/16 13:08	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		08/12/16 13:08	1634-04-4	

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358800

Sample: MW18		Lab ID: 10358800005		Collected: 08/10/16 14:15		Received: 08/11/16 11:26		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260B VOC		Analytical Method: EPA 8260B							
Naphthalene	ND	ug/L	4.0	1		08/12/16 13:08	91-20-3		
n-Propylbenzene	ND	ug/L	1.0	1		08/12/16 13:08	103-65-1		
Styrene	ND	ug/L	1.0	1		08/12/16 13:08	100-42-5		
1,1,1,2-Tetrachloroethane	ND	ug/L	4.0	1		08/12/16 13:08	630-20-6		
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		08/12/16 13:08	79-34-5		
Tetrachloroethene	1.6	ug/L	1.0	1		08/12/16 13:08	127-18-4		
Tetrahydrofuran	ND	ug/L	10.0	1		08/12/16 13:08	109-99-9		
Toluene	ND	ug/L	1.0	1		08/12/16 13:08	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		08/12/16 13:08	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		08/12/16 13:08	120-82-1		
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/12/16 13:08	71-55-6		
1,1,2-Trichloroethane	ND	ug/L	1.0	1		08/12/16 13:08	79-00-5		
Trichloroethene	ND	ug/L	0.40	1		08/12/16 13:08	79-01-6		
Trichlorofluoromethane	ND	ug/L	1.0	1		08/12/16 13:08	75-69-4	L3,M1	
1,2,3-Trichloropropane	ND	ug/L	4.0	1		08/12/16 13:08	96-18-4		
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		08/12/16 13:08	76-13-1		
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		08/12/16 13:08	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		08/12/16 13:08	108-67-8		
Vinyl chloride	ND	ug/L	1.0	1		08/12/16 13:08	75-01-4		
Xylene (Total)	ND	ug/L	3.0	1		08/12/16 13:08	1330-20-7		
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%.	75-125	1		08/12/16 13:08	17060-07-0		
Toluene-d8 (S)	99	%.	75-125	1		08/12/16 13:08	2037-26-5		
4-Bromofluorobenzene (S)	102	%.	75-125	1		08/12/16 13:08	460-00-4		

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358800

Sample: MW19	Lab ID: 10358800006	Collected: 08/10/16 12:10	Received: 08/11/16 11:26	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Acetone	ND	ug/L	20.0	1		08/12/16 12:35	67-64-1	
Allyl chloride	ND	ug/L	4.0	1		08/12/16 12:35	107-05-1	
Benzene	ND	ug/L	1.0	1		08/12/16 12:35	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		08/12/16 12:35	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		08/12/16 12:35	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		08/12/16 12:35	75-27-4	
Bromoform	ND	ug/L	4.0	1		08/12/16 12:35	75-25-2	
Bromomethane	ND	ug/L	4.0	1		08/12/16 12:35	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		08/12/16 12:35	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		08/12/16 12:35	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		08/12/16 12:35	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		08/12/16 12:35	98-06-6	
Carbon tetrachloride	ND	ug/L	4.0	1		08/12/16 12:35	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		08/12/16 12:35	108-90-7	
Chloroethane	ND	ug/L	1.0	1		08/12/16 12:35	75-00-3	
Chloroform	ND	ug/L	1.0	1		08/12/16 12:35	67-66-3	
Chloromethane	ND	ug/L	4.0	1		08/12/16 12:35	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		08/12/16 12:35	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		08/12/16 12:35	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	10.0	1		08/12/16 12:35	96-12-8	
Dibromochloromethane	ND	ug/L	4.0	1		08/12/16 12:35	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		08/12/16 12:35	106-93-4	
Dibromomethane	ND	ug/L	4.0	1		08/12/16 12:35	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		08/12/16 12:35	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		08/12/16 12:35	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		08/12/16 12:35	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		08/12/16 12:35	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/12/16 12:35	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/12/16 12:35	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/12/16 12:35	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/12/16 12:35	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/12/16 12:35	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	1		08/12/16 12:35	75-43-4	
1,2-Dichloropropane	ND	ug/L	4.0	1		08/12/16 12:35	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		08/12/16 12:35	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	1		08/12/16 12:35	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		08/12/16 12:35	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	1		08/12/16 12:35	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	1		08/12/16 12:35	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	1		08/12/16 12:35	60-29-7	
Ethylbenzene	ND	ug/L	1.0	1		08/12/16 12:35	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		08/12/16 12:35	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		08/12/16 12:35	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		08/12/16 12:35	99-87-6	
Methylene Chloride	ND	ug/L	4.0	1		08/12/16 12:35	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		08/12/16 12:35	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		08/12/16 12:35	1634-04-4	

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358800

Sample: MW19	Lab ID: 10358800006	Collected: 08/10/16 12:10	Received: 08/11/16 11:26	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC								
Analytical Method: EPA 8260B								
Naphthalene	ND	ug/L	4.0	1		08/12/16 12:35	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		08/12/16 12:35	103-65-1	
Styrene	ND	ug/L	1.0	1		08/12/16 12:35	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	4.0	1		08/12/16 12:35	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		08/12/16 12:35	79-34-5	
Tetrachloroethene	1.8	ug/L	1.0	1		08/12/16 12:35	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		08/12/16 12:35	109-99-9	
Toluene	ND	ug/L	1.0	1		08/12/16 12:35	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		08/12/16 12:35	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		08/12/16 12:35	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/12/16 12:35	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		08/12/16 12:35	79-00-5	
Trichloroethene	ND	ug/L	0.40	1		08/12/16 12:35	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		08/12/16 12:35	75-69-4	L3
1,2,3-Trichloropropane	ND	ug/L	4.0	1		08/12/16 12:35	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		08/12/16 12:35	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		08/12/16 12:35	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		08/12/16 12:35	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		08/12/16 12:35	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		08/12/16 12:35	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	101	%.	75-125	1		08/12/16 12:35	17060-07-0	
Toluene-d8 (S)	99	%.	75-125	1		08/12/16 12:35	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125	1		08/12/16 12:35	460-00-4	

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358800

Sample: MW20	Lab ID: 10358800007	Collected: 08/10/16 11:50	Received: 08/11/16 11:26	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Acetone	ND	ug/L	20.0	1		08/12/16 14:13	67-64-1	
Allyl chloride	ND	ug/L	4.0	1		08/12/16 14:13	107-05-1	
Benzene	ND	ug/L	1.0	1		08/12/16 14:13	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		08/12/16 14:13	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		08/12/16 14:13	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		08/12/16 14:13	75-27-4	
Bromoform	ND	ug/L	4.0	1		08/12/16 14:13	75-25-2	
Bromomethane	ND	ug/L	4.0	1		08/12/16 14:13	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		08/12/16 14:13	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		08/12/16 14:13	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		08/12/16 14:13	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		08/12/16 14:13	98-06-6	
Carbon tetrachloride	ND	ug/L	4.0	1		08/12/16 14:13	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		08/12/16 14:13	108-90-7	
Chloroethane	ND	ug/L	1.0	1		08/12/16 14:13	75-00-3	
Chloroform	ND	ug/L	1.0	1		08/12/16 14:13	67-66-3	
Chloromethane	ND	ug/L	4.0	1		08/12/16 14:13	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		08/12/16 14:13	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		08/12/16 14:13	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	10.0	1		08/12/16 14:13	96-12-8	
Dibromochloromethane	ND	ug/L	4.0	1		08/12/16 14:13	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		08/12/16 14:13	106-93-4	
Dibromomethane	ND	ug/L	4.0	1		08/12/16 14:13	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		08/12/16 14:13	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		08/12/16 14:13	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		08/12/16 14:13	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		08/12/16 14:13	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/12/16 14:13	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/12/16 14:13	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/12/16 14:13	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/12/16 14:13	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/12/16 14:13	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	1		08/12/16 14:13	75-43-4	
1,2-Dichloropropane	ND	ug/L	4.0	1		08/12/16 14:13	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		08/12/16 14:13	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	1		08/12/16 14:13	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		08/12/16 14:13	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	1		08/12/16 14:13	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	1		08/12/16 14:13	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	1		08/12/16 14:13	60-29-7	
Ethylbenzene	ND	ug/L	1.0	1		08/12/16 14:13	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		08/12/16 14:13	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		08/12/16 14:13	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		08/12/16 14:13	99-87-6	
Methylene Chloride	ND	ug/L	4.0	1		08/12/16 14:13	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		08/12/16 14:13	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		08/12/16 14:13	1634-04-4	

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358800

Sample: MW20	Lab ID: 10358800007	Collected: 08/10/16 11:50	Received: 08/11/16 11:26	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Naphthalene	ND	ug/L	4.0	1		08/12/16 14:13	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		08/12/16 14:13	103-65-1	
Styrene	ND	ug/L	1.0	1		08/12/16 14:13	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	4.0	1		08/12/16 14:13	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		08/12/16 14:13	79-34-5	
Tetrachloroethene	3.6	ug/L	1.0	1		08/12/16 14:13	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		08/12/16 14:13	109-99-9	
Toluene	ND	ug/L	1.0	1		08/12/16 14:13	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		08/12/16 14:13	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		08/12/16 14:13	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/12/16 14:13	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		08/12/16 14:13	79-00-5	
Trichloroethene	ND	ug/L	0.40	1		08/12/16 14:13	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		08/12/16 14:13	75-69-4	L3
1,2,3-Trichloropropane	ND	ug/L	4.0	1		08/12/16 14:13	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		08/12/16 14:13	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		08/12/16 14:13	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		08/12/16 14:13	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		08/12/16 14:13	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		08/12/16 14:13	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	103	%.	75-125	1		08/12/16 14:13	17060-07-0	
Toluene-d8 (S)	99	%.	75-125	1		08/12/16 14:13	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	75-125	1		08/12/16 14:13	460-00-4	

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358800

Sample: Trip Blank		Lab ID: 1035880008	Collected: 08/10/16 00:00	Received: 08/11/16 11:26	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Acetone	ND	ug/L	20.0	1		08/12/16 12:19	67-64-1	
Allyl chloride	ND	ug/L	4.0	1		08/12/16 12:19	107-05-1	
Benzene	ND	ug/L	1.0	1		08/12/16 12:19	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		08/12/16 12:19	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		08/12/16 12:19	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		08/12/16 12:19	75-27-4	
Bromoform	ND	ug/L	4.0	1		08/12/16 12:19	75-25-2	
Bromomethane	ND	ug/L	4.0	1		08/12/16 12:19	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		08/12/16 12:19	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		08/12/16 12:19	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		08/12/16 12:19	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		08/12/16 12:19	98-06-6	
Carbon tetrachloride	ND	ug/L	4.0	1		08/12/16 12:19	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		08/12/16 12:19	108-90-7	
Chloroethane	ND	ug/L	1.0	1		08/12/16 12:19	75-00-3	
Chloroform	ND	ug/L	1.0	1		08/12/16 12:19	67-66-3	
Chloromethane	ND	ug/L	4.0	1		08/12/16 12:19	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		08/12/16 12:19	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		08/12/16 12:19	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	10.0	1		08/12/16 12:19	96-12-8	
Dibromochloromethane	ND	ug/L	4.0	1		08/12/16 12:19	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		08/12/16 12:19	106-93-4	
Dibromomethane	ND	ug/L	4.0	1		08/12/16 12:19	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		08/12/16 12:19	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		08/12/16 12:19	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		08/12/16 12:19	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		08/12/16 12:19	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/12/16 12:19	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/12/16 12:19	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/12/16 12:19	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/12/16 12:19	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/12/16 12:19	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	1		08/12/16 12:19	75-43-4	
1,2-Dichloropropane	ND	ug/L	4.0	1		08/12/16 12:19	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		08/12/16 12:19	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	1		08/12/16 12:19	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		08/12/16 12:19	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	1		08/12/16 12:19	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	1		08/12/16 12:19	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	1		08/12/16 12:19	60-29-7	
Ethylbenzene	ND	ug/L	1.0	1		08/12/16 12:19	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		08/12/16 12:19	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		08/12/16 12:19	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		08/12/16 12:19	99-87-6	
Methylene Chloride	ND	ug/L	4.0	1		08/12/16 12:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		08/12/16 12:19	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		08/12/16 12:19	1634-04-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CrC
Pace Project No.: 10358800

Sample: Trip Blank		Lab ID: 1035880008	Collected: 08/10/16 00:00	Received: 08/11/16 11:26	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B						
Naphthalene	ND	ug/L	4.0	1		08/12/16 12:19	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		08/12/16 12:19	103-65-1	
Styrene	ND	ug/L	1.0	1		08/12/16 12:19	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	4.0	1		08/12/16 12:19	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		08/12/16 12:19	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		08/12/16 12:19	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		08/12/16 12:19	109-99-9	
Toluene	ND	ug/L	1.0	1		08/12/16 12:19	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		08/12/16 12:19	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		08/12/16 12:19	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/12/16 12:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		08/12/16 12:19	79-00-5	
Trichloroethene	ND	ug/L	0.40	1		08/12/16 12:19	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		08/12/16 12:19	75-69-4	L3
1,2,3-Trichloropropane	ND	ug/L	4.0	1		08/12/16 12:19	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		08/12/16 12:19	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		08/12/16 12:19	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		08/12/16 12:19	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		08/12/16 12:19	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		08/12/16 12:19	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	103	%.	75-125	1		08/12/16 12:19	17060-07-0	
Toluene-d8 (S)	98	%.	75-125	1		08/12/16 12:19	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	75-125	1		08/12/16 12:19	460-00-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358800

QC Batch: 430295 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260B MSV 465 W
Associated Lab Samples: 10358800001, 10358800002, 10358800005, 10358800006, 10358800007, 10358800008

METHOD BLANK: 2341044 Matrix: Water
Associated Lab Samples: 10358800001, 10358800002, 10358800005, 10358800006, 10358800007, 10358800008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	4.0	08/12/16 10:57	
1,1,1-Trichloroethane	ug/L	ND	1.0	08/12/16 10:57	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	08/12/16 10:57	
1,1,2-Trichloroethane	ug/L	ND	1.0	08/12/16 10:57	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	08/12/16 10:57	
1,1-Dichloroethane	ug/L	ND	1.0	08/12/16 10:57	
1,1-Dichloroethene	ug/L	ND	1.0	08/12/16 10:57	
1,1-Dichloropropene	ug/L	ND	1.0	08/12/16 10:57	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	08/12/16 10:57	
1,2,3-Trichloropropane	ug/L	ND	4.0	08/12/16 10:57	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	08/12/16 10:57	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	08/12/16 10:57	
1,2-Dibromo-3-chloropropane	ug/L	ND	10.0	08/12/16 10:57	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	08/12/16 10:57	
1,2-Dichlorobenzene	ug/L	ND	1.0	08/12/16 10:57	
1,2-Dichloroethane	ug/L	ND	1.0	08/12/16 10:57	
1,2-Dichloropropane	ug/L	ND	4.0	08/12/16 10:57	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	08/12/16 10:57	
1,3-Dichlorobenzene	ug/L	ND	1.0	08/12/16 10:57	
1,3-Dichloropropane	ug/L	ND	1.0	08/12/16 10:57	
1,4-Dichlorobenzene	ug/L	ND	1.0	08/12/16 10:57	
2,2-Dichloropropane	ug/L	ND	4.0	08/12/16 10:57	
2-Butanone (MEK)	ug/L	ND	5.0	08/12/16 10:57	
2-Chlorotoluene	ug/L	ND	1.0	08/12/16 10:57	
4-Chlorotoluene	ug/L	ND	1.0	08/12/16 10:57	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	08/12/16 10:57	
Acetone	ug/L	ND	20.0	08/12/16 10:57	
Allyl chloride	ug/L	ND	4.0	08/12/16 10:57	
Benzene	ug/L	ND	1.0	08/12/16 10:57	
Bromobenzene	ug/L	ND	1.0	08/12/16 10:57	
Bromochloromethane	ug/L	ND	1.0	08/12/16 10:57	
Bromodichloromethane	ug/L	ND	1.0	08/12/16 10:57	
Bromoform	ug/L	ND	4.0	08/12/16 10:57	
Bromomethane	ug/L	ND	4.0	08/12/16 10:57	
Carbon tetrachloride	ug/L	ND	4.0	08/12/16 10:57	
Chlorobenzene	ug/L	ND	1.0	08/12/16 10:57	
Chloroethane	ug/L	ND	1.0	08/12/16 10:57	
Chloroform	ug/L	ND	1.0	08/12/16 10:57	
Chloromethane	ug/L	ND	4.0	08/12/16 10:57	
cis-1,2-Dichloroethene	ug/L	ND	1.0	08/12/16 10:57	
cis-1,3-Dichloropropene	ug/L	ND	4.0	08/12/16 10:57	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358800

METHOD BLANK: 2341044 Matrix: Water
Associated Lab Samples: 10358800001, 10358800002, 10358800005, 10358800006, 10358800007, 10358800008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromochloromethane	ug/L	ND	4.0	08/12/16 10:57	
Dibromomethane	ug/L	ND	4.0	08/12/16 10:57	
Dichlorodifluoromethane	ug/L	ND	1.0	08/12/16 10:57	
Dichlorofluoromethane	ug/L	ND	1.0	08/12/16 10:57	
Diethyl ether (Ethyl ether)	ug/L	ND	4.0	08/12/16 10:57	
Ethylbenzene	ug/L	ND	1.0	08/12/16 10:57	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	08/12/16 10:57	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	08/12/16 10:57	
Methyl-tert-butyl ether	ug/L	ND	1.0	08/12/16 10:57	
Methylene Chloride	ug/L	ND	4.0	08/12/16 10:57	
n-Butylbenzene	ug/L	ND	1.0	08/12/16 10:57	
n-Propylbenzene	ug/L	ND	1.0	08/12/16 10:57	
Naphthalene	ug/L	ND	4.0	08/12/16 10:57	
p-Isopropyltoluene	ug/L	ND	1.0	08/12/16 10:57	
sec-Butylbenzene	ug/L	ND	1.0	08/12/16 10:57	
Styrene	ug/L	ND	1.0	08/12/16 10:57	
tert-Butylbenzene	ug/L	ND	1.0	08/12/16 10:57	
Tetrachloroethene	ug/L	ND	1.0	08/12/16 10:57	
Tetrahydrofuran	ug/L	ND	10.0	08/12/16 10:57	
Toluene	ug/L	ND	1.0	08/12/16 10:57	
trans-1,2-Dichloroethene	ug/L	ND	1.0	08/12/16 10:57	
trans-1,3-Dichloropropene	ug/L	ND	4.0	08/12/16 10:57	
Trichloroethene	ug/L	ND	0.40	08/12/16 10:57	
Trichlorofluoromethane	ug/L	ND	1.0	08/12/16 10:57	
Vinyl chloride	ug/L	ND	1.0	08/12/16 10:57	D1
Xylene (Total)	ug/L	ND	3.0	08/12/16 10:57	
1,2-Dichloroethane-d4 (S)	%	98	75-125	08/12/16 10:57	
4-Bromofluorobenzene (S)	%	99	75-125	08/12/16 10:57	
Toluene-d8 (S)	%	98	75-125	08/12/16 10:57	

Parameter	Units	2341046							Max RPD	Qualifiers
		Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD		
1,1,1,2-Tetrachloroethane	ug/L	20	21.2	21.9	106	109	75-125	3	20	
1,1,1-Trichloroethane	ug/L	20	20.2	21.3	101	106	73-125	5	20	
1,1,2,2-Tetrachloroethane	ug/L	20	18.9	21.1	95	105	75-128	11	20	
1,1,2-Trichloroethane	ug/L	20	20.0	21.1	100	105	75-129	5	20	
1,1,2-Trichlorotrifluoroethane	ug/L	20	20.2	22.4	101	112	69-125	10	20	
1,1-Dichloroethane	ug/L	20	18.8	20.2	94	101	75-131	7	20	
1,1-Dichloroethene	ug/L	20	18.8	20.8	94	104	72-125	10	20	
1,1-Dichloropropene	ug/L	20	19.3	20.7	96	104	74-125	7	20	
1,2,3-Trichlorobenzene	ug/L	20	18.4	19.7	92	99	68-127	7	20	
1,2,3-Trichloropropane	ug/L	20	18.7	20.2	94	101	75-125	8	20	
1,2,4-Trichlorobenzene	ug/L	20	19.0	19.8	95	99	70-125	4	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358800

LABORATORY CONTROL SAMPLE & LCSD: 2341045		2341046								
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	20.0	21.5	100	108	75-130	7	20	
1,2-Dibromo-3-chloropropane	ug/L	50	48.0	51.6	96	103	74-125	7	20	
1,2-Dibromoethane (EDB)	ug/L	20	20.0	21.1	100	106	75-125	5	20	
1,2-Dichlorobenzene	ug/L	20	18.9	20.4	94	102	75-125	8	20	
1,2-Dichloroethane	ug/L	20	18.1	19.7	91	98	72-129	8	20	
1,2-Dichloropropane	ug/L	20	19.3	20.3	97	102	71-129	5	20	
1,3,5-Trimethylbenzene	ug/L	20	19.2	20.3	96	102	75-127	6	20	
1,3-Dichlorobenzene	ug/L	20	18.2	19.7	91	99	75-125	8	20	
1,3-Dichloropropane	ug/L	20	19.5	20.3	98	101	75-125	4	20	
1,4-Dichlorobenzene	ug/L	20	17.6	18.4	88	92	75-125	4	20	
2,2-Dichloropropane	ug/L	20	20.6	22.2	103	111	71-125	8	20	
2-Butanone (MEK)	ug/L	100	96.4	103	96	103	58-150	7	20	
2-Chlorotoluene	ug/L	20	19.0	20.3	95	101	75-125	7	20	
4-Chlorotoluene	ug/L	20	18.4	19.3	92	97	75-130	5	20	
4-Methyl-2-pentanone (MIBK)	ug/L	100	98.4	104	98	104	72-140	6	20	
Acetone	ug/L	100	99.6	106	100	106	69-137	6	20	
Allyl chloride	ug/L	20	21.0	22.8	105	114	68-132	8	20	
Benzene	ug/L	20	19.3	20.9	97	104	75-125	7	20	
Bromobenzene	ug/L	20	20.2	21.7	101	109	75-125	7	20	
Bromochloromethane	ug/L	20	20.6	23.3	103	117	75-125	12	20	
Bromodichloromethane	ug/L	20	21.4	21.7	107	109	69-128	1	20	
Bromoform	ug/L	20	18.5	18.5	93	92	75-125	0	20	
Bromomethane	ug/L	20	24.7	25.4	123	127	30-150	3	20	
Carbon tetrachloride	ug/L	20	21.2	22.4	106	112	74-125	6	20	
Chlorobenzene	ug/L	20	19.3	20.3	97	101	75-125	5	20	
Chloroethane	ug/L	20	22.4	25.0	112	125	60-150	11	20	
Chloroform	ug/L	20	21.0	22.8	105	114	75-126	8	20	
Chloromethane	ug/L	20	25.4	22.0	127	110	46-150	15	20	
cis-1,2-Dichloroethene	ug/L	20	18.7	19.8	93	99	75-126	6	20	
cis-1,3-Dichloropropene	ug/L	20	20.8	20.9	104	105	75-125	0	20	
Dibromochloromethane	ug/L	20	19.1	19.2	96	96	75-125	0	20	
Dibromomethane	ug/L	20	20.5	20.8	103	104	72-127	1	20	
Dichlorodifluoromethane	ug/L	20	21.4	22.1	107	110	58-135	3	20	
Dichlorofluoromethane	ug/L	20	21.4	23.5	107	117	68-149	10	20	
Diethyl ether (Ethyl ether)	ug/L	20	19.6	20.9	98	104	66-144	6	20	
Ethylbenzene	ug/L	20	18.9	19.6	95	98	75-125	4	20	
Hexachloro-1,3-butadiene	ug/L	20	20.5	21.0	103	105	73-125	3	20	
Isopropylbenzene (Cumene)	ug/L	20	19.3	20.0	97	100	69-140	4	20	
Methyl-tert-butyl ether	ug/L	20	18.8	21.1	94	105	75-126	12	20	
Methylene Chloride	ug/L	20	18.7	20.3	94	101	71-130	8	20	
n-Butylbenzene	ug/L	20	20.2	20.7	101	103	71-129	2	20	
n-Propylbenzene	ug/L	20	18.6	20.0	93	100	71-133	7	20	
Naphthalene	ug/L	20	17.4	18.3	87	92	59-137	5	20	
p-Isopropyltoluene	ug/L	20	20.7	21.5	104	107	74-127	3	20	
sec-Butylbenzene	ug/L	20	18.9	19.4	94	97	66-140	3	20	
Styrene	ug/L	20	19.0	19.9	95	99	75-125	4	20	
tert-Butylbenzene	ug/L	20	18.4	19.6	92	98	73-129	7	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358800

LABORATORY CONTROL SAMPLE & LCSD: 2341045		2341046								
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Tetrachloroethene	ug/L	20	20.2	20.5	101	102	75-125	1	20	
Tetrahydrofuran	ug/L	200	193	210	97	105	71-129	8	20	
Toluene	ug/L	20	19.3	20.5	97	102	75-125	6	20	
trans-1,2-Dichloroethene	ug/L	20	19.5	21.1	98	105	75-125	8	20	
trans-1,3-Dichloropropene	ug/L	20	18.5	19.2	92	96	75-125	4	20	
Trichloroethene	ug/L	20	20.7	21.4	104	107	75-125	3	20	
Trichlorofluoromethane	ug/L	20	24.1	25.8	121	129	74-128	7	20 LO	
Vinyl chloride	ug/L	20	20.5	21.7	103	108	71-131	6	20	
Xylene (Total)	ug/L	60	56.8	59.9	95	100	75-125	5	20	
1,2-Dichloroethane-d4 (S)	%				99	104	75-125			
4-Bromofluorobenzene (S)	%				98	100	75-125			
Toluene-d8 (S)	%				100	101	75-125			

MATRIX SPIKE SAMPLE: 2342113		10358800005		Spike			MS		% Rec		Qualifiers
Parameter	Units	Result	Conc.	Result	% Rec	Limit	Limit	Limit	Limit	Qualifiers	
1,1,1,2-Tetrachloroethane	ug/L	ND	20	22.0	110	75-125					
1,1,1-Trichloroethane	ug/L	ND	20	24.5	122	71-144					
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20.1	101	75-131					
1,1,2-Trichloroethane	ug/L	ND	20	21.2	106	75-125					
1,1,2-Trichlorotrifluoroethane	ug/L	ND	20	25.7	128	75-150					
1,1-Dichloroethane	ug/L	ND	20	23.0	115	64-150					
1,1-Dichloroethene	ug/L	ND	20	23.8	119	68-150					
1,1-Dichloropropene	ug/L	ND	20	24.2	121	68-145					
1,2,3-Trichlorobenzene	ug/L	ND	20	18.2	91	57-142					
1,2,3-Trichloropropane	ug/L	ND	20	20.7	103	75-125					
1,2,4-Trichlorobenzene	ug/L	ND	20	19.1	96	60-135					
1,2,4-Trimethylbenzene	ug/L	ND	20	21.1	105	67-148					
1,2-Dibromo-3-chloropropane	ug/L	ND	50	45.2	90	32-137					
1,2-Dibromoethane (EDB)	ug/L	ND	20	21.1	106	75-125					
1,2-Dichlorobenzene	ug/L	ND	20	19.5	97	75-125					
1,2-Dichloroethane	ug/L	ND	20	20.3	101	62-138					
1,2-Dichloropropane	ug/L	ND	20	21.7	109	62-144					
1,3,5-Trimethylbenzene	ug/L	ND	20	19.9	100	67-148					
1,3-Dichlorobenzene	ug/L	ND	20	19.7	98	74-131					
1,3-Dichloropropane	ug/L	ND	20	20.7	104	75-127					
1,4-Dichlorobenzene	ug/L	ND	20	18.7	94	74-126					
2,2-Dichloropropane	ug/L	ND	20	24.9	125	56-146					
2-Butanone (MEK)	ug/L	ND	100	94.2	94	47-150					
2-Chlorotoluene	ug/L	ND	20	20.9	104	74-137					
4-Chlorotoluene	ug/L	ND	20	19.9	100	72-138					
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	96.0	96	60-147					
Acetone	ug/L	ND	100	98.7	99	61-150					
Allyl chloride	ug/L	ND	20	23.0	115	53-150					
Benzene	ug/L	ND	20	21.2	106	52-147					

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358800

MATRIX SPIKE SAMPLE:	2342113	10358800005	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Bromobenzene	ug/L	ND	20	21.0	105	75-129	
Bromochloromethane	ug/L	ND	20	22.7	113	72-128	
Bromodichloromethane	ug/L	ND	20	21.6	108	65-137	
Bromoform	ug/L	ND	20	18.3	91	59-133	
Bromomethane	ug/L	ND	20	14.7	74	30-150	
Carbon tetrachloride	ug/L	ND	20	23.7	119	73-144	
Chlorobenzene	ug/L	ND	20	20.6	103	75-126	
Chloroethane	ug/L	ND	20	41.3	207	55-150	M1
Chloroform	ug/L	ND	20	23.1	111	66-143	
Chloromethane	ug/L	ND	20	23.3	113	42-150	
cis-1,2-Dichloroethene	ug/L	ND	20	21.1	106	65-143	
cis-1,3-Dichloropropene	ug/L	ND	20	21.1	105	75-125	
Dibromochloromethane	ug/L	ND	20	18.7	94	75-125	
Dibromomethane	ug/L	ND	20	21.0	105	66-133	
Dichlorodifluoromethane	ug/L	ND	20	27.4	137	74-150	
Dichlorofluoromethane	ug/L	ND	20	25.3	127	68-150	
Diethyl ether (Ethyl ether)	ug/L	ND	20	21.2	106	57-148	
Ethylbenzene	ug/L	ND	20	20.5	103	67-149	
Hexachloro-1,3-butadiene	ug/L	ND	20	22.0	110	65-143	
Isopropylbenzene (Cumene)	ug/L	ND	20	21.0	105	64-150	
Methyl-tert-butyl ether	ug/L	ND	20	20.5	103	71-130	
Methylene Chloride	ug/L	ND	20	20.4	102	67-137	
n-Butylbenzene	ug/L	ND	20	20.7	103	70-138	
n-Propylbenzene	ug/L	ND	20	20.8	104	70-148	
Naphthalene	ug/L	ND	20	16.3	82	39-150	
p-Isopropyltoluene	ug/L	ND	20	20.8	104	74-138	
sec-Butylbenzene	ug/L	ND	20	20.6	103	64-150	
Styrene	ug/L	ND	20	19.8	99	75-132	
tert-Butylbenzene	ug/L	ND	20	20.5	103	75-138	
Tetrachloroethene	ug/L	1.6	20	23.7	111	73-136	
Tetrahydrofuran	ug/L	ND	200	201	101	68-142	
Toluene	ug/L	ND	20	20.7	103	69-139	
trans-1,2-Dichloroethene	ug/L	ND	20	22.9	114	75-135	
trans-1,3-Dichloropropene	ug/L	ND	20	19.2	96	66-136	
Trichloroethene	ug/L	ND	20	22.7	113	74-135	
Trichlorofluoromethane	ug/L	ND	20	31.1	156	75-150	M1
Vinyl chloride	ug/L	ND	20	25.3	127	69-150	
Xylene (Total)	ug/L	ND	60	61.9	103	70-147	
1,2-Dichloroethane-d4 (S)	%				103	75-125	
4-Bromofluorobenzene (S)	%				102	75-125	
Toluene-d8 (S)	%				100	75-125	

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358800

SAMPLE DUPLICATE: 2342115

Parameter	Units	10358800006 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,1-Trichloroethane	ug/L	ND	ND		30	
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,2-Trichloroethane	ug/L	ND	ND		30	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	ND		30	
1,1-Dichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethene	ug/L	ND	ND		30	
1,1-Dichloropropene	ug/L	ND	ND		30	
1,2,3-Trichlorobenzene	ug/L	ND	ND		30	
1,2,3-Trichloropropane	ug/L	ND	ND		30	
1,2,4-Trichlorobenzene	ug/L	ND	ND		30	
1,2,4-Trimethylbenzene	ug/L	ND	ND		30	
1,2-Dibromo-3-chloropropane	ug/L	ND	ND		30	
1,2-Dibromoethane (EDB)	ug/L	ND	ND		30	
1,2-Dichlorobenzene	ug/L	ND	ND		30	
1,2-Dichloroethane	ug/L	ND	ND		30	
1,2-Dichloropropane	ug/L	ND	ND		30	
1,3,5-Trimethylbenzene	ug/L	ND	ND		30	
1,3-Dichlorobenzene	ug/L	ND	ND		30	
1,3-Dichloropropane	ug/L	ND	ND		30	
1,4-Dichlorobenzene	ug/L	ND	ND		30	
2,2-Dichloropropane	ug/L	ND	ND		30	
2-Butanone (MEK)	ug/L	ND	ND		30	
2-Chlorotoluene	ug/L	ND	ND		30	
4-Chlorotoluene	ug/L	ND	ND		30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND		30	
Acetone	ug/L	ND	ND		30	
Allyl chloride	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Bromobenzene	ug/L	ND	ND		30	
Bromochloromethane	ug/L	ND	ND		30	
Bromodichloromethane	ug/L	ND	ND		30	
Bromoform	ug/L	ND	ND		30	
Bromomethane	ug/L	ND	ND		30	
Carbon tetrachloride	ug/L	ND	ND		30	
Chlorobenzene	ug/L	ND	ND		30	
Chloroethane	ug/L	ND	ND		30	
Chloroform	ug/L	ND	ND		30	
Chloromethane	ug/L	ND	ND		30	
cis-1,2-Dichloroethene	ug/L	ND	ND		30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dibromomethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	
Dichlorofluoromethane	ug/L	ND	ND		30	
Diethyl ether (Ethyl ether)	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358800

SAMPLE DUPLICATE: 2342115

Parameter	Units	10358800006 Result	Dup Result	RPD	Max RPD	Qualifiers
Hexachloro-1,3-butadiene	ug/L	ND	ND		30	
Isopropylbenzene (Cumene)	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Methylene Chloride	ug/L	ND	ND		30	
n-Butylbenzene	ug/L	ND	ND		30	
n-Propylbenzene	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
p-Isopropyltoluene	ug/L	ND	ND		30	
sec-Butylbenzene	ug/L	ND	ND		30	
Styrene	ug/L	ND	ND		30	
tert-Butylbenzene	ug/L	ND	ND		30	
Tetrachloroethene	ug/L	1.8	2.0	8	30	
Tetrahydrofuran	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
trans-1,2-Dichloroethene	ug/L	ND	ND		30	
trans-1,3-Dichloropropene	ug/L	ND	ND		30	
Trichloroethene	ug/L	ND	ND		30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	101	103	2		
4-Bromofluorobenzene (S)	%	99	100	1		
Toluene-d8 (S)	%	99	99	0		

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358800

QC Batch: 430489 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260B MSV 465 W
Associated Lab Samples: 10358800003, 10358800004

METHOD BLANK: 2342120 Matrix: Water
Associated Lab Samples: 10358800003, 10358800004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	4.0	08/13/16 16:46	
1,1,1-Trichloroethane	ug/L	ND	1.0	08/13/16 16:46	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	08/13/16 16:46	
1,1,2-Trichloroethane	ug/L	ND	1.0	08/13/16 16:46	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	08/13/16 16:46	
1,1-Dichloroethane	ug/L	ND	4.0	08/13/16 16:46	
1,1-Dichloroethene	ug/L	ND	1.0	08/13/16 16:46	
1,1-Dichloropropene	ug/L	ND	1.0	08/13/16 16:46	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	08/13/16 16:46	
1,2,3-Trichloropropane	ug/L	ND	4.0	08/13/16 16:46	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	08/13/16 16:46	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	08/13/16 16:46	
1,2-Dibromo-3-chloropropane	ug/L	ND	10.0	08/13/16 16:46	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	08/13/16 16:46	
1,2-Dichlorobenzene	ug/L	ND	1.0	08/13/16 16:46	
1,2-Dichloroethane	ug/L	ND	1.0	08/13/16 16:46	
1,2-Dichloropropane	ug/L	ND	4.0	08/13/16 16:46	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	08/13/16 16:46	
1,3-Dichlorobenzene	ug/L	ND	1.0	08/13/16 16:46	
1,3-Dichloropropane	ug/L	ND	1.0	08/13/16 16:46	
1,4-Dichlorobenzene	ug/L	ND	1.0	08/13/16 16:46	
2,2-Dichloropropane	ug/L	ND	4.0	08/13/16 16:46	
2-Butanone (MEK)	ug/L	ND	5.0	08/13/16 16:46	
2-Chlorotoluene	ug/L	ND	1.0	08/13/16 16:46	
4-Chlorotoluene	ug/L	ND	1.0	08/13/16 16:46	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	08/13/16 16:46	
Acetone	ug/L	ND	20.0	08/13/16 16:46	
Allyl chloride	ug/L	ND	4.0	08/13/16 16:46	
Benzene	ug/L	ND	1.0	08/13/16 16:46	
Bromobenzene	ug/L	ND	1.0	08/13/16 16:46	
Bromochloromethane	ug/L	ND	1.0	08/13/16 16:46	
Bromodichloromethane	ug/L	ND	1.0	08/13/16 16:46	
Bromoform	ug/L	ND	10.0	08/13/16 16:46	
Bromomethane	ug/L	ND	4.0	08/13/16 16:46	
Carbon tetrachloride	ug/L	ND	4.0	08/13/16 16:46	
Chlorobenzene	ug/L	ND	1.0	08/13/16 16:46	
Chloroethane	ug/L	ND	4.0	08/13/16 16:46	
Chloroform	ug/L	ND	1.0	08/13/16 16:46	
Chloromethane	ug/L	ND	4.0	08/13/16 16:46	
cis-1,2-Dichloroethene	ug/L	ND	1.0	08/13/16 16:46	
cis-1,3-Dichloropropene	ug/L	ND	4.0	08/13/16 16:46	

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358800

METHOD BLANK: 2342120 Matrix: Water

Associated Lab Samples: 10358800003, 10358800004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromochloromethane	ug/L	ND	4.0	08/13/16 16:46	
Dibromomethane	ug/L	ND	4.0	08/13/16 16:46	
Dichlorodifluoromethane	ug/L	ND	1.0	08/13/16 16:46	
Dichlorofluoromethane	ug/L	ND	1.0	08/13/16 16:46	
Diethyl ether (Ethyl ether)	ug/L	ND	4.0	08/13/16 16:46	
Ethylbenzene	ug/L	ND	1.0	08/13/16 16:46	
Hexachloro-1,3-butadiene	ug/L	ND	4.0	08/13/16 16:46	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	08/13/16 16:46	
Methyl-tert-butyl ether	ug/L	ND	1.0	08/13/16 16:46	
Methylene Chloride	ug/L	ND	4.0	08/13/16 16:46	
n-Butylbenzene	ug/L	ND	1.0	08/13/16 16:46	
n-Propylbenzene	ug/L	ND	1.0	08/13/16 16:46	
Naphthalene	ug/L	ND	4.0	08/13/16 16:46	
p-Isopropyltoluene	ug/L	ND	1.0	08/13/16 16:46	
sec-Butylbenzene	ug/L	ND	1.0	08/13/16 16:46	
Styrene	ug/L	ND	1.0	08/13/16 16:46	
tert-Butylbenzene	ug/L	ND	1.0	08/13/16 16:46	
Tetrachloroethene	ug/L	ND	1.0	08/13/16 16:46	
Tetrahydrofuran	ug/L	ND	10.0	08/13/16 16:46	
Toluene	ug/L	ND	1.0	08/13/16 16:46	
trans-1,2-Dichloroethene	ug/L	ND	1.0	08/13/16 16:46	
trans-1,3-Dichloropropene	ug/L	ND	4.0	08/13/16 16:46	
Trichloroethene	ug/L	ND	0.40	08/13/16 16:46	
Trichlorofluoromethane	ug/L	ND	1.0	08/13/16 16:46	
Vinyl chloride	ug/L	ND	0.40	08/13/16 16:46	
Xylene (Total)	ug/L	ND	3.0	08/13/16 16:46	
1,2-Dichloroethane-d4 (S)	%	108	75-125	08/13/16 16:46	
4-Bromofluorobenzene (S)	%	104	75-125	08/13/16 16:46	
Toluene-d8 (S)	%	104	75-125	08/13/16 16:46	

LABORATORY CONTROL SAMPLE: 2342121

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	18.3	91	75-125	
1,1,1-Trichloroethane	ug/L	20	16.7	83	73-125	
1,1,2,2-Tetrachloroethane	ug/L	20	20.6	103	75-128	
1,1,2-Trichloroethane	ug/L	20	19.7	98	75-129	
1,1,2-Trichlorotrifluoroethane	ug/L	20	20.9	104	69-125	
1,1-Dichloroethane	ug/L	20	16.1	80	75-131	
1,1-Dichloroethene	ug/L	20	21.4	107	72-125	
1,1-Dichloropropene	ug/L	20	16.6	83	74-125	
1,2,3-Trichlorobenzene	ug/L	20	19.9	99	68-127	
1,2,3-Trichloropropane	ug/L	20	21.9	109	75-125	
1,2,4-Trichlorobenzene	ug/L	20	19.9	100	70-125	

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358800

LABORATORY CONTROL SAMPLE: 2342121

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	21.2	106	75-130	
1,2-Dibromo-3-chloropropane	ug/L	50	45.8	92	74-125	
1,2-Dibromoethane (EDB)	ug/L	20	20.2	101	75-125	
1,2-Dichlorobenzene	ug/L	20	20.8	104	75-125	
1,2-Dichloroethane	ug/L	20	17.2	86	72-129	
1,2-Dichloropropane	ug/L	20	17.4	87	71-129	
1,3,5-Trimethylbenzene	ug/L	20	21.6	108	75-127	
1,3-Dichlorobenzene	ug/L	20	19.7	99	75-125	
1,3-Dichloropropane	ug/L	20	19.7	99	75-125	
1,4-Dichlorobenzene	ug/L	20	19.8	99	75-125	
2,2-Dichloropropane	ug/L	20	17.2	86	71-125	
2-Butanone (MEK)	ug/L	100	84.8	85	58-150	
2-Chlorotoluene	ug/L	20	20.5	102	75-125	
4-Chlorotoluene	ug/L	20	20.4	102	75-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	94.8	95	72-140	
Acetone	ug/L	100	102	102	69-137	
Allyl chloride	ug/L	20	22.0	110	68-132	
Benzene	ug/L	20	17.7	89	75-125	
Bromobenzene	ug/L	20	20.2	101	75-125	
Bromochloromethane	ug/L	20	18.1	90	75-125	
Bromodichloromethane	ug/L	20	19.6	98	69-128	
Bromoform	ug/L	20	16.6	83	75-125	
Bromomethane	ug/L	20	22.4	112	30-150	
Carbon tetrachloride	ug/L	20	17.6	88	74-125	
Chlorobenzene	ug/L	20	19.0	95	75-125	
Chloroethane	ug/L	20	16.5	82	60-150	
Chloroform	ug/L	20	18.8	94	75-126	
Chloromethane	ug/L	20	19.2	96	46-150	
cis-1,2-Dichloroethene	ug/L	20	17.3	86	75-126	
cis-1,3-Dichloropropene	ug/L	20	17.8	89	75-125	
Dibromochloromethane	ug/L	20	18.2	91	75-125	
Dibromomethane	ug/L	20	19.2	96	72-127	
Dichlorodifluoromethane	ug/L	20	18.1	91	58-135	
Dichlorofluoromethane	ug/L	20	21.1	105	68-149	
Diethyl ether (Ethyl ether)	ug/L	20	28.2	141	66-144	CH
Ethylbenzene	ug/L	20	19.0	95	75-125	
Hexachloro-1,3-butadiene	ug/L	20	21.8	109	73-125	
Isopropylbenzene (Cumene)	ug/L	20	19.7	98	69-140	
Methyl-tert-butyl ether	ug/L	20	18.5	92	75-126	
Methylene Chloride	ug/L	20	19.8	99	71-130	
n-Butylbenzene	ug/L	20	21.1	106	71-129	
n-Propylbenzene	ug/L	20	19.7	98	71-133	
Naphthalene	ug/L	20	19.4	97	59-137	
p-Isopropyltoluene	ug/L	20	22.2	111	74-127	
sec-Butylbenzene	ug/L	20	20.6	103	66-140	
Styrene	ug/L	20	20.8	104	75-125	
tert-Butylbenzene	ug/L	20	20.4	102	73-129	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358800

LABORATORY CONTROL SAMPLE: 2342121

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tetrachloroethene	ug/L	20	18.5	92	75-125	
Tetrahydrofuran	ug/L	200	219	110	71-129	
Toluene	ug/L	20	18.9	95	75-125	
trans-1,2-Dichloroethene	ug/L	20	18.7	93	75-125	
trans-1,3-Dichloropropene	ug/L	20	18.5	93	75-125	
Trichloroethene	ug/L	20	18.2	91	75-125	
Trichlorofluoromethane	ug/L	20	19.3	96	74-128	
Vinyl chloride	ug/L	20	16.7	84	71-131	
Xylene (Total)	ug/L	60	59.6	99	75-125	
1,2-Dichloroethane-d4 (S)	%			105	75-125	
4-Bromofluorobenzene (S)	%			100	75-125	
Toluene-d8 (S)	%			106	75-125	

MATRIX SPIKE SAMPLE: 2342126

Parameter	Units	10358930001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	24.0	120	75-125	
1,1,1-Trichloroethane	ug/L	ND	20	24.4	122	71-144	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	26.9	134	75-131	M1
1,1,2-Trichloroethane	ug/L	ND	20	26.4	132	75-125	M1
1,1,2-Trichlorotrifluoroethane	ug/L	ND	20	25.7	128	75-150	
1,1-Dichloroethane	ug/L	ND	20	27.0	135	64-150	
1,1-Dichloroethene	ug/L	ND	20	26.3	131	68-150	
1,1-Dichloropropene	ug/L	ND	20	25.0	125	68-145	
1,2,3-Trichlorobenzene	ug/L	ND	20	23.5	118	57-142	
1,2,3-Trichloropropane	ug/L	ND	20	29.0	145	75-125	M1
1,2,4-Trichlorobenzene	ug/L	ND	20	22.9	114	60-135	
1,2,4-Trimethylbenzene	ug/L	ND	20	26.4	132	67-148	
1,2-Dibromo-3-chloropropane	ug/L	ND	50	52.6	105	32-137	
1,2-Dibromoethane (EDB)	ug/L	ND	20	26.0	130	75-125	M1
1,2-Dichlorobenzene	ug/L	ND	20	25.3	127	75-125	M1
1,2-Dichloroethane	ug/L	ND	20	22.5	113	62-138	
1,2-Dichloropropane	ug/L	ND	20	18.7	94	62-144	
1,3,5-Trimethylbenzene	ug/L	ND	20	26.8	134	67-148	
1,3-Dichlorobenzene	ug/L	ND	20	25.0	125	74-131	
1,3-Dichloropropane	ug/L	ND	20	27.2	136	75-127	M1
1,4-Dichlorobenzene	ug/L	ND	20	25.1	126	74-126	
2,2-Dichloropropane	ug/L	ND	20	25.1	126	56-146	
2-Butanone (MEK)	ug/L	ND	100	124	124	47-150	
2-Chlorotoluene	ug/L	ND	20	26.4	132	74-137	
4-Chlorotoluene	ug/L	ND	20	25.9	129	72-138	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	118	118	60-147	
Acetone	ug/L	ND	100	136	133	61-150	
Allyl chloride	ug/L	ND	20	27.9	139	53-150	
Benzene	ug/L	ND	20	25.3	127	52-147	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358800

MATRIX SPIKE SAMPLE:		2342126					
Parameter	Units	10358930001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromobenzene	ug/L	ND	20	26.3	131	75-129	M1
Bromochloromethane	ug/L	ND	20	26.5	133	72-128	M1
Bromodichloromethane	ug/L	ND	20	19.9	99	65-137	
Bromoform	ug/L	ND	20	19.8	99	59-133	
Bromomethane	ug/L	ND	20	23.2	116	30-150	
Carbon tetrachloride	ug/L	ND	20	23.1	115	73-144	
Chlorobenzene	ug/L	ND	20	24.7	123	75-126	
Chloroethane	ug/L	ND	20	19.1	95	55-150	
Chloroform	ug/L	ND	20	25.7	128	66-143	
Chloromethane	ug/L	ND	20	22.4	112	42-150	
cis-1,2-Dichloroethene	ug/L	ND	20	24.3	121	65-143	
cis-1,3-Dichloropropene	ug/L	ND	20	18.4	92	75-125	
Dibromochloromethane	ug/L	ND	20	22.4	112	75-125	
Dibromomethane	ug/L	ND	20	19.6	98	66-133	
Dichlorodifluoromethane	ug/L	ND	20	23.1	115	74-150	
Dichlorofluoromethane	ug/L	ND	20	22.3	111	68-150	
Diethyl ether (Ethyl ether)	ug/L	ND	20	24.7	123	57-148	CH
Ethylbenzene	ug/L	ND	20	23.8	119	67-149	
Hexachloro-1,3-butadiene	ug/L	ND	20	30.0	150	65-143	M1
Isopropylbenzene (Cumene)	ug/L	ND	20	26.0	130	64-150	
Methyl-tert-butyl ether	ug/L	ND	20	22.7	114	71-130	
Methylene Chloride	ug/L	ND	20	23.9	120	67-137	
n-Butylbenzene	ug/L	ND	20	27.1	136	70-138	
n-Propylbenzene	ug/L	ND	20	26.4	132	70-148	
Naphthalene	ug/L	ND	20	22.2	111	39-150	
p-Isopropyltoluene	ug/L	ND	20	27.3	137	74-138	
sec-Butylbenzene	ug/L	ND	20	28.1	140	64-150	
Styrene	ug/L	ND	20	26.2	131	75-132	
tert-Butylbenzene	ug/L	ND	20	27.5	137	75-138	
Tetrachloroethene	ug/L	ND	20	25.1	126	73-136	
Tetrahydrofuran	ug/L	ND	200	317	158	68-142	M1
Toluene	ug/L	ND	20	24.0	120	69-139	
trans-1,2-Dichloroethene	ug/L	ND	20	23.0	115	75-135	
trans-1,3-Dichloropropene	ug/L	ND	20	25.1	125	66-136	
Trichloroethene	ug/L	ND	20	26.4	132	74-135	
Trichlorofluoromethane	ug/L	ND	20	24.1	121	75-150	
Vinyl chloride	ug/L	ND	20	21.3	107	69-150	
Xylene (Total)	ug/L	ND	60	75.0	125	70-147	
1,2-Dichloroethane-d4 (S)	%				105	75-125	
4-Bromofluorobenzene (S)	%				99	75-125	
Toluene-d8 (S)	%				105	75-125	

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358800

SAMPLE DUPLICATE: 2342127

Parameter	Units	10358932001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,1-Trichloroethane	ug/L	ND	ND		30	
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,2-Trichloroethane	ug/L	ND	ND		30	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	ND		30	
1,1-Dichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethene	ug/L	ND	ND		30	
1,1-Dichloropropene	ug/L	ND	ND		30	
1,2,3-Trichlorobenzene	ug/L	ND	ND		30	
1,2,3-Trichloropropane	ug/L	ND	ND		30	
1,2,4-Trichlorobenzene	ug/L	ND	ND		30	
1,2,4-Trimethylbenzene	ug/L	ND	ND		30	
1,2-Dibromo-3-chloropropane	ug/L	ND	ND		30	
1,2-Dibromoethane (EDB)	ug/L	ND	ND		30	
1,2-Dichlorobenzene	ug/L	ND	ND		30	
1,2-Dichloroethane	ug/L	ND	ND		30	
1,2-Dichloropropane	ug/L	ND	ND		30	
1,3,5-Trimethylbenzene	ug/L	ND	ND		30	
1,3-Dichlorobenzene	ug/L	ND	ND		30	
1,3-Dichloropropane	ug/L	ND	ND		30	
1,4-Dichlorobenzene	ug/L	ND	ND		30	
2,2-Dichloropropane	ug/L	ND	ND		30	
2-Butanone (MEK)	ug/L	ND	ND		30	
2-Chlorotoluene	ug/L	ND	ND		30	
4-Chlorotoluene	ug/L	ND	ND		30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND		30	
Acetone	ug/L	ND	ND		30	
Allyl chloride	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Bromobenzene	ug/L	ND	ND		30	
Bromochloromethane	ug/L	ND	ND		30	
Bromodichloromethane	ug/L	ND	ND		30	
Bromoform	ug/L	ND	ND		30	
Bromomethane	ug/L	ND	ND		30	
Carbon tetrachloride	ug/L	ND	ND		30	
Chlorobenzene	ug/L	ND	ND		30	
Chloroethane	ug/L	ND	ND		30	
Chloroform	ug/L	ND	ND		30	
Chloromethane	ug/L	ND	ND		30	
cis-1,2-Dichloroethene	ug/L	ND	ND		30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dibromomethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	
Dichlorofluoromethane	ug/L	ND	ND		30	
Diethyl ether (Ethyl ether)	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: CrC
Pace Project No.: 10358800

SAMPLE DUPLICATE: 2342127

Parameter	Units	10358932001 Result	Dup Result	RPD	Max RPD	Qualifiers
Hexachloro-1,3-butadiene	ug/L	ND	ND		30	
Isopropylbenzene (Cumene)	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Methylene Chloride	ug/L	ND	ND		30	
n-Butylbenzene	ug/L	ND	ND		30	
n-Propylbenzene	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
p-Isopropyltoluene	ug/L	ND	ND		30	
sec-Butylbenzene	ug/L	ND	ND		30	
Styrene	ug/L	ND	ND		30	
tert-Butylbenzene	ug/L	ND	ND		30	
Tetrachloroethene	ug/L	2.2	2.2	4	30	
Tetrahydrofuran	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
trans-1,2-Dichloroethene	ug/L	ND	ND		30	
trans-1,3-Dichloropropene	ug/L	ND	ND		30	
Trichloroethene	ug/L	ND	ND		30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	115	115	1		
4-Bromofluorobenzene (S)	%	103	105	2		
Toluene-d8 (S)	%	106	107	1		

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: CrC
Pace Project No.: 10358800

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: 430489

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

CH The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.

D1 Analyte not detected when evaluated to 1/2 the reporting limit.

L0 Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

L3 Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CrC
Pace Project No.: 10358800

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10358800001	MW14	EPA 8260B	430295		
10358800002	MW15	EPA 8260B	430295		
10358800003	MW16	EPA 8260B	430489		
10358800004	MW17	EPA 8260B	430489		
10358800005	MW18	EPA 8260B	430295		
10358800006	MW19	EPA 8260B	430295		
10358800007	MW20	EPA 8260B	430295		
10358800008	Trip Blank	EPA 8260B	430295		

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

10358800

Section A Required Client Information: Company: <u>Lanhamark Environmental</u> Address: <u>7012 W 90th Street</u> <u>Bloomington, MN</u> Email To: <u>akuck@lanhamarkenv.com</u> Phone: _____ Fax: _____ Requested Due Date/TAT: _____		Section B Required Project Information: Report To: <u>akuck@lanhamarkenv.com</u> Copy To: <u>jskramstud@lanhamarkenv.com</u> Purchase Order No.: _____ Project Name: <u>CRC</u> Project Number: _____		Section C Invoice Information: Attention: <u>Sharon Paradise</u> Company Name: _____ Address: _____ Pace Quote Reference: _____ Pace Project Manager: _____ Pace Profile #: <u>35807</u>	
Section D Required Client Information: Matrix Codes: DW Drinking Water WW Waste Water P Product SL Soil/Solid OL Oil WP Wipe AR Air TS Tissue OT Other SAMPLE ID (A-Z, 0-9 /, .) Sample IDs MUST BE UNIQUE		Regulatory Agency: _____ <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER Site Location: _____ STATE: _____			

ITEM #	SAMPLE ID	MATRIX CODE	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP)	MATRIX CODE (see valid codes to left)	# OF CONTAINERS	PRESERVATIVES	ANALYSIS TEST	Y/N	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
			COMPOSITE START	COMPOSITE END/GRAB									
1	MW14		8/10/16 12:20		G	WT	3		↑ VOCs				001
2	MW15		12:40		G		3						002
3	MW16		12:30		G		3						003
4	MW17		13:30		G		3						004
5	MW18		14:15		G		3						005
6	MW19		12:10		G		3						006
7	MW20		11:50		G		3						007
8	Top Blank Bottle												008

Section E Relinquished By / Affiliation: _____ Date: 8/11/16 11:30 Signature: <u>[Signature]</u>	Section F Accepted By / Affiliation: <u>Sharon Paradise</u> Date: 8/11/16 11:26 Signature: <u>[Signature]</u>	Temp In °C: _____ Received on: _____ Custody Sealed (Y/N): _____ Samples Intact (Y/N): _____
Section G Relinquished By / Affiliation: _____ Date: _____ Signature: _____		Temp In °C: _____ Received on: _____ Custody Sealed (Y/N): _____ Samples Intact (Y/N): _____

ORIGINAL

SAMPLER NAME AND SIGNATURE: [Signature]
 PRINT Name of SAMPLER: AAnn Kuck
 SIGNATURE of SAMPLER: [Signature]
 DATE Signed (MM/DD/YY): 08/10/16

Sample Condition Upon Receipt

Client Name: Landmark Environmental Project #: **WO# : 10358800**

Courier: Fed Ex UPS USPS Client
 Commercial Pace Speedee Other: _____



Tracking Number: _____

Custody Seal on Cooler/Box Present? Yes No Seals Intact? Yes No Optional: Proj. Due Date: _____ Proj. Name: _____

Packing Material: Bubble Wrap Bubble Bags None Other: _____ Temp Blank? Yes No

Thermometer Used: 151401163 B88A912167504 151401164 B88A0143310098 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temp Read (°C): 0.4 Cooler Temp Corrected (°C): 0.4 Biological Tissue Frozen? Yes No N/A

Temp should be above freezing to 6°C Correction Factor: +0.0 Date and Initials of Person Examining Contents: GS 8/11/16

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: AL, AR, AZ, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? Yes No Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

	COMMENTS:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name and/or Signature on COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72 hr)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered Volume Received for Dissolved Tests? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11. Note if sediment is visible in the dissolved container
Sample Labels Match COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes Date/Time/ID/Analysis Matrix: <u>WT</u>	
All containers needing acid/base preservation have been checked? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> HCl
All containers needing preservation are found to be in compliance with EPA recommendation? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Sample #
(HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide) Exceptions: <u>VOA</u> Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Initial when completed: _____ Lot # of added preservative: _____
Headspace in VOA Vials (>6mm)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14.
Trip Blank Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	15. <u>Shared trip blank</u>
Trip Blank Custody Seals Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): <u>052316-3B2A</u>	

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? Yes No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review:

Date: 8/12/16

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).



88 Empire Drive
St Paul, MN 55103
Tel: 651-642-1150
Fax: 651-642-1239

August 29, 2016

Mr. Aaron Kuck
Landmark Environmental
2042 West 98th Street
Bloomington, MN 55431

Work Order Number: 1603494
RE: TO-15

Enclosed are the results of analyses for samples received by the laboratory on 08/11/16. If you have any questions concerning this report, please feel free to contact me.

Samples will not be retained by LEGEND once the analyses are completed.

All internal quality assurance met the method requirements unless otherwise noted in the case narrative. Additionally, all samples were received in acceptable condition unless otherwise noted.

For the tentatively identified compounds (TICs), a computer generated library search was done comparing the spectra of the unknown compounds with spectra contained in the NIST (NBS) and Wiley reference libraries. A visual comparison was made of each unknown compound and the best library match. Quantitation was based on the response of the nearest internal standard. Unidentified peaks were quantified using 100 as the molecular weight. Both the identification of specific compounds and the quantities given should be considered approximations.

Chromatograms are included for samples containing detections.

MDH Accreditation #027-123-295

Prepared by,
LEGEND TECHNICAL SERVICES, INC

Bach Pham
Client Manager II
bpham@legend-group.com

Landmark Environmental 2042 West 98th Street Bloomington, MN 55431	Project: TO-15 Project Number: CrC Project Manager: Mr. Aaron Kuck	Work Order #: 1603494 Date Reported: 08/29/16
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ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
LSG-9	1603494-01	Air	08/10/16 14:25	08/11/16 11:20
LSG-10	1603494-02	Air	08/10/16 14:41	08/11/16 11:20
LGP-7	1603494-03	Air	08/10/16 14:57	08/11/16 11:20
LGP-8	1603494-04	Air	08/10/16 15:10	08/11/16 11:20
DPE-Exhaust	1603494-05	Air	08/10/16 16:50	08/11/16 11:20

Case Narrative:

%RPD results for 1,2,4-Trimethylbenzene, Methyl isobutyl ketone, Naphthalene, and Tetrahydrofuran in the TO-15 extraction batch B6H1824-DUP1 exceeded methods limits.

Per the client's instructions, TICs were not included in this report.

Landmark Environmental 2042 West 98th Street Bloomington, MN 55431	Project: TO-15 Project Number: CrC Project Manager: Mr. Aaron Kuck	Work Order #: 1603494 Date Reported: 08/29/16
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VOC - AIR
Legend Technical Services, Inc.

Analyte (CAS#)	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LSG-9 (1603494-01) Air Received:08/11/16 11:20 Sampled:08/10/16 14:25										
1,1,1-Trichloroethane (71-55-6)	<2.7	2.7	0.044	ug/m ³	1	B6H1824	08/15/16	08/15/16	TO-15	
1,1,2,2-Tetrachloroethane (79-34-5)	<3.4	3.4	0.074	ug/m ³	1	"	"	"	"	
1,1,2-Trichloroethane (79-00-5)	<2.7	2.7	0.11	ug/m ³	1	"	"	"	"	
1,1-Dichloroethane (75-34-3)	<2.0	2.0	0.11	ug/m ³	1	"	"	"	"	
1,1-Dichloroethene (75-35-4)	<2.0	2.0	0.078	ug/m ³	1	"	"	"	"	
1,2,4-Trichlorobenzene (120-82-1)	<3.7	3.7	0.13	ug/m ³	1	"	"	"	"	
1,2,4-Trimethylbenzene (95-63-6)	1.2	1.0	0.073	ug/m ³	1	"	"	"	"	
1,2-Dibromoethane (106-93-4)	<3.8	3.8	0.16	ug/m ³	1	"	"	"	"	
1,2-Dichlorobenzene (95-50-1)	<3.0	3.0	0.071	ug/m ³	1	"	"	"	"	
1,2-Dichloroethane (107-06-2)	<2.0	2.0	0.055	ug/m ³	1	"	"	"	"	
1,2-Dichloropropane (78-87-5)	<2.3	2.3	0.081	ug/m ³	1	"	"	"	"	
1,3,5-Trimethylbenzene (108-67-8)	<1.0	1.0	0.11	ug/m ³	1	"	"	"	"	
1,3-Butadiene (106-99-0)	<1.1	1.1	0.10	ug/m ³	1	"	"	"	"	
1,3-Dichlorobenzene (541-73-1)	<3.0	3.0	0.14	ug/m ³	1	"	"	"	"	
1,4-Dichlorobenzene (106-46-7)	<3.0	3.0	0.17	ug/m ³	1	"	"	"	"	
2-Butanone (78-93-3)	2.7	1.5	0.078	ug/m ³	1	"	"	"	"	
4-Ethyltoluene (622-96-8)	<2.5	2.5	0.11	ug/m ³	1	"	"	"	"	
Acetone (67-64-1)	36	1.2	0.055	ug/m ³	1	"	"	"	"	
Benzene (71-43-2)	<0.64	0.64	0.050	ug/m ³	1	"	"	"	"	
Benzyl chloride (100-44-7)	<2.6	2.6	0.073	ug/m ³	1	"	"	"	"	
Bromodichloromethane (75-27-4)	<3.4	3.4	0.13	ug/m ³	1	"	"	"	"	
Bromoform (75-25-2)	<5.2	5.2	0.13	ug/m ³	1	"	"	"	"	
Bromomethane (74-83-9)	<1.9	1.9	0.069	ug/m ³	1	"	"	"	"	
Carbon disulfide (75-15-0)	<1.6	1.6	0.070	ug/m ³	1	"	"	"	"	
Carbon tetrachloride (56-23-5)	<3.1	3.1	0.087	ug/m ³	1	"	"	"	"	
Chlorobenzene (108-90-7)	<2.3	2.3	0.080	ug/m ³	1	"	"	"	"	
Chloroethane (75-00-3)	<1.3	1.3	0.037	ug/m ³	1	"	"	"	"	
Chloroform (67-66-3)	<2.4	2.4	0.055	ug/m ³	1	"	"	"	"	
Chloromethane (74-87-3)	<1.0	1.0	0.044	ug/m ³	1	"	"	"	"	
cis-1,2-Dichloroethene (156-59-2)	<2.0	2.0	0.089	ug/m ³	1	"	"	"	"	
cis-1,3-Dichloropropene (10061-01-5)	<2.3	2.3	0.12	ug/m ³	1	"	"	"	"	
Cyclohexane (110-82-7)	<1.7	1.7	0.059	ug/m ³	1	"	"	"	"	
Dibromochloromethane (124-48-1)	<4.3	4.3	0.16	ug/m ³	1	"	"	"	"	
Dichlorodifluoromethane (75-71-8)	<2.5	2.5	0.12	ug/m ³	1	"	"	"	"	
Dichlorotetrafluoroethane (76-14-2)	<3.5	3.5	0.063	ug/m ³	1	"	"	"	"	

Landmark Environmental 2042 West 98th Street Bloomington, MN 55431	Project: TO-15 Project Number: CrC Project Manager: Mr. Aaron Kuck	Work Order #: 1603494 Date Reported: 08/29/16
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VOC - AIR
Legend Technical Services, Inc.

Analyte (CAS#)	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LSG-9 (1603494-01) Air Received:08/11/16 11:20 Sampled:08/10/16 14:25										
Ethanol (64-17-5)	330	14	1.0	ug/m ³	15	B6H1824	08/15/16	08/18/16	TO-15	
Ethyl acetate (141-78-6)	<1.8	1.8	0.11	ug/m ³	1	"	"	08/15/16	"	
Ethylbenzene (100-41-4)	<0.87	0.87	0.082	ug/m ³	1	"	"	"	"	
Hexachlorobutadiene (87-68-3)	<5.3	5.3	0.27	ug/m ³	1	"	"	"	"	
Isopropyl alcohol (67-63-0)	610	18	1.1	ug/m ³	15	"	"	08/18/16	"	
m,p-Xylene (136777-61-2)	2.6	1.7	0.15	ug/m ³	1	"	"	08/15/16	"	
Methyl butyl ketone (591-78-6)	<2.0	2.0	0.12	ug/m ³	1	"	"	"	"	
Methyl isobutyl ketone (108-10-1)	<2.0	2.0	0.11	ug/m ³	1	"	"	"	"	
Methyl tert-butyl ether (1634-04-4)	<1.8	1.8	0.11	ug/m ³	1	"	"	"	"	
Methylene chloride (75-09-2)	11	1.7	0.21	ug/m ³	1	"	"	"	"	
Naphthalene (91-20-3)	<2.6	2.6	0.11	ug/m ³	1	"	"	"	"	
n-Heptane (142-82-5)	<2.0	2.0	0.078	ug/m ³	1	"	"	"	"	
n-Hexane (110-54-3)	7.9	1.8	0.074	ug/m ³	1	"	"	"	"	
o-Xylene (95-47-6)	1.0	0.87	0.096	ug/m ³	1	"	"	"	"	
Propylene (115-07-1)	<0.86	0.86	0.027	ug/m ³	1	"	"	"	"	
Styrene (100-42-5)	<2.1	2.1	0.096	ug/m ³	1	"	"	"	"	
Tetrachloroethene (127-18-4)	<3.4	3.4	0.13	ug/m ³	1	"	"	"	"	
Tetrahydrofuran (109-99-9)	<1.5	1.5	0.038	ug/m ³	1	"	"	"	"	
Toluene (108-88-3)	5.4	0.75	0.060	ug/m ³	1	"	"	"	"	
trans-1,2-Dichloroethene (156-60-5)	<2.0	2.0	0.11	ug/m ³	1	"	"	"	"	
trans-1,3-Dichloropropene (10061-02-6)	<2.3	2.3	0.070	ug/m ³	1	"	"	"	"	
Trichloroethene (79-01-6)	<1.1	1.1	0.12	ug/m ³	1	"	"	"	"	
Trichlorofluoromethane (75-69-4)	<2.8	2.8	0.048	ug/m ³	1	"	"	"	"	
Trichlorotrifluoroethane (76-13-1)	<3.8	3.8	0.17	ug/m ³	1	"	"	"	"	
Vinyl acetate (108-05-4)	<1.8	1.8	0.90	ug/m ³	1	"	"	"	"	
Vinyl chloride (75-01-4)	<0.51	0.51	0.051	ug/m ³	1	"	"	"	"	

LSG-10 (1603494-02) Air Received:08/11/16 11:20 Sampled:08/10/16 14:41										
1,1,1-Trichloroethane (71-55-6)	<2.7	2.7	0.044	ug/m ³	1	B6H1824	08/15/16	08/15/16	TO-15	
1,1,2,2-Tetrachloroethane (79-34-5)	<3.4	3.4	0.074	ug/m ³	1	"	"	"	"	
1,1,2-Trichloroethane (79-00-5)	<2.7	2.7	0.11	ug/m ³	1	"	"	"	"	
1,1-Dichloroethane (75-34-3)	<2.0	2.0	0.11	ug/m ³	1	"	"	"	"	
1,1-Dichloroethene (75-35-4)	<2.0	2.0	0.078	ug/m ³	1	"	"	"	"	
1,2,4-Trichlorobenzene (120-82-1)	<3.7	3.7	0.13	ug/m ³	1	"	"	"	"	
1,2,4-Trimethylbenzene (95-63-6)	1.4	1.0	0.073	ug/m ³	1	"	"	"	"	
1,2-Dibromoethane (106-93-4)	<3.8	3.8	0.16	ug/m ³	1	"	"	"	"	

Landmark Environmental 2042 West 98th Street Bloomington, MN 55431	Project: TO-15 Project Number: CrC Project Manager: Mr. Aaron Kuck	Work Order #: 1603494 Date Reported: 08/29/16
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VOC - AIR
Legend Technical Services, Inc.

Analyte (CAS#)	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LSG-10 (1603494-02) Air Received:08/11/16 11:20 Sampled:08/10/16 14:41										
1,2-Dichlorobenzene (95-50-1)	<3.0	3.0	0.071	ug/m ³	1	B6H1824	08/15/16	08/15/16	TO-15	
1,2-Dichloroethane (107-06-2)	<2.0	2.0	0.055	ug/m ³	1	"	"	"	"	
1,2-Dichloropropane (78-87-5)	<2.3	2.3	0.081	ug/m ³	1	"	"	"	"	
1,3,5-Trimethylbenzene (108-67-8)	<1.0	1.0	0.11	ug/m ³	1	"	"	"	"	
1,3-Butadiene (106-99-0)	<1.1	1.1	0.10	ug/m ³	1	"	"	"	"	
1,3-Dichlorobenzene (541-73-1)	<3.0	3.0	0.14	ug/m ³	1	"	"	"	"	
1,4-Dichlorobenzene (106-46-7)	<3.0	3.0	0.17	ug/m ³	1	"	"	"	"	
2-Butanone (78-93-3)	5.0	1.5	0.078	ug/m ³	1	"	"	"	"	
4-Ethyltoluene (622-96-8)	<2.5	2.5	0.11	ug/m ³	1	"	"	"	"	
Acetone (67-64-1)	64	36	1.6	ug/m ³	30	"	"	08/18/16	"	
Benzene (71-43-2)	<0.64	0.64	0.050	ug/m ³	1	"	"	08/15/16	"	
Benzyl chloride (100-44-7)	<2.6	2.6	0.073	ug/m ³	1	"	"	"	"	
Bromodichloromethane (75-27-4)	<3.4	3.4	0.13	ug/m ³	1	"	"	"	"	
Bromoform (75-25-2)	<5.2	5.2	0.13	ug/m ³	1	"	"	"	"	
Bromomethane (74-83-9)	<1.9	1.9	0.069	ug/m ³	1	"	"	"	"	
Carbon disulfide (75-15-0)	<1.6	1.6	0.070	ug/m ³	1	"	"	"	"	
Carbon tetrachloride (56-23-5)	<3.1	3.1	0.087	ug/m ³	1	"	"	"	"	
Chlorobenzene (108-90-7)	<2.3	2.3	0.080	ug/m ³	1	"	"	"	"	
Chloroethane (75-00-3)	<1.3	1.3	0.037	ug/m ³	1	"	"	"	"	
Chloroform (67-66-3)	<2.4	2.4	0.055	ug/m ³	1	"	"	"	"	
Chloromethane (74-87-3)	<1.0	1.0	0.044	ug/m ³	1	"	"	"	"	
cis-1,2-Dichloroethene (156-59-2)	<2.0	2.0	0.089	ug/m ³	1	"	"	"	"	
cis-1,3-Dichloropropene (10061-01-5)	<2.3	2.3	0.12	ug/m ³	1	"	"	"	"	
Cyclohexane (110-82-7)	<1.7	1.7	0.059	ug/m ³	1	"	"	"	"	
Dibromochloromethane (124-48-1)	<4.3	4.3	0.16	ug/m ³	1	"	"	"	"	
Dichlorodifluoromethane (75-71-8)	3.3	2.5	0.12	ug/m ³	1	"	"	"	"	
Dichlorotetrafluoroethane (76-14-2)	<3.5	3.5	0.063	ug/m ³	1	"	"	"	"	
Ethanol (64-17-5)	390	28	2.0	ug/m ³	30	"	"	08/18/16	"	
Ethyl acetate (141-78-6)	<1.8	1.8	0.11	ug/m ³	1	"	"	08/15/16	"	
Ethylbenzene (100-41-4)	<0.87	0.87	0.082	ug/m ³	1	"	"	"	"	
Hexachlorobutadiene (87-68-3)	<5.3	5.3	0.27	ug/m ³	1	"	"	"	"	
Isopropyl alcohol (67-63-0)	710	36	2.2	ug/m ³	30	"	"	08/18/16	"	
m,p-Xylene (136777-61-2)	2.7	1.7	0.15	ug/m ³	1	"	"	08/15/16	"	
Methyl butyl ketone (591-78-6)	<2.0	2.0	0.12	ug/m ³	1	"	"	"	"	
Methyl isobutyl ketone (108-10-1)	<2.0	2.0	0.11	ug/m ³	1	"	"	"	"	

Landmark Environmental 2042 West 98th Street Bloomington, MN 55431	Project: TO-15 Project Number: CrC Project Manager: Mr. Aaron Kuck	Work Order #: 1603494 Date Reported: 08/29/16
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VOC - AIR
Legend Technical Services, Inc.

Analyte (CAS#)	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LSG-10 (1603494-02) Air Received:08/11/16 11:20 Sampled:08/10/16 14:41										
Methyl tert-butyl ether (1634-04-4)	<1.8	1.8	0.11	ug/m ³	1	B6H1824	08/15/16	08/15/16	TO-15	
Methylene chloride (75-09-2)	15	1.7	0.21	ug/m ³	1	"	"	"	"	
Naphthalene (91-20-3)	<2.6	2.6	0.11	ug/m ³	1	"	"	"	"	
n-Heptane (142-82-5)	<2.0	2.0	0.078	ug/m ³	1	"	"	"	"	
n-Hexane (110-54-3)	4.6	1.8	0.074	ug/m ³	1	"	"	"	"	
o-Xylene (95-47-6)	1.0	0.87	0.096	ug/m ³	1	"	"	"	"	
Propylene (115-07-1)	<0.86	0.86	0.027	ug/m ³	1	"	"	"	"	
Styrene (100-42-5)	<2.1	2.1	0.096	ug/m ³	1	"	"	"	"	
Tetrachloroethene (127-18-4)	12	3.4	0.13	ug/m ³	1	"	"	"	"	
Tetrahydrofuran (109-99-9)	<1.5	1.5	0.038	ug/m ³	1	"	"	"	"	
Toluene (108-88-3)	6.2	0.75	0.060	ug/m ³	1	"	"	"	"	
trans-1,2-Dichloroethene (156-60-5)	<2.0	2.0	0.11	ug/m ³	1	"	"	"	"	
trans-1,3-Dichloropropene (10061-02-6)	<2.3	2.3	0.070	ug/m ³	1	"	"	"	"	
Trichloroethene (79-01-6)	<1.1	1.1	0.12	ug/m ³	1	"	"	"	"	
Trichlorofluoromethane (75-69-4)	<2.8	2.8	0.048	ug/m ³	1	"	"	"	"	
Trichlorotrifluoroethane (76-13-1)	<3.8	3.8	0.17	ug/m ³	1	"	"	"	"	
Vinyl acetate (108-05-4)	<1.8	1.8	0.90	ug/m ³	1	"	"	"	"	
Vinyl chloride (75-01-4)	<0.51	0.51	0.051	ug/m ³	1	"	"	"	"	

LGP-7 (1603494-03) Air Received:08/11/16 11:20 Sampled:08/10/16 14:57										
1,1,1-Trichloroethane (71-55-6)	<2.7	2.7	0.044	ug/m ³	1	B6H1824	08/15/16	08/15/16	TO-15	
1,1,2,2-Tetrachloroethane (79-34-5)	<3.4	3.4	0.074	ug/m ³	1	"	"	"	"	
1,1,2-Trichloroethane (79-00-5)	<2.7	2.7	0.11	ug/m ³	1	"	"	"	"	
1,1-Dichloroethane (75-34-3)	<2.0	2.0	0.11	ug/m ³	1	"	"	"	"	
1,1-Dichloroethene (75-35-4)	<2.0	2.0	0.078	ug/m ³	1	"	"	"	"	
1,2,4-Trichlorobenzene (120-82-1)	<3.7	3.7	0.13	ug/m ³	1	"	"	"	"	
1,2,4-Trimethylbenzene (95-63-6)	1.2	1.0	0.073	ug/m ³	1	"	"	"	"	
1,2-Dibromoethane (106-93-4)	<3.8	3.8	0.16	ug/m ³	1	"	"	"	"	
1,2-Dichlorobenzene (95-50-1)	<3.0	3.0	0.071	ug/m ³	1	"	"	"	"	
1,2-Dichloroethane (107-06-2)	<2.0	2.0	0.055	ug/m ³	1	"	"	"	"	
1,2-Dichloropropane (78-87-5)	<2.3	2.3	0.081	ug/m ³	1	"	"	"	"	
1,3,5-Trimethylbenzene (108-67-8)	<1.0	1.0	0.11	ug/m ³	1	"	"	"	"	
1,3-Butadiene (106-99-0)	<1.1	1.1	0.10	ug/m ³	1	"	"	"	"	
1,3-Dichlorobenzene (541-73-1)	<3.0	3.0	0.14	ug/m ³	1	"	"	"	"	
1,4-Dichlorobenzene (106-46-7)	<3.0	3.0	0.17	ug/m ³	1	"	"	"	"	
2-Butanone (78-93-3)	3.1	1.5	0.078	ug/m ³	1	"	"	"	"	

Landmark Environmental 2042 West 98th Street Bloomington, MN 55431	Project: TO-15 Project Number: CrC Project Manager: Mr. Aaron Kuck	Work Order #: 1603494 Date Reported: 08/29/16
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VOC - AIR
Legend Technical Services, Inc.

Analyte (CAS#)	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LGP-7 (1603494-03) Air Received:08/11/16 11:20 Sampled:08/10/16 14:57										
4-Ethyltoluene (622-96-8)	<2.5	2.5	0.11	ug/m ³	1	B6H1824	08/15/16	08/15/16	TO-15	
Acetone (67-64-1)	61	36	1.6	ug/m ³	30	"	"	08/18/16	"	
Benzene (71-43-2)	<0.64	0.64	0.050	ug/m ³	1	"	"	08/15/16	"	
Benzyl chloride (100-44-7)	<2.6	2.6	0.073	ug/m ³	1	"	"	"	"	
Bromodichloromethane (75-27-4)	<3.4	3.4	0.13	ug/m ³	1	"	"	"	"	
Bromoform (75-25-2)	<5.2	5.2	0.13	ug/m ³	1	"	"	"	"	
Bromomethane (74-83-9)	<1.9	1.9	0.069	ug/m ³	1	"	"	"	"	
Carbon disulfide (75-15-0)	<1.6	1.6	0.070	ug/m ³	1	"	"	"	"	
Carbon tetrachloride (56-23-5)	<3.1	3.1	0.087	ug/m ³	1	"	"	"	"	
Chlorobenzene (108-90-7)	<2.3	2.3	0.080	ug/m ³	1	"	"	"	"	
Chloroethane (75-00-3)	<1.3	1.3	0.037	ug/m ³	1	"	"	"	"	
Chloroform (67-66-3)	<2.4	2.4	0.055	ug/m ³	1	"	"	"	"	
Chloromethane (74-87-3)	1.2	1.0	0.044	ug/m ³	1	"	"	"	"	
cis-1,2-Dichloroethene (156-59-2)	<2.0	2.0	0.089	ug/m ³	1	"	"	"	"	
cis-1,3-Dichloropropene (10061-01-5)	<2.3	2.3	0.12	ug/m ³	1	"	"	"	"	
Cyclohexane (110-82-7)	<1.7	1.7	0.059	ug/m ³	1	"	"	"	"	
Dibromochloromethane (124-48-1)	<4.3	4.3	0.16	ug/m ³	1	"	"	"	"	
Dichlorodifluoromethane (75-71-8)	3.5	2.5	0.12	ug/m ³	1	"	"	"	"	
Dichlorotetrafluoroethane (76-14-2)	<3.5	3.5	0.063	ug/m ³	1	"	"	"	"	
Ethanol (64-17-5)	380	28	2.0	ug/m ³	30	"	"	08/18/16	"	
Ethyl acetate (141-78-6)	<1.8	1.8	0.11	ug/m ³	1	"	"	08/15/16	"	
Ethylbenzene (100-41-4)	<0.87	0.87	0.082	ug/m ³	1	"	"	"	"	
Hexachlorobutadiene (87-68-3)	<5.3	5.3	0.27	ug/m ³	1	"	"	"	"	
Isopropyl alcohol (67-63-0)	520	36	2.2	ug/m ³	30	"	"	08/18/16	"	
m,p-Xylene (136777-61-2)	2.1	1.7	0.15	ug/m ³	1	"	"	08/15/16	"	
Methyl butyl ketone (591-78-6)	<2.0	2.0	0.12	ug/m ³	1	"	"	"	"	
Methyl isobutyl ketone (108-10-1)	<2.0	2.0	0.11	ug/m ³	1	"	"	"	"	
Methyl tert-butyl ether (1634-04-4)	<1.8	1.8	0.11	ug/m ³	1	"	"	"	"	
Methylene chloride (75-09-2)	21	1.7	0.21	ug/m ³	1	"	"	"	"	
Naphthalene (91-20-3)	<2.6	2.6	0.11	ug/m ³	1	"	"	"	"	
n-Heptane (142-82-5)	<2.0	2.0	0.078	ug/m ³	1	"	"	"	"	
n-Hexane (110-54-3)	12	1.8	0.074	ug/m ³	1	"	"	"	"	
o-Xylene (95-47-6)	<0.87	0.87	0.096	ug/m ³	1	"	"	"	"	
Propylene (115-07-1)	<0.86	0.86	0.027	ug/m ³	1	"	"	"	"	
Styrene (100-42-5)	<2.1	2.1	0.096	ug/m ³	1	"	"	"	"	

Landmark Environmental 2042 West 98th Street Bloomington, MN 55431	Project: TO-15 Project Number: CrC Project Manager: Mr. Aaron Kuck	Work Order #: 1603494 Date Reported: 08/29/16
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VOC - AIR
Legend Technical Services, Inc.

Analyte (CAS#)	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LGP-7 (1603494-03) Air Received:08/11/16 11:20 Sampled:08/10/16 14:57										
Tetrachloroethene (127-18-4)	<3.4	3.4	0.13	ug/m ³	1	B6H1824	08/15/16	08/15/16	TO-15	
Tetrahydrofuran (109-99-9)	<1.5	1.5	0.038	ug/m ³	1	"	"	"	"	
Toluene (108-88-3)	7.2	0.75	0.060	ug/m ³	1	"	"	"	"	
trans-1,2-Dichloroethene (156-60-5)	<2.0	2.0	0.11	ug/m ³	1	"	"	"	"	
trans-1,3-Dichloropropene (10061-02-6)	<2.3	2.3	0.070	ug/m ³	1	"	"	"	"	
Trichloroethene (79-01-6)	<1.1	1.1	0.12	ug/m ³	1	"	"	"	"	
Trichlorofluoromethane (75-69-4)	<2.8	2.8	0.048	ug/m ³	1	"	"	"	"	
Trichlorotrifluoroethane (76-13-1)	<3.8	3.8	0.17	ug/m ³	1	"	"	"	"	
Vinyl acetate (108-05-4)	<1.8	1.8	0.90	ug/m ³	1	"	"	"	"	
Vinyl chloride (75-01-4)	<0.51	0.51	0.051	ug/m ³	1	"	"	"	"	
LGP-8 (1603494-04) Air Received:08/11/16 11:20 Sampled:08/10/16 15:10										
1,1,1-Trichloroethane (71-55-6)	<2.7	2.7	0.044	ug/m ³	1	B6H1824	08/15/16	08/16/16	TO-15	
1,1,2,2-Tetrachloroethane (79-34-5)	<3.4	3.4	0.074	ug/m ³	1	"	"	"	"	
1,1,2-Trichloroethane (79-00-5)	<2.7	2.7	0.11	ug/m ³	1	"	"	"	"	
1,1-Dichloroethane (75-34-3)	<2.0	2.0	0.11	ug/m ³	1	"	"	"	"	
1,1-Dichloroethene (75-35-4)	<2.0	2.0	0.078	ug/m ³	1	"	"	"	"	
1,2,4-Trichlorobenzene (120-82-1)	<3.7	3.7	0.13	ug/m ³	1	"	"	"	"	
1,2,4-Trimethylbenzene (95-63-6)	1.4	1.0	0.073	ug/m ³	1	"	"	"	"	
1,2-Dibromoethane (106-93-4)	<3.8	3.8	0.16	ug/m ³	1	"	"	"	"	
1,2-Dichlorobenzene (95-50-1)	<3.0	3.0	0.071	ug/m ³	1	"	"	"	"	
1,2-Dichloroethane (107-06-2)	<2.0	2.0	0.055	ug/m ³	1	"	"	"	"	
1,2-Dichloropropane (78-87-5)	<2.3	2.3	0.081	ug/m ³	1	"	"	"	"	
1,3,5-Trimethylbenzene (108-67-8)	<1.0	1.0	0.11	ug/m ³	1	"	"	"	"	
1,3-Butadiene (106-99-0)	<1.1	1.1	0.10	ug/m ³	1	"	"	"	"	
1,3-Dichlorobenzene (541-73-1)	<3.0	3.0	0.14	ug/m ³	1	"	"	"	"	
1,4-Dichlorobenzene (106-46-7)	<3.0	3.0	0.17	ug/m ³	1	"	"	"	"	
2-Butanone (78-93-3)	6.3	1.5	0.078	ug/m ³	1	"	"	"	"	
4-Ethyltoluene (622-96-8)	<2.5	2.5	0.11	ug/m ³	1	"	"	"	"	
Acetone (67-64-1)	72	18	0.82	ug/m ³	15	"	"	08/18/16	"	
Benzene (71-43-2)	<0.64	0.64	0.050	ug/m ³	1	"	"	08/16/16	"	
Benzyl chloride (100-44-7)	<2.6	2.6	0.073	ug/m ³	1	"	"	"	"	
Bromodichloromethane (75-27-4)	<3.4	3.4	0.13	ug/m ³	1	"	"	"	"	
Bromoform (75-25-2)	<5.2	5.2	0.13	ug/m ³	1	"	"	"	"	
Bromomethane (74-83-9)	<1.9	1.9	0.069	ug/m ³	1	"	"	"	"	
Carbon disulfide (75-15-0)	<1.6	1.6	0.070	ug/m ³	1	"	"	"	"	

Landmark Environmental 2042 West 98th Street Bloomington, MN 55431	Project: TO-15 Project Number: CrC Project Manager: Mr. Aaron Kuck	Work Order #: 1603494 Date Reported: 08/29/16
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VOC - AIR
Legend Technical Services, Inc.

Analyte (CAS#)	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LGP-8 (1603494-04) Air Received:08/11/16 11:20 Sampled:08/10/16 15:10										
Carbon tetrachloride (56-23-5)	<3.1	3.1	0.087	ug/m ³	1	B6H1824	08/15/16	08/16/16	TO-15	
Chlorobenzene (108-90-7)	<2.3	2.3	0.080	ug/m ³	1	"	"	"	"	
Chloroethane (75-00-3)	<1.3	1.3	0.037	ug/m ³	1	"	"	"	"	
Chloroform (67-66-3)	<2.4	2.4	0.055	ug/m ³	1	"	"	"	"	
Chloromethane (74-87-3)	<1.0	1.0	0.044	ug/m ³	1	"	"	"	"	
cis-1,2-Dichloroethene (156-59-2)	<2.0	2.0	0.089	ug/m ³	1	"	"	"	"	
cis-1,3-Dichloropropene (10061-01-5)	<2.3	2.3	0.12	ug/m ³	1	"	"	"	"	
Cyclohexane (110-82-7)	<1.7	1.7	0.059	ug/m ³	1	"	"	"	"	
Dibromochloromethane (124-48-1)	<4.3	4.3	0.16	ug/m ³	1	"	"	"	"	
Dichlorodifluoromethane (75-71-8)	4.7	2.5	0.12	ug/m ³	1	"	"	"	"	
Dichlorotetrafluoroethane (76-14-2)	<3.5	3.5	0.063	ug/m ³	1	"	"	"	"	
Ethanol (64-17-5)	190	14	1.0	ug/m ³	15	"	"	08/18/16	"	
Ethyl acetate (141-78-6)	<1.8	1.8	0.11	ug/m ³	1	"	"	08/16/16	"	
Ethylbenzene (100-41-4)	<0.87	0.87	0.082	ug/m ³	1	"	"	"	"	
Hexachlorobutadiene (87-68-3)	<5.3	5.3	0.27	ug/m ³	1	"	"	"	"	
Isopropyl alcohol (67-63-0)	330	18	1.1	ug/m ³	15	"	"	08/18/16	"	
m,p-Xylene (136777-61-2)	2.7	1.7	0.15	ug/m ³	1	"	"	08/16/16	"	
Methyl butyl ketone (591-78-6)	<2.0	2.0	0.12	ug/m ³	1	"	"	"	"	
Methyl isobutyl ketone (108-10-1)	<2.0	2.0	0.11	ug/m ³	1	"	"	"	"	
Methyl tert-butyl ether (1634-04-4)	<1.8	1.8	0.11	ug/m ³	1	"	"	"	"	
Methylene chloride (75-09-2)	65	1.7	0.21	ug/m ³	1	"	"	"	"	
Naphthalene (91-20-3)	<2.6	2.6	0.11	ug/m ³	1	"	"	"	"	
n-Heptane (142-82-5)	<2.0	2.0	0.078	ug/m ³	1	"	"	"	"	
n-Hexane (110-54-3)	58	1.8	0.074	ug/m ³	1	"	"	"	"	
o-Xylene (95-47-6)	1.1	0.87	0.096	ug/m ³	1	"	"	"	"	
Propylene (115-07-1)	<0.86	0.86	0.027	ug/m ³	1	"	"	"	"	
Styrene (100-42-5)	<2.1	2.1	0.096	ug/m ³	1	"	"	"	"	
Tetrachloroethene (127-18-4)	<3.4	3.4	0.13	ug/m ³	1	"	"	"	"	
Tetrahydrofuran (109-99-9)	2.2	1.5	0.038	ug/m ³	1	"	"	"	"	
Toluene (108-88-3)	6.9	0.75	0.060	ug/m ³	1	"	"	"	"	
trans-1,2-Dichloroethene (156-60-5)	<2.0	2.0	0.11	ug/m ³	1	"	"	"	"	
trans-1,3-Dichloropropene (10061-02-6)	<2.3	2.3	0.070	ug/m ³	1	"	"	"	"	
Trichloroethene (79-01-6)	<1.1	1.1	0.12	ug/m ³	1	"	"	"	"	
Trichlorofluoromethane (75-69-4)	<2.8	2.8	0.048	ug/m ³	1	"	"	"	"	
Trichlorotrifluoroethane (76-13-1)	<3.8	3.8	0.17	ug/m ³	1	"	"	"	"	

Landmark Environmental 2042 West 98th Street Bloomington, MN 55431	Project: TO-15 Project Number: CrC Project Manager: Mr. Aaron Kuck	Work Order #: 1603494 Date Reported: 08/29/16
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VOC - AIR
Legend Technical Services, Inc.

Analyte (CAS#)	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LGP-8 (1603494-04) Air Received:08/11/16 11:20 Sampled:08/10/16 15:10										
Vinyl acetate (108-05-4)	<1.8	1.8	0.90	ug/m ³	1	B6H1824	08/15/16	08/16/16	TO-15	
Vinyl chloride (75-01-4)	<0.51	0.51	0.051	ug/m ³	1	"	"	"	"	
DPE-Exhaust (1603494-05) Air Received:08/11/16 11:20 Sampled:08/10/16 16:50										
1,1,1-Trichloroethane (71-55-6)	<2.7	2.7	0.044	ug/m ³	1	B6H1824	08/15/16	08/15/16	TO-15	
1,1,2,2-Tetrachloroethane (79-34-5)	<3.4	3.4	0.074	ug/m ³	1	"	"	"	"	
1,1,2-Trichloroethane (79-00-5)	<2.7	2.7	0.11	ug/m ³	1	"	"	"	"	
1,1-Dichloroethane (75-34-3)	<2.0	2.0	0.11	ug/m ³	1	"	"	"	"	
1,1-Dichloroethene (75-35-4)	<2.0	2.0	0.078	ug/m ³	1	"	"	"	"	
1,2,4-Trichlorobenzene (120-82-1)	<3.7	3.7	0.13	ug/m ³	1	"	"	"	"	
1,2,4-Trimethylbenzene (95-63-6)	<1.0	1.0	0.073	ug/m ³	1	"	"	"	"	
1,2-Dibromoethane (106-93-4)	<3.8	3.8	0.16	ug/m ³	1	"	"	"	"	
1,2-Dichlorobenzene (95-50-1)	<3.0	3.0	0.071	ug/m ³	1	"	"	"	"	
1,2-Dichloroethane (107-06-2)	<2.0	2.0	0.055	ug/m ³	1	"	"	"	"	
1,2-Dichloropropane (78-87-5)	<2.3	2.3	0.081	ug/m ³	1	"	"	"	"	
1,3,5-Trimethylbenzene (108-67-8)	<1.0	1.0	0.11	ug/m ³	1	"	"	"	"	
1,3-Butadiene (106-99-0)	<1.1	1.1	0.10	ug/m ³	1	"	"	"	"	
1,3-Dichlorobenzene (541-73-1)	<3.0	3.0	0.14	ug/m ³	1	"	"	"	"	
1,4-Dichlorobenzene (106-46-7)	<3.0	3.0	0.17	ug/m ³	1	"	"	"	"	
2-Butanone (78-93-3)	3.8	1.5	0.078	ug/m ³	1	"	"	"	"	
4-Ethyltoluene (622-96-8)	<2.5	2.5	0.11	ug/m ³	1	"	"	"	"	
Acetone (67-64-1)	44	1.2	0.055	ug/m ³	1	"	"	"	"	
Benzene (71-43-2)	0.71	0.64	0.050	ug/m ³	1	"	"	"	"	
Benzyl chloride (100-44-7)	<2.6	2.6	0.073	ug/m ³	1	"	"	"	"	
Bromodichloromethane (75-27-4)	<3.4	3.4	0.13	ug/m ³	1	"	"	"	"	
Bromoform (75-25-2)	<5.2	5.2	0.13	ug/m ³	1	"	"	"	"	
Bromomethane (74-83-9)	<1.9	1.9	0.069	ug/m ³	1	"	"	"	"	
Carbon disulfide (75-15-0)	<1.6	1.6	0.070	ug/m ³	1	"	"	"	"	
Carbon tetrachloride (56-23-5)	<3.1	3.1	0.087	ug/m ³	1	"	"	"	"	
Chlorobenzene (108-90-7)	<2.3	2.3	0.080	ug/m ³	1	"	"	"	"	
Chloroethane (75-00-3)	<1.3	1.3	0.037	ug/m ³	1	"	"	"	"	
Chloroform (67-66-3)	<2.4	2.4	0.055	ug/m ³	1	"	"	"	"	
Chloromethane (74-87-3)	1.8	1.0	0.044	ug/m ³	1	"	"	"	"	
cis-1,2-Dichloroethene (156-59-2)	<2.0	2.0	0.089	ug/m ³	1	"	"	"	"	
cis-1,3-Dichloropropene (10061-01-5)	<2.3	2.3	0.12	ug/m ³	1	"	"	"	"	
Cyclohexane (110-82-7)	<1.7	1.7	0.059	ug/m ³	1	"	"	"	"	

Landmark Environmental 2042 West 98th Street Bloomington, MN 55431	Project: TO-15 Project Number: CrC Project Manager: Mr. Aaron Kuck	Work Order #: 1603494 Date Reported: 08/29/16
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VOC - AIR
Legend Technical Services, Inc.

Analyte (CAS#)	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DPE-Exhaust (1603494-05) Air Received:08/11/16 11:20 Sampled:08/10/16 16:50										
Dibromochloromethane (124-48-1)	<4.3	4.3	0.16	ug/m ³	1	B6H1824	08/15/16	08/15/16	TO-15	
Dichlorodifluoromethane (75-71-8)	2.6	2.5	0.12	ug/m ³	1	"	"	"	"	
Dichlorotetrafluoroethane (76-14-2)	<3.5	3.5	0.063	ug/m ³	1	"	"	"	"	
Ethanol (64-17-5)	250	14	1.0	ug/m ³	15	"	"	08/18/16	"	
Ethyl acetate (141-78-6)	<1.8	1.8	0.11	ug/m ³	1	"	"	08/15/16	"	
Ethylbenzene (100-41-4)	<0.87	0.87	0.082	ug/m ³	1	"	"	"	"	
Hexachlorobutadiene (87-68-3)	<5.3	5.3	0.27	ug/m ³	1	"	"	"	"	
Isopropyl alcohol (67-63-0)	270	18	1.1	ug/m ³	15	"	"	08/18/16	"	
m,p-Xylene (136777-61-2)	2.0	1.7	0.15	ug/m ³	1	"	"	08/15/16	"	
Methyl butyl ketone (591-78-6)	<2.0	2.0	0.12	ug/m ³	1	"	"	"	"	
Methyl isobutyl ketone (108-10-1)	<2.0	2.0	0.11	ug/m ³	1	"	"	"	"	
Methyl tert-butyl ether (1634-04-4)	<1.8	1.8	0.11	ug/m ³	1	"	"	"	"	
Methylene chloride (75-09-2)	16	1.7	0.21	ug/m ³	1	"	"	"	"	
Naphthalene (91-20-3)	<2.6	2.6	0.11	ug/m ³	1	"	"	"	"	
n-Heptane (142-82-5)	<2.0	2.0	0.078	ug/m ³	1	"	"	"	"	
n-Hexane (110-54-3)	4.2	1.8	0.074	ug/m ³	1	"	"	"	"	
o-Xylene (95-47-6)	<0.87	0.87	0.096	ug/m ³	1	"	"	"	"	
Propylene (115-07-1)	<0.86	0.86	0.027	ug/m ³	1	"	"	"	"	
Styrene (100-42-5)	<2.1	2.1	0.096	ug/m ³	1	"	"	"	"	
Tetrachloroethene (127-18-4)	15	3.4	0.13	ug/m ³	1	"	"	"	"	
Tetrahydrofuran (109-99-9)	<1.5	1.5	0.038	ug/m ³	1	"	"	"	"	
Toluene (108-88-3)	4.1	0.75	0.060	ug/m ³	1	"	"	"	"	
trans-1,2-Dichloroethene (156-60-5)	<2.0	2.0	0.11	ug/m ³	1	"	"	"	"	
trans-1,3-Dichloropropene (10061-02-6)	<2.3	2.3	0.070	ug/m ³	1	"	"	"	"	
Trichloroethene (79-01-6)	<1.1	1.1	0.12	ug/m ³	1	"	"	"	"	
Trichlorofluoromethane (75-69-4)	<2.8	2.8	0.048	ug/m ³	1	"	"	"	"	
Trichlorotrifluoroethane (76-13-1)	970	57	2.6	ug/m ³	15	"	"	08/18/16	"	
Vinyl acetate (108-05-4)	<1.8	1.8	0.90	ug/m ³	1	"	"	08/15/16	"	
Vinyl chloride (75-01-4)	<0.51	0.51	0.051	ug/m ³	1	"	"	"	"	

Landmark Environmental 2042 West 98th Street Bloomington, MN 55431	Project: TO-15 Project Number: CrC Project Manager: Mr. Aaron Kuck	Work Order #: 1603494 Date Reported: 08/29/16
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VOC - AIR - Quality Control
Legend Technical Services, Inc.

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	%RPD	%RPD Limit	Notes
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Batch B6H1824 - TO-15

Blank (B6H1824-BLK1)

Prepared & Analyzed: 08/15/16

1,1,1-Trichloroethane	< 2.7	2.7	0.044	ug/m ³							
1,1,2,2-Tetrachloroethane	< 3.4	3.4	0.074	ug/m ³							
1,1,2-Trichloroethane	< 2.7	2.7	0.11	ug/m ³							
1,1-Dichloroethane	< 2.0	2.0	0.11	ug/m ³							
1,1-Dichloroethene	< 2.0	2.0	0.078	ug/m ³							
1,2,4-Trichlorobenzene	< 3.7	3.7	0.13	ug/m ³							
1,2,4-Trimethylbenzene	< 1.0	1.0	0.073	ug/m ³							
1,2-Dibromoethane	< 3.8	3.8	0.16	ug/m ³							
1,2-Dichlorobenzene	< 3.0	3.0	0.071	ug/m ³							
1,2-Dichloroethane	< 2.0	2.0	0.055	ug/m ³							
1,2-Dichloropropane	< 2.3	2.3	0.081	ug/m ³							
1,3,5-Trimethylbenzene	< 1.0	1.0	0.11	ug/m ³							
1,3-Butadiene	< 1.1	1.1	0.10	ug/m ³							
1,3-Dichlorobenzene	< 3.0	3.0	0.14	ug/m ³							
1,4-Dichlorobenzene	< 3.0	3.0	0.17	ug/m ³							
2-Butanone	< 1.5	1.5	0.078	ug/m ³							
4-Ethyltoluene	< 2.5	2.5	0.11	ug/m ³							
Acetone	< 1.2	1.2	0.055	ug/m ³							
Benzene	< 0.64	0.64	0.050	ug/m ³							
Benzyl chloride	< 2.6	2.6	0.073	ug/m ³							
Bromodichloromethane	< 3.4	3.4	0.13	ug/m ³							
Bromoform	< 5.2	5.2	0.13	ug/m ³							
Bromomethane	< 1.9	1.9	0.069	ug/m ³							
Carbon disulfide	< 1.6	1.6	0.070	ug/m ³							
Carbon tetrachloride	< 3.1	3.1	0.087	ug/m ³							
Chlorobenzene	< 2.3	2.3	0.080	ug/m ³							
Chloroethane	< 1.3	1.3	0.037	ug/m ³							
Chloroform	< 2.4	2.4	0.055	ug/m ³							
Chloromethane	< 1.0	1.0	0.044	ug/m ³							
cis-1,2-Dichloroethene	< 2.0	2.0	0.089	ug/m ³							
cis-1,3-Dichloropropene	< 2.3	2.3	0.12	ug/m ³							
Cyclohexane	< 1.7	1.7	0.059	ug/m ³							
Dibromochloromethane	< 4.3	4.3	0.16	ug/m ³							
Dichlorodifluoromethane	< 2.5	2.5	0.12	ug/m ³							
Dichlorotetrafluoroethane	< 3.5	3.5	0.063	ug/m ³							
Ethanol	< 0.94	0.94	0.068	ug/m ³							
Ethyl acetate	< 1.8	1.8	0.11	ug/m ³							
Ethylbenzene	< 0.87	0.87	0.082	ug/m ³							
Hexachlorobutadiene	< 5.3	5.3	0.27	ug/m ³							
Isopropyl alcohol	< 1.2	1.2	0.075	ug/m ³							

Landmark Environmental 2042 West 98th Street Bloomington, MN 55431	Project: TO-15 Project Number: CrC Project Manager: Mr. Aaron Kuck	Work Order #: 1603494 Date Reported: 08/29/16
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VOC - AIR - Quality Control
Legend Technical Services, Inc.

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	%RPD	%RPD Limit	Notes
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Batch B6H1824 - TO-15

Blank (B6H1824-BLK1)

Prepared & Analyzed: 08/15/16

m,p-Xylene	< 1.7	1.7	0.15	ug/m ³							
Methyl butyl ketone	< 2.0	2.0	0.12	ug/m ³							
Methyl isobutyl ketone	< 2.0	2.0	0.11	ug/m ³							
Methyl tert-butyl ether	< 1.8	1.8	0.11	ug/m ³							
Methylene chloride	< 1.7	1.7	0.21	ug/m ³							
Naphthalene	< 2.6	2.6	0.11	ug/m ³							
n-Heptane	< 2.0	2.0	0.078	ug/m ³							
n-Hexane	< 1.8	1.8	0.074	ug/m ³							
o-Xylene	< 0.87	0.87	0.096	ug/m ³							
Propylene	< 0.86	0.86	0.027	ug/m ³							
Styrene	< 2.1	2.1	0.096	ug/m ³							
Tetrachloroethene	< 3.4	3.4	0.13	ug/m ³							
Tetrahydrofuran	< 1.5	1.5	0.038	ug/m ³							
Toluene	< 0.75	0.75	0.060	ug/m ³							
trans-1,2-Dichloroethene	< 2.0	2.0	0.11	ug/m ³							
trans-1,3-Dichloropropene	< 2.3	2.3	0.070	ug/m ³							
Trichloroethene	< 1.1	1.1	0.12	ug/m ³							
Trichlorofluoromethane	< 2.8	2.8	0.048	ug/m ³							
Trichlorotrifluoroethane	< 3.8	3.8	0.17	ug/m ³							
Vinyl acetate	< 1.8	1.8	0.90	ug/m ³							
Vinyl chloride	< 0.51	0.51	0.051	ug/m ³							

LCS (B6H1824-BS1)

Prepared & Analyzed: 08/15/16

1,1,1-Trichloroethane	51.5	2.7	0.044	ug/m ³	54.6		94.4	70-130			
1,1,2,2-Tetrachloroethane	60.2	3.4	0.074	ug/m ³	68.6		87.7	70-130			
1,1,2-Trichloroethane	53.5	2.7	0.11	ug/m ³	54.6		98.0	70-130			
1,1-Dichloroethane	42.9	2.0	0.11	ug/m ³	40.5		106	70-130			
1,1-Dichloroethene	41.6	2.0	0.078	ug/m ³	39.6		105	70-130			
1,2,4-Trichlorobenzene	68.0	3.7	0.13	ug/m ³	74.2		91.6	70-130			
1,2,4-Trimethylbenzene	40.8	1.0	0.073	ug/m ³	49.2		82.9	70-130			
1,2-Dibromoethane	73.6	3.8	0.16	ug/m ³	76.8		95.8	70-130			
1,2-Dichlorobenzene	47.8	3.0	0.071	ug/m ³	60.1		79.5	70-130			
1,2-Dichloroethane	35.7	2.0	0.055	ug/m ³	40.5		88.3	70-130			
1,2-Dichloropropane	44.8	2.3	0.081	ug/m ³	46.2		96.9	70-130			
1,3,5-Trimethylbenzene	41.5	1.0	0.11	ug/m ³	49.2		84.4	70-130			
1,3-Butadiene	19.2	1.1	0.10	ug/m ³	22.1		86.8	70-130			
1,3-Dichlorobenzene	49.4	3.0	0.14	ug/m ³	60.1		82.1	70-130			
1,4-Dichlorobenzene	49.6	3.0	0.17	ug/m ³	60.1		82.5	70-130			
2-Butanone	24.2	1.5	0.078	ug/m ³	29.5		82.2	70-130			
4-Ethyltoluene	44.3	2.5	0.11	ug/m ³	49.2		90.2	70-130			

Landmark Environmental 2042 West 98th Street Bloomington, MN 55431	Project: TO-15 Project Number: CrC Project Manager: Mr. Aaron Kuck	Work Order #: 1603494 Date Reported: 08/29/16
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VOC - AIR - Quality Control
Legend Technical Services, Inc.

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	%RPD	%RPD Limit	Notes
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Batch B6H1824 - TO-15

LCS (B6H1824-BS1)

Prepared & Analyzed: 08/15/16

Acetone	24.9	1.2	0.055	ug/m ³	23.8		105	70-130			
Benzene	31.3	0.64	0.050	ug/m ³	31.9		98.0	70-130			
Benzyl chloride	44.1	2.6	0.073	ug/m ³	51.8		85.2	70-130			
Bromodichloromethane	63.9	3.4	0.13	ug/m ³	67.0		95.4	70-130			
Bromoform	89.7	5.2	0.13	ug/m ³	103		86.8	70-130			
Bromomethane	36.7	1.9	0.069	ug/m ³	38.8		94.6	70-130			
Carbon disulfide	33.9	1.6	0.070	ug/m ³	31.1		109	70-130			
Carbon tetrachloride	59.1	3.1	0.087	ug/m ³	62.9		93.9	70-130			
Chlorobenzene	45.1	2.3	0.080	ug/m ³	46.0		98.0	70-130			
Chloroethane	25.0	1.3	0.037	ug/m ³	26.4		94.9	70-130			
Chloroform	46.3	2.4	0.055	ug/m ³	48.8		94.8	70-130			
Chloromethane	19.7	1.0	0.044	ug/m ³	20.6		95.5	70-130			
cis-1,2-Dichloroethene	42.8	2.0	0.089	ug/m ³	39.6		108	70-130			
cis-1,3-Dichloropropene	43.0	2.3	0.12	ug/m ³	45.4		94.8	70-130			
Cyclohexane	33.6	1.7	0.059	ug/m ³	34.4		97.6	70-130			
Dibromochloromethane	80.6	4.3	0.16	ug/m ³	85.2		94.6	70-130			
Dichlorodifluoromethane	49.5	2.5	0.12	ug/m ³	49.5		100	70-130			
Dichlorotetrafluoroethane	72.7	3.5	0.063	ug/m ³	69.9		104	70-130			
Ethanol	18.8	0.94	0.068	ug/m ³	18.8		99.8	70-130			
Ethyl acetate	32.9	1.8	0.11	ug/m ³	36.0		91.2	70-130			
Ethylbenzene	41.2	0.87	0.082	ug/m ³	43.4		94.9	70-130			
Hexachlorobutadiene	78.7	5.3	0.27	ug/m ³	107		73.8	70-130			
Isopropyl alcohol	24.5	1.2	0.075	ug/m ³	24.6		99.5	70-130			
m,p-Xylene	80.8	1.7	0.15	ug/m ³	86.8		93.0	70-130			
Methyl butyl ketone	40.6	2.0	0.12	ug/m ³	41.0		99.2	70-130			
Methyl isobutyl ketone	37.3	2.0	0.11	ug/m ³	41.0		91.0	70-130			
Methyl tert-butyl ether	36.8	1.8	0.11	ug/m ³	36.1		102	70-130			
Methylene chloride	37.5	1.7	0.21	ug/m ³	34.7		108	70-130			
Naphthalene	47.7	2.6	0.11	ug/m ³	55.0		86.7	70-130			
n-Heptane	40.3	2.0	0.078	ug/m ³	41.0		98.4	70-130			
n-Hexane	38.4	1.8	0.074	ug/m ³	35.2		109	70-130			
o-Xylene	39.0	0.87	0.096	ug/m ³	43.4		89.9	70-130			
Propylene	14.9	0.86	0.027	ug/m ³	17.2		86.6	70-130			
Styrene	39.6	2.1	0.096	ug/m ³	42.6		92.9	70-130			
Tetrachloroethene	65.6	3.4	0.13	ug/m ³	67.8		96.7	70-130			
Tetrahydrofuran	26.7	1.5	0.038	ug/m ³	29.5		90.6	70-130			
Toluene	36.3	0.75	0.060	ug/m ³	37.7		96.4	70-130			
trans-1,2-Dichloroethene	44.4	2.0	0.11	ug/m ³	39.6		112	70-130			
trans-1,3-Dichloropropene	42.8	2.3	0.070	ug/m ³	45.4		94.2	70-130			
Trichloroethene	51.8	1.1	0.12	ug/m ³	53.7		96.4	70-130			

Landmark Environmental 2042 West 98th Street Bloomington, MN 55431	Project: TO-15 Project Number: CrC Project Manager: Mr. Aaron Kuck	Work Order #: 1603494 Date Reported: 08/29/16
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VOC - AIR - Quality Control
Legend Technical Services, Inc.

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	%RPD	%RPD Limit	Notes
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Batch B6H1824 - TO-15

LCS (B6H1824-BS1)

Prepared & Analyzed: 08/15/16

Trichlorofluoromethane	59.0	2.8	0.048	ug/m ³	56.2		105	70-130			
Trichlorotrifluoroethane	89.7	3.8	0.17	ug/m ³	76.6		117	70-130			
Vinyl acetate	35.6	1.8	0.90	ug/m ³	35.2		101	70-130			
Vinyl chloride	24.2	0.51	0.051	ug/m ³	25.6		94.5	70-130			

Duplicate (B6H1824-DUP1)

Source: 1603496-02

Prepared & Analyzed: 08/15/16

1,1,1-Trichloroethane	< 2.7	2.7	0.044	ug/m ³	<2.7			NA		25	
1,1,1,2-Tetrachloroethane	< 3.4	3.4	0.074	ug/m ³	<3.4			NA		25	
1,1,1,2-Trichloroethane	< 2.7	2.7	0.11	ug/m ³	<2.7			NA		25	
1,1-Dichloroethane	< 2.0	2.0	0.11	ug/m ³	<2.0			NA		25	
1,1-Dichloroethene	< 2.0	2.0	0.078	ug/m ³	<2.0			NA		25	
1,2,4-Trichlorobenzene	< 3.7	3.7	0.13	ug/m ³	<3.7			NA		25	
1,2,4-Trimethylbenzene	50.6	1.0	0.073	ug/m ³	38.8			26.2		25	R8
1,2-Dibromoethane	< 3.8	3.8	0.16	ug/m ³	<3.8			NA		25	
1,2-Dichlorobenzene	< 3.0	3.0	0.071	ug/m ³	<3.0			NA		25	
1,2-Dichloroethane	< 2.0	2.0	0.055	ug/m ³	<2.0			NA		25	
1,2-Dichloropropane	< 2.3	2.3	0.081	ug/m ³	<2.3			NA		25	
1,3,5-Trimethylbenzene	12.9	1.0	0.11	ug/m ³	10.8			18.3		25	
1,3-Butadiene	13.5	1.1	0.10	ug/m ³	11.1			19.5		25	
1,3-Dichlorobenzene	< 3.0	3.0	0.14	ug/m ³	<3.0			NA		25	
1,4-Dichlorobenzene	< 3.0	3.0	0.17	ug/m ³	<3.0			NA		25	
2-Butanone	41.2	1.5	0.078	ug/m ³	41.5			0.803		25	
4-Ethyltoluene	13.8	2.5	0.11	ug/m ³	11.3			20.3		25	
Acetone	112	18	0.82	ug/m ³	114			2.08		25	
Benzene	15.5	0.64	0.050	ug/m ³	14.2			8.33		25	
Benzyl chloride	< 2.6	2.6	0.073	ug/m ³	<2.6			NA		25	
Bromodichloromethane	< 3.4	3.4	0.13	ug/m ³	<3.4			NA		25	
Bromoform	< 5.2	5.2	0.13	ug/m ³	<5.2			NA		25	
Bromomethane	< 1.9	1.9	0.069	ug/m ³	<1.9			NA		25	
Carbon disulfide	7.56	1.6	0.070	ug/m ³	8.57			12.6		25	
Carbon tetrachloride	< 3.1	3.1	0.087	ug/m ³	<3.1			NA		25	
Chlorobenzene	< 2.3	2.3	0.080	ug/m ³	<2.3			NA		25	
Chloroethane	< 1.3	1.3	0.037	ug/m ³	<1.3			NA		25	
Chloroform	< 2.4	2.4	0.055	ug/m ³	<2.4			NA		25	
Chloromethane	< 1.0	1.0	0.044	ug/m ³	<1.0			NA		25	
cis-1,2-Dichloroethene	< 2.0	2.0	0.089	ug/m ³	<2.0			NA		25	
cis-1,3-Dichloropropene	< 2.3	2.3	0.12	ug/m ³	<2.3			NA		25	
Cyclohexane	4.56	1.7	0.059	ug/m ³	4.48			1.87		25	
Dibromochloromethane	< 4.3	4.3	0.16	ug/m ³	<4.3			NA		25	
Dichlorodifluoromethane	< 2.5	2.5	0.12	ug/m ³	<2.5			NA		25	

Landmark Environmental 2042 West 98th Street Bloomington, MN 55431	Project: TO-15 Project Number: CrC Project Manager: Mr. Aaron Kuck	Work Order #: 1603494 Date Reported: 08/29/16
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VOC - AIR - Quality Control
Legend Technical Services, Inc.

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	%RPD	%RPD Limit	Notes
Batch B6H1824 - TO-15											
Duplicate (B6H1824-DUP1)		Source: 1603496-02				Prepared & Analyzed: 08/15/16					
Dichlorotetrafluoroethane	< 3.5	3.5	0.063	ug/m ³		<3.5			NA	25	
Ethanol	27.0	0.94	0.068	ug/m ³		25.1			7.26	25	
Ethyl acetate	< 1.8	1.8	0.11	ug/m ³		<1.8			NA	25	
Ethylbenzene	27.2	0.87	0.082	ug/m ³		27.6			1.40	25	
Hexachlorobutadiene	< 5.3	5.3	0.27	ug/m ³		<5.3			NA	25	
Isopropyl alcohol	9.59	1.2	0.075	ug/m ³		9.36			2.36	25	
m,p-Xylene	123	1.7	0.15	ug/m ³		107			14.4	25	
Methyl butyl ketone	< 2.0	2.0	0.12	ug/m ³		<2.0			NA	25	
Methyl isobutyl ketone	2.39	2.0	0.11	ug/m ³		3.17			28.2	25	R8
Methyl tert-butyl ether	< 1.8	1.8	0.11	ug/m ³		<1.8			NA	25	
Methylene chloride	< 1.7	1.7	0.21	ug/m ³		<1.7			NA	25	
Naphthalene	11.5	2.6	0.11	ug/m ³		8.43			30.9	25	R8
n-Heptane	11.7	2.0	0.078	ug/m ³		10.6			10.4	25	
n-Hexane	12.2	1.8	0.074	ug/m ³		13.2			7.53	25	
o-Xylene	45.8	0.87	0.096	ug/m ³		39.3			15.3	25	
Propylene	107	13	0.40	ug/m ³		104			3.21	25	
Styrene	< 2.1	2.1	0.096	ug/m ³		<2.1			NA	25	
Tetrachloroethene	2860	100	3.9	ug/m ³		2880			0.596	25	
Tetrahydrofuran	6.18	1.5	0.038	ug/m ³		4.56			30.3	25	R8
Toluene	126	11	0.90	ug/m ³		125			1.19	25	
trans-1,2-Dichloroethene	< 2.0	2.0	0.11	ug/m ³		<2.0			NA	25	
trans-1,3-Dichloropropene	< 2.3	2.3	0.070	ug/m ³		<2.3			NA	25	
Trichloroethene	11.0	1.1	0.12	ug/m ³		11.6			5.49	25	
Trichlorofluoromethane	< 2.8	2.8	0.048	ug/m ³		<2.8			NA	25	
Trichlorotrifluoroethane	< 3.8	3.8	0.17	ug/m ³		<3.8			NA	25	
Vinyl acetate	< 1.8	1.8	0.90	ug/m ³		<1.8			NA	25	
Vinyl chloride	< 0.51	0.51	0.051	ug/m ³		<0.51			NA	25	

Landmark Environmental 2042 West 98th Street Bloomington, MN 55431	Project: TO-15 Project Number: CrC Project Manager: Mr. Aaron Kuck	Work Order #: 1603494 Date Reported: 08/29/16
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Notes and Definitions

- R8 Sample RPD exceeded the method acceptance limit.
- < Less than value listed
- NA Not applicable. The %RPD is not calculated from values less than the reporting limit.
- MDL Method Detection Limit
- RL Reporting Limit
- RPD Relative Percent Difference
- LCS Laboratory Control Spike = Blank Spike (BS) = Laboratory Fortified Blank (LFB)

Page of
LEGEND TECHNICAL SERVICES, INC
 88 Empire Drive, St. Paul, MN 55103 - Telephone: 651-642-1150, Fax: 651-642-1239
CHAIN-OF-CUSTODY RECORD

Client Name: <u>Landmark</u>		Bill To: <u>→</u>		LEGEND Project: <u>1003194</u>		TO-15 (M) w/ TICs Air Analysis			
Address: <u>Landmark</u>		Address: <u>City of Rochester</u>		Turn Around Time: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> RUSH		Project Comments:			
Attn: <u>akuck@landmark.com</u>		E-Mail: <u>akuck@landmark.com</u>		Requested Due Date: <u> </u>					
Phone: <u> </u>		Flow Controller Serial #		Client Project Name: <u>CxL</u>					
Item No.	Field ID / Sampler ID	Canister Serial #	Pressure (" Hg)	Date Collected	Time Collected	Total Time	PID Reading	Sample Comments	
1	L56-9	391	-6	8/10/16	1418 1425	7:00	0.0	O/A	
2	L56-10	383	-6	8/10/16	1435 1441	6:00	0.0	O2	
3	L6P-7	378	-6	8/10/16	1452 1457	5:00	0.0	O3	
4	L6P-8	390	-6	8/10/16	1503 1510	6:00	0.0	O4	
5	DPE-Exhaust	00393	-7	8/10/16	10:45 11:50	6 hrs 5 mins	0.0	O5	
6									
7									
8									
9									
10									
Sample Collector (please print): <u>Ann Kuck</u>		Requisitioned By: <u>[Signature]</u>		Date: <u>8/11/16</u>		Time: <u> </u>		Accepted by: <u> </u>	
Comments:		Requisitioned By: <u>[Signature]</u>		Date: <u>8/11/16</u>		Time: <u> </u>		Received by Lab: <u> </u>	

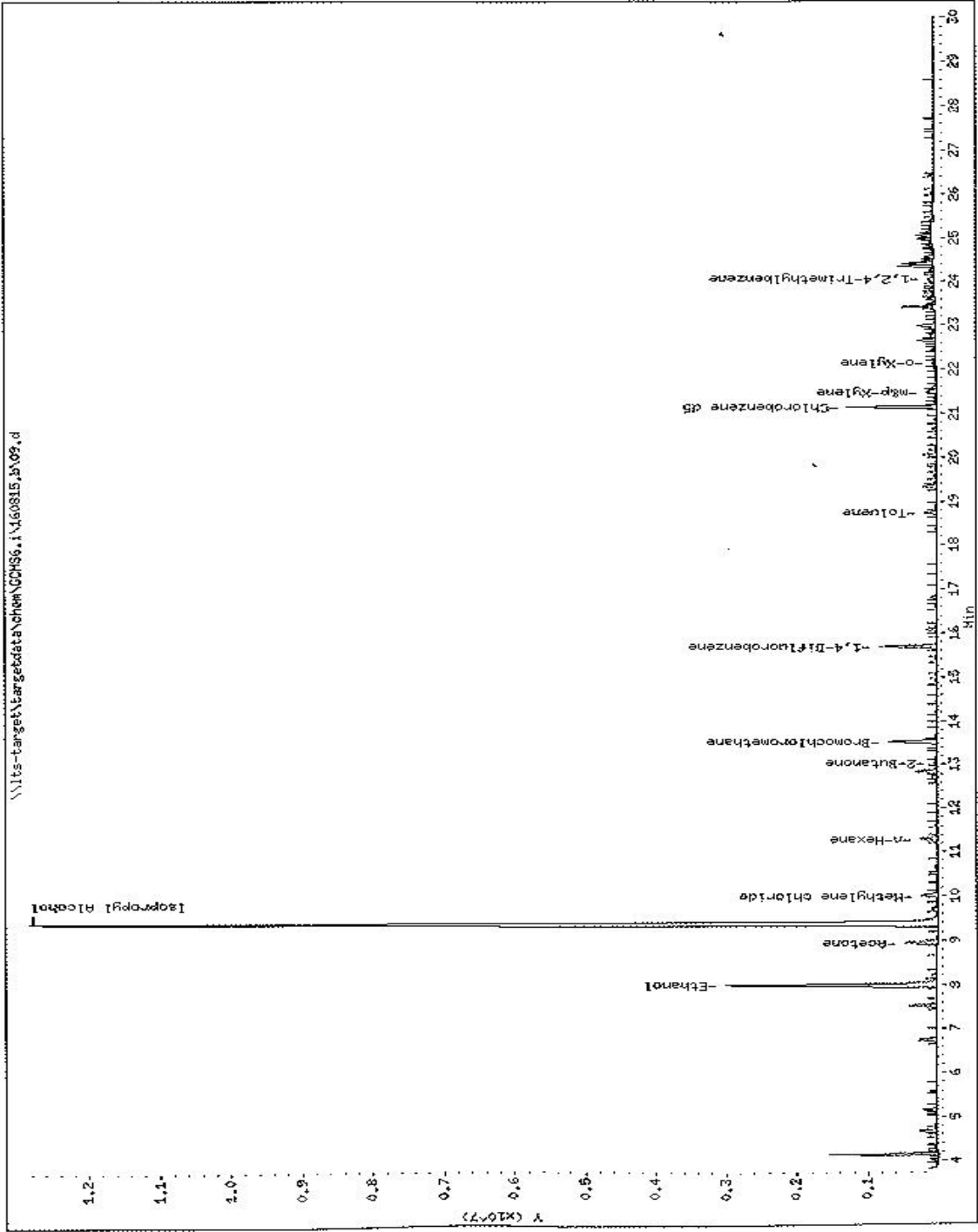
White Copy - Original Accompanies Shipment to Lab Yellow Copy - Lab Pink Copy - Customer or Field Copy

PLEASE REVIEW TERMS AND CONDITIONS ON BACK BEFORE SIGNING

Form LAB-364.2 (05/14)

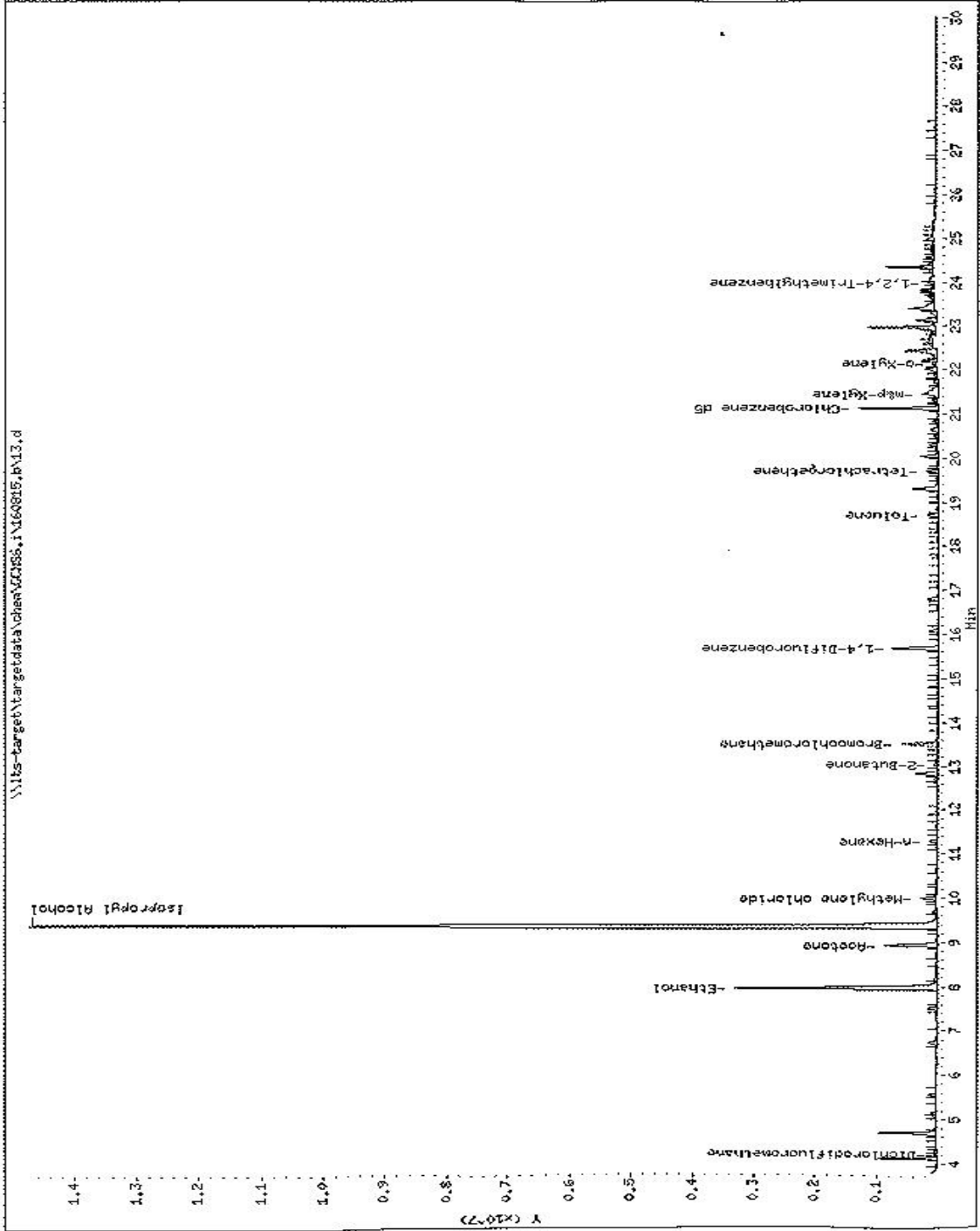
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 Purge Volume: 1.0
 Column phase:

Instrument: GC856.i
 Operator: SLH
 Column diameter: 0.20



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 Client ID: L50-19
 Sample Info: 1603494-02
 Purge Volume: 1.0
 Column phase:

Instrument: GC866.i
 Operator: SLH
 Column diameter: 0.20



Data File: \\lts-target\targetdata\chem\GCHS6.i\160815.B\15.d

Date: 16-08-2016 23:49

Client ID: LCP-7

Sample Info: 1603494-03

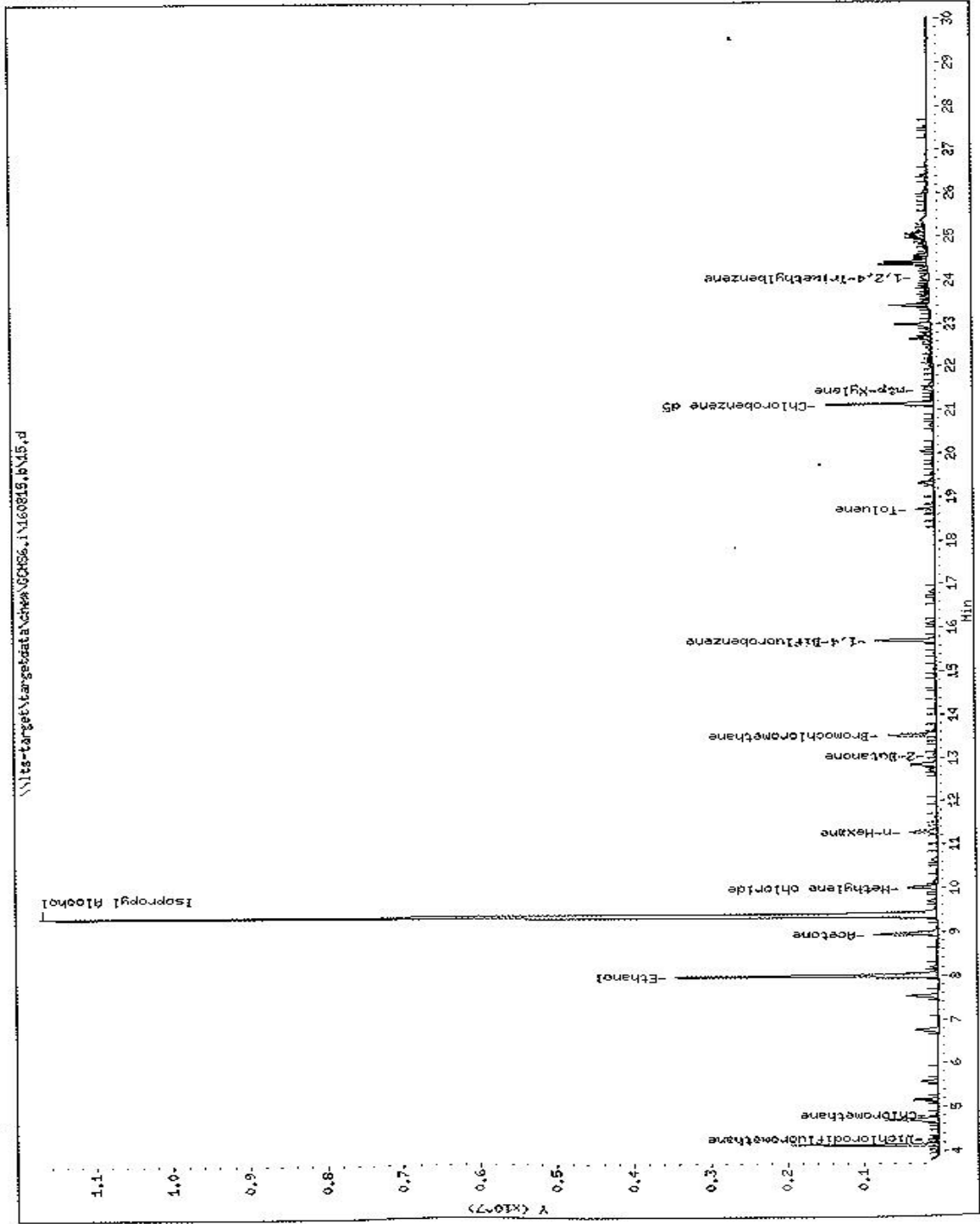
Purge Volume: 1.0

Column phase:

Instrument: SCHS6.i

Operator: SLH

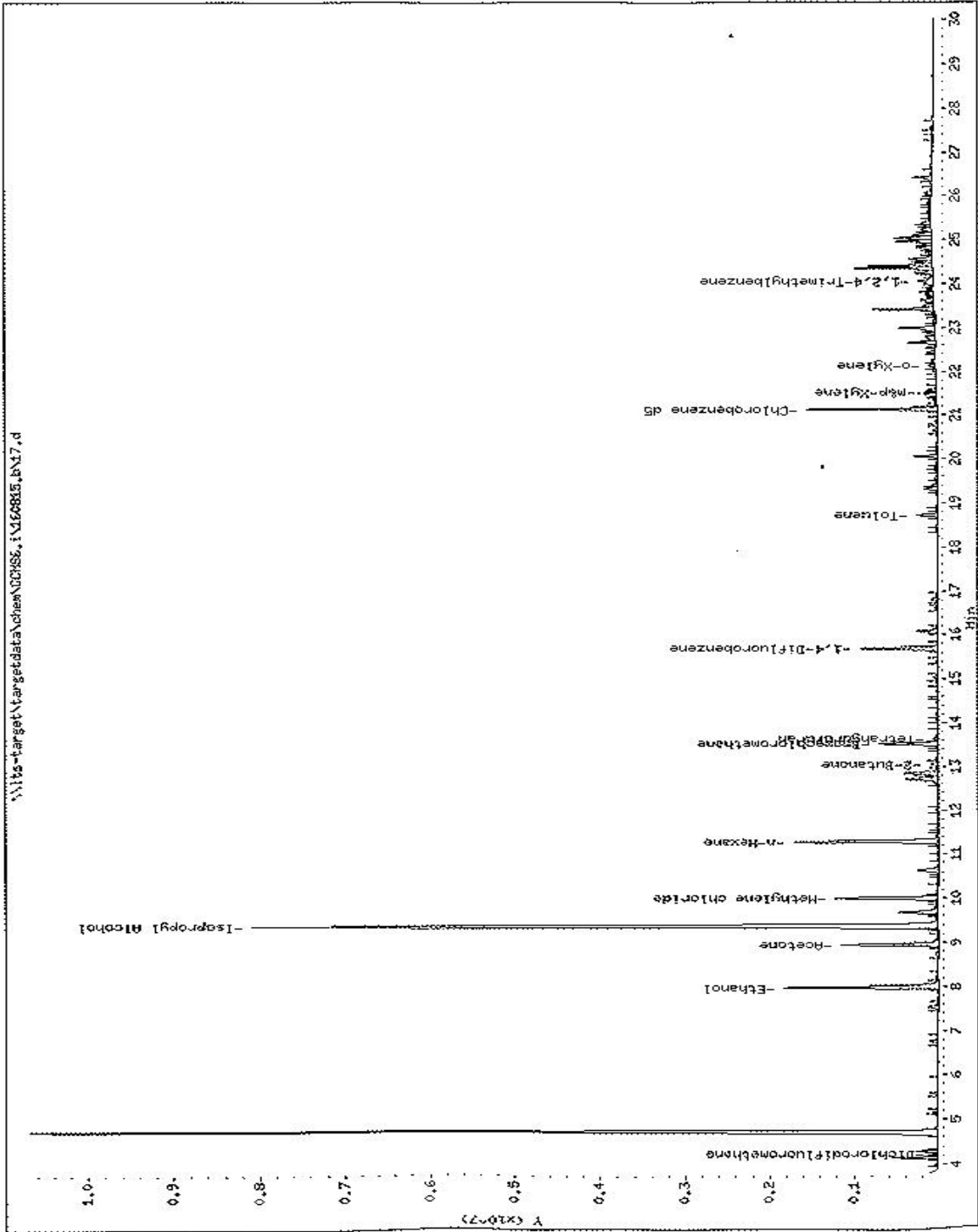
Column diameter: 0.20



Page 4

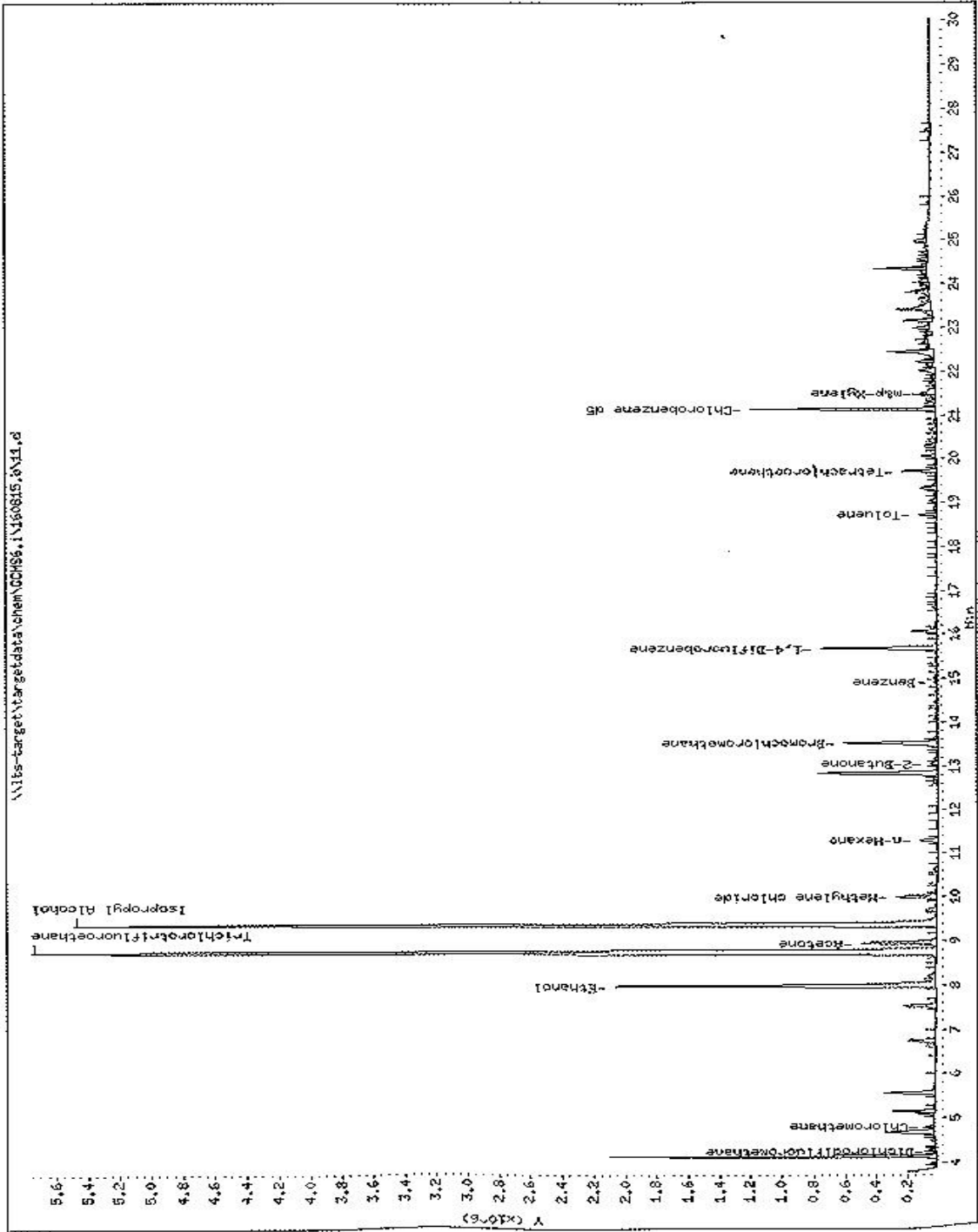
Data File: \\lts-target\target\data\chem\00MS6.i\160805.b\17.d
 Date: 16-08-2016 01:50
 Client ID: LCP-8
 Sample Info: 1602494-04
 Purge Volume: 1.0
 Column phase:

Instrument: GCMS6.i
 Operator: SLH
 Column diameter: 0.20



Data File: \\its-target\targetdata\chem\GCHS6.i\160815.a\11.d
 Date: 15-AUG-2016 19:49
 Client ID: WFE-Exhaust
 Sample Info: 1603494-05
 Purge Volume: 1.0
 Column phase:

Instrument: GC656.i
 Operator: SLH
 Column diameter: 0.20



Attachment B

FIELD DATA SHEET 1 of 2 (REVISED 4/13/10)

LA

CLIENT NAME: CITY OF ROCHESTER
 PROJECT ID: CRC
 PROJECT NAME: MN BIO BUSINESS CENTER

DATE: 7/28/16
 TIME: 6:00
 RECORDED BY: ADK & ZW

2009 SYSTEM STARTUP INFORMATION

Startup Date: 6/29/2009 MS Discharge Totalizer: 68 Sump Discharge Totalizer: 200

NOTES - LEAVE VACUUM RELIEF VALVE SELECTOR SWITCH IN OFF POSITION
 LEAVE AIR STRIPPER SELECTOR SWITCHES IN AUTO POSITION

CURRENT OPERATING WELL:

DPE WELL BLEED VALVE % OPEN:
 DPE PUMP BLEED VALVE % OPEN:

ANALOG PANEL READINGS

DPE PUMP AIR FLOW (SCFM): 158.3
 DPE WELL VACUUM (IN. HG): 16.82
 DPE PUMP INLET VACUUM (IN. HG): 17.58
 DPE PUMP OUTLET PRESSURE (PSI): 0.07
 DPE PUMP OUTLET TEMP (DEG. F): 202.4
 MS PUMP WATER FLOW (GPM): 48.00

DPE-1

TOTAL PANEL READINGS

DPE VACUUM PUMP (HRS): 32,788
 MS PUMP (HRS): 2871
 MS VACUUM VALVE (HRS): 698
 AIR STRIPPER BLOWER (HRS): 16,214
 AIR STRIPPER PUMP (HRS): 1,016
 DPE AIR FLOW (SCF): 132,381,000
 MS PUMP WATER FLOW (GAL): 3,740,682
 SUMP PUMP WATER FLOW (GAL): 610

Water meter brace

STATIC WATER LEVELS

	Clean to Dirty Ranking	Well Depth below TOC (FT)	Depth to Water below TOC (FT)
MW-14	3	17.5	
MW-15	4	18	
MW-16	10	18	
MW-17	7	25	
MW-18	6	60	
MW-19	1	20	13.33
MW-20	8	16.7	11.15
DPE-1	15	21.9	
DPE-2	13	20.5	
DPE-3	14	17.1	
DPE-4	12	19.3	
DPE-5	9	18.1	
DPE-6	5	19.5	
DPE-7	2	22.2	
DPE-8	11	17.5	15.63
Sump	1	7.74	

FIELD MEASUREMENTS

DPE WELL CASING VACUUM (MM HG): 215
 PRE-MANIFOLD VACUUM (IN. HG): 15
 DPE WELL (PRE-MS-1) VACUUM (IN. HG): 15
 POST-MS-1 VACUUM (IN. HG): 17
 POST-MS-2 VACUUM (IN. HG): 17
 DPE PUMP AIR FLOW (SCFM): 160
 DPE EXHAUST PID CONC. (PPM): 15.5
 DPE PUMP OUTLET PRESSURE (IN. H2O): 0.0 MF
 DPE PUMP OUTLET TEMP (DEG. F): 190

MS PUMP WATER FLOWRATE (WHILE PUMPING) (GPM): MF
 MS PUMP WATER PRESSURE (WHILE PUMPING) (PSI): 10.5
 MS PUMP FLOW TOTALIZER READING (GAL): 467,017

AS EXHAUST PRESSURE (IN. H2O): 10" H2O
 AS DISCHARGE PUMP PRESSURE (WHILE PUMPING) (PSI): 16
 AS BLOWER PRESSURE (IN. H2O): 16.0
 AS EXHAUST PID (PPM): 0.0

ELEVATOR DRAIN TILE SUMP FLOW TOTALIZER (GAL): *plus*

OPERATING WATER LEVELS

DPE-1
DPE-2
DPE-3
DPE-4
DPE-5
DPE-6
DPE-7
DPE-8

SUMP RQOM PID:

BASEMENT PID READINGS:

COMMENTS/MAINTENANCE:

FIELD DATA SHEET 2 of 2 (REVISED 4/13/10)

CLIENT NAME: CITY OF ROCHESTER
 PROJECT ID: CRC
 PROJECT NAME: MN BIO BUSINESS CENTER

DATE: 7/28/16
 TIME: 6:00
 RECORDED BY: ADK & Zi-yao

	PID READINGS	DPE EXHAUST FLOW RATE	DPE PUMP INLET VACUUM	WELL CASING VACUUMS
DPE-1	15.5	160	17.58	215
DPE-2	Not Working			
DPE-3	18.4	165	17.31	200
DPE-4	19.2	195	14.93	185
DPE-5	8.1	165 225	12.42	165
DPE-6	7.1	220	12.68	150
DPE-7	5.9	220	12.01	175
DPE-8	5.3	230	11.37	150

DPE-2
kicked
in

* DPE-2 Kicked in when DPE-3 was on-line

FIELD DATA SHEET 1 of 2 (REVISED 4/13/10)

CLIENT NAME: CITY OF ROCHESTER
PROJECT ID: CRC
PROJECT NAME: MN BIO BUSINESS CENTER

DATE: 8/10/16
TIME: 10:15
RECORDED BY: ADK

2009 SYSTEM STARTUP INFORMATION

Startup Date: 6/29/2009 **MS Discharge Totalizer:** 68 **Sump Discharge Totalizer:** 200

NOTES - LEAVE VACUUM RELIEF VALVE SELECTOR SWITCH IN OFF POSITION
LEAVE AIR STRIPPER SELECTOR SWITCHES IN AUTO POSITION

CURRENT OPERATING WELL:

DPE WELL BLEED VALVE % OPEN:
DPE PUMP BLEED VALVE % OPEN:

ANALOG PANEL READINGS

DPE PUMP AIR FLOW (SCFM): 166.1
DPE WELL VACUUM (IN. HG): 16.45
DPE PUMP INLET VACUUM (IN. HG): 17.25
DPE PUMP OUTLET PRESSURE (PSI): 0.09
DPE PUMP OUTLET TEMP (DEG. F): 212.5
MS PUMP WATER FLOW (GPM): 48.00

DPE-7 10:45

TOTAL PANEL READINGS

DPE VACUUM PUMP (HRS): 33,091
MS PUMP (HRS): 2906
MS VACUUM VALVE (HRS): 698
AIR STRIPPER BLOWER (HRS): 16,516
AIR STRIPPER PUMP (HRS): 1044
DPE AIR FLOW (SCF): 135,990,000
MS PUMP WATER FLOW (GAL): 3,841,318
SUMP PUMP WATER FLOW (GAL): 610

STATIC WATER LEVELS

	Clean to Dirty Ranking	Well Depth below TOC (FT)	Depth to Water below TOC (FT)
MW-14	3	17.5	12.15
MW-15	4	18	13.97
MW-16	10	18	12.56
MW-17	7	25	12.05
MW-18	6	60	12.55
MW-19	1	20	13.03
MW-20	8	16.7	11.41
DPE-1	15	21.9	15.15
DPE-2	13	20.5	15.12
DPE-3	14	17.1	15.63
DPE-4	12	19.3	15.08
DPE-5	9	18.1	15.58
DPE-6	5	19.5	15.02
DPE-7	2	22.2	16.02
DPE-8	11	17.5	14.99
Sump	1	7.74	

FIELD MEASUREMENTS

DPE WELL CASING VACUUM (MM HG): 250 in H2O
PRE-MANIFOLD VACUUM (IN. HG): 15
DPE WELL (PRE-MS-1) VACUUM (IN. HG): 16
POST-MS-1 VACUUM (IN. HG): 16.5
POST-MS-2 VACUUM (IN. HG): 16.5
DPE PUMP AIR FLOW (SCFM): 170
DPE EXHAUST PID CONC. (PPM): 0.0
DPE PUMP OUTLET PRESSURE (IN. H2O): MF
DPE PUMP OUTLET TEMP (DEG. F): 200

OPERATING WATER LEVELS

DPE-1
DPE-2
DPE-3
DPE-4
DPE-5
DPE-6
DPE-7
DPE-8

MS PUMP WATER FLOWRATE (WHILE PUMPING) (GPM): MF
MS PUMP WATER PRESSURE (WHILE PUMPING) (PSI): 11.5
MS PUMP FLOW TOTALIZER READING (GAL): 495,431

SUMP ROOM PID:

BASEMENT PID READINGS:

COMMENTS/MAINTENANCE:

AS EXHAUST PRESSURE (IN. H2O): 7.0
AS DISCHARGE PUMP PRESSURE (WHILE PUMPING) (PSI): 15.5
AS BLOWER PRESSURE (IN. H2O): 16.0
AS EXHAUST PID (PPM): 0.0

ELEVATOR DRAIN TILE SUMP FLOW TOTALIZER (GAL):

FIELD DATA SHEET 2 of 2 (REVISED 4/13/10)

CLIENT NAME: CITY OF ROCHESTER
 PROJECT ID: CRC
 PROJECT NAME: MN BIO BUSINESS CENTER

DATE: 8/10/16
 TIME: 11:00
 RECORDED BY: ADK + SEG +

2: 1/20

	PID READINGS	DPE EXHAUST FLOW RATE	DPE PUMP INLET VACUUM	WELL CASING VACUUMS
DPE-1	3.8	115	20.57	250
DPE-2	2.3	115	20.43	250
DPE-3	28.8	110	20.65	250
DPE-4	13.5	95	21.25	250
DPE-5	8.5	160	18.20	250
DPE-6	6.1	160	17.39	225
DPE-7	0.0	170	17.25	250
DPE-8	4.8	180	17.28	225

MAINTENANCE CHECKLIST (Revised 4/13/10)

MN Bio Business Center
 221 1st Avenue SW
 Rochester, MN

Date: 8/10/16
 Field Representative: ADU + SEG

OBSERVATIONS AND/OR DESCRIPTION OF MAINTENANCE PERFORMED

✓
✓
✓

DPE Pump Maintenance
 - Inspect Hoses, Piping and Fittings for Oil Leaks - MONTHLY
 - Check Oil Level (level should show at middle of site glass) - MONTHLY
 - Change Oil - MONTHLY

✓
✓
N/A

Moisture Separator Maintenance
 - Clean Floats - MONTHLY
 - Check Sediment - MONTHLY
 - Remove Sediment - MONTHLY
 - Replace MS#1 Filter (5 micron) - If Pressure Drop Occurs
 - Replace MS#2 Filter (1 micron) - If Pressure Drop Occurs
 - Transfer Pump (Moyno 34401 1 HP) - Inspect Hoses, Piping and Fittings for Water Leaks - MONTHLY
 - Replace Transfer Pump Stator - SEMI-ANNUALLY
 - Clean Discharge Flow Meter - SEMI-ANNUALLY

N/A
N/A

Air Stripper Maintenance
 - Clean Air Stripper - ANNUALLY OR AS NEEDED
 - Clean Floats - Quarterly
 - Discharge Pump (Meyers CT10 1 HP) - Inspect Hoses, Piping and Fittings for Water Leaks - MONTHLY
 - Blower (16N4 TBNA 3 HP) - Inspect Hoses, Piping and Fittings for Leaks - MONTHLY

✓

Solonoid Valve Maintenance
 - Inspect - MONTHLY
 - Clean - AS NEEDED
 - Rebuild - AS NEEDED

Replaced & cleaned solenoid valves for DPE-2, 5, 7, & 8

Soil Vapor and Venting System Field Monitoring Results

MN Bio Business Center
 221 1st Avenue SW
 Rochester, Minnesota

	Date	Summa Can # and Flow #	Start/Stop Time	Start/Stop Vacuum	Static Pressure (+/-) Inch in WC	PID (ppm)	Methane (CH4)	Lower Explosive Limit	Oxygen	Hydrogen Sulfide	Carbon Monoxide
LSG-7	8/16/16	378/55	1452/1457	-27/-6	NA	0.0					
LSG-8		370/10	1503/1510	-28/-6	NA	0.0					
LSG-9		391	1418/1425	-30/-6	NA	0.0					
LSG-10		303	1425/1441	-27/-6	NA	0.0					
SP-1						0.0					
SP-2						0.0					
PV-1						0.0					
PV-2						0.0					
PV-3						0.0					

Notes:
 NR: Not recorded.
 NA: Not analyzed

m m *h h*

Field Information Data Sheet



Client Name: City of Rochester
 Project Name: CRC Project Number: _____
 Location: Multiple Location Date: August 10, 2016
 Station: _____ Sample time: _____

Multiple Sampling Log:	Time/Volume	Temp °C	Cond @25	pH	Eh	D.O.
Location:	19.09 10/10/16	11:40	2471	6.95	+136.2	7.65
DPE-1:	19.48 10/10/16	1150	3106	7.24	+127.3	6.14
DPE-2:	19.25	1155	7253	7.32	+119.3	8.41
DPE-3:	19.87	1210	4180	7.54	+110.1	6.22
DPE-4:	19.13	1225	3380 3380	7.53	+138.1	8.13
DPE-5:	19.77	1235	1720	7.42	+118.3	5.47
DPE-6:	20.11	1240	2283	7.22	+113.7	6.58
DPE-7:	19.29	1250	6876	7.41	+96.8	8.55
DPE-8:						
Rate, gpm:						
Volume purged:						
Duplicate collected?						
Sampled by:						
Others present:				Well Condition		
Analysis:	VOC	filtered metal	ml filter	in-line filter	others:	

MW:gw monitoring well WS:water supply well SW:surface water SE:sediment other:

¹ Measurements are referenced from top of riser pipe, unless otherwise indicated.

Field Information Data Sheet

**Landmark
Environmental, LLC**

Client Name: City of Rochester
 Project Name: CRC Project Number: _____
 Location: MW-14 Date: August 10, 2016
 Station: _____ Sample time: 12:20

Casing diameter:	2"	Time/ Volume	Temp °C	Cond @ 25	pH	Eh	D.O.	Turb. NTU
Total well depth:	17.5							
Static water level:			19.2	1847	7.40	+103.1	5.51	
Water depth ¹ :								
Well volume (gal):								
Purge method:								
Sample Method:								
Start time:								
Stop time:								
Duration (min.):		Odor:						
Rate, gpm:		Purge appearance:		dirty/brown				
Volume purged:		Sample appearance:		cloudy				
Duplicate collected?		Comments:						
Sampled by:								
Others present:		Well Condition						
Analysis:	VOC	filtered metal	ml filter	in-line filter	others:			
MW:gw monitoring well WS:water supply well SW:surface water SE:sediment other:								

¹ Measurements are referenced from top of riser pipe, unless otherwise indicated.

Field Information Data Sheet

**Landmark
Environmental, LLC**

Client Name: City of Rochester

Project Name: CRC Project Number: _____

Location: MW-15 Date: August 10, 2016

Station: _____ Sample time: 1240

Casing diameter:	2"	Time/ Volume	Temp °C	Cond @ 25	pH	Eh	D.O.	Turb. NTU
Total well depth:	18							
Static water level:			20.7	2404	7.51	100.5	6.02	
Water depth ¹ :								
Well volume (gal):								
Purge method:								
Sample Method:								
Start time:								
Stop time:								
Duration (min.):		Odor:						
Rate, gpm:		Purge appearance:						
Volume purged:		Sample appearance:						
Duplicate collected?		Comments:						
Sampled by:								
Others present:		Well Condition						
Analysis:	VOC	filtered metal	ml filter	in-line filter	others:			
MW:gw monitoring well WS:water supply well SW:surface water SE:sediment other:								

¹ Measurements are referenced from top of riser pipe, unless otherwise indicated.

Field Information Data Sheet



Client Name: City of Rochester
 Project Name: CRC Project Number: _____
 Location: MW-16 Date: August 10, 2016
 Station: _____ Sample time: 1230

Casing diameter:	2"	Time/ Volume	Temp °C	Cond @ 25	pH	Eh	D.O.	Turb. NTU
Total well depth:	18							
Static water level:			19.5	2907	7.47	+75.3	5.77	
Water depth ¹ :								
Well volume (gal):								
Purge method:								
Sample Method:								
Start time:								
Stop time:								
Duration (min.):		Odor:						
Rate, gpm:		Purge appearance:						
Volume purged:		Sample appearance:						
Duplicate collected?		Comments:						
Sampled by:								
Others present:		Well Condition						
Analysis:	VOC filtered metal ml filter in-line filter others:							
MW:gw monitoring well WS:water supply well SW:surface water SE:sediment other:								

¹ Measurements are referenced from top of riser pipe, unless otherwise indicated.

Field Information Data Sheet

**Landmark
Environmental, LLC**

Client Name: City of Rochester
 Project Name: CRC Project Number: _____
 Location: MW-17 Date: August 10, 2016
 Station: 25 Sample time: 1330

Casing diameter:	2"	Time/ Volume	Temp °C	Cond @ 25	pH	Eh	D.O.	Turb. NTU
Total well depth:	25							
Static water level:			19.1	2521	7.70	13.4	1.93	
Water depth ¹ :								
Well volume (gal):								
Purge method:								
Sample Method:								
Start time:								
Stop time:								
Duration (min.):		Odor:						
Rate, gpm:		Purge appearance:		cloudy				
Volume purged:	3 gallons by hand	Sample appearance:		cloudy				
Duplicate collected?		Comments:						
Sampled by:								
Others present:		Well Condition						
Analysis:	VOC	filtered metal	ml filter	in-line filter	others:			

MW:gw monitoring well WS:water supply well SW:surface water SE:sediment other:

¹ Measurements are referenced from top of riser pipe, unless otherwise indicated.

Field Information Data Sheet



Client Name: City of Rochester

Project Name: CRC Project Number: _____

Location: MW-18 Date: August 10, 2016

Station: _____ Sample time: _____

Casing diameter:	2"	Time/ Volume	Temp °C	Cond @ 25	pH	Eh	D.O.	Turb. NTU
Total well depth:	60							
Static water level:			19.8	2501	8.22	-120.4	1.50	
Water depth ¹ :								
Well volume (gal):								
Purge method:								
Sample Method:								
Start time:								
Stop time:								
Duration (min.):		Odor:						
Rate, gpm:		Purge appearance:		Cloudy				
Volume purged:	8 gallons by hand	Sample appearance:		Cloudy				
Duplicate collected?		Comments:						
Sampled by:								
Others present:		Well Condition						
Analysis:	VOC	filtered metal	ml filter	in-line filter	others:			
MW:gw monitoring well WS:water supply well SW:surface water SE:sediment other:								

¹ Measurements are referenced from top of riser pipe, unless otherwise indicated.

Field Information Data Sheet

**Landmark
Environmental, LLC**

Client Name: City of Rochester
 Project Name: CRC Project Number: _____
 Location: MW-19 Date: August 10, 2016
 Station: _____ Sample time: 12:10

Casing diameter:	2"	Time/ Volume	Temp °C	Cond @ 25	pH	Eh	D.O.	Turb. NTU
Total well depth:	20							
Static water level:			17.40	655Z	6.76	+131.1	3.75	
Water depth ¹ :								
Well volume (gal):								
Purge method:								
Sample Method:								
Start time:								
Stop time:								
Duration (min.):		Odor:						
Rate, gpm:		Purge appearance:						
Volume purged:		Sample appearance:						
Duplicate collected?		Comments:						
Sampled by:								
Others present:				Well Condition				
Analysis:	VOC	filtered metal	ml filter	in-line filter	others:			
MW:gw monitoring well WS:water supply well SW:surface water SE:sediment other:								

Field Information Data Sheet

**Landmark
Environmental, LLC**

Client Name: City of Rochester
 Project Name: CRC Project Number: _____
 Location: MW-20 Date: August 10, 2016
 Station: _____ Sample time: 11:50

Casing diameter:	2"	Time/ Volume	Temp °C	Cond @ 25	pH	Eh	D.O.	Turb. NTU
Total well depth:	16.7							
Static water level:			19.2	8300	6.94	+112	4.63	
Water depth ¹ :								
Well volume (gal):								
Purge method:								
Sample Method:								
Start time:								
Stop time:								
Duration (min.):		Odor:						
Rate, gpm:		Purge appearance:	cloudy					
Volume purged:		Sample appearance:	cloudy					
Duplicate collected?		Comments:						
Sampled by:								
Others present:		Well Condition						
Analysis:	VOC	filtered metal	ml filter	in-line filter	others:			
MW:gw monitoring well WS:water supply well SW:surface water SE:sediment other:								

¹ Measurements are referenced from top of riser pipe, unless otherwise indicated.

LEGEND TECHNICAL SERVICES, INC
 88 Empire Drive, St. Paul, MN 55103 - Telephone: 651-642-1150, Fax: 651-642-1239
CHAIN-OF-CUSTODY RECORD

Client Name: <u>Ludbeck</u>		Bill To: <u>→</u>		LEGEND Project#: _____		TO-15 (M) w/ TICs Air Analysis					
Address: _____		Address: _____		Turn Around Time: _____		Project Comments: _____					
Attn: <u>akurk@ludbeckenv.com</u>		PO # <u>City of Rochester</u>		<input checked="" type="checkbox"/> Normal <input type="checkbox"/> RUSH							
Phone: _____		E-mail: <u>akurk@ludbeckenv.com</u>		Requested Due Date: _____							
		Client Project Number: _____		Client Project Name: <u>CVC</u>							
Item No.	Field ID / Sampler ID	Canister Serial #	Flow Controller Serial #	Pressure (" Hg)		Date Collected	Time Collected		Total Time	PID Reading	Sample Comments
				Start	Stop		Start	Stop			
1	L56-9	391	4	-30	-6	8/16/16	1425	7:00	7:00	0.0	
2	L56-10	385	5	-27	-6		1435	6:00	6:00	0.0	
3	L67-7	378	55	-27	-6		1452	5:00	5:00	0.0	
4	L67-8	370	10	-28	-6		1503	6:00	6:00	0.0	
5	DPE-Exhaust	00393	109	-29	-7	8/16/16	10:15	4:50	6 hrs 5 mins	6.0	
6											
7											
8											
9											
10											
Sample Collector (please print): <u>Alex Kurk</u>		Relinquished By: <u>[Signature]</u>		Date: <u>8/11/16</u>		Time: _____		Accepted by: _____		Date: _____	
Comments: _____		Relinquished By: _____		Date: _____		Time: _____		Received by Lab: _____		Date: _____	

PLEASE REVIEW TERMS AND CONDITIONS ON BACK BEFORE SIGNING

Section A Required Client Information: Company: <u>Louisville Environmental</u> Address: <u>7047 W 98th Street</u> <u>Blair, IN 46104</u> Email To: <u>l.k@luc.com</u> Phone: _____ Requested Due Date/TAT: _____	Section B Required Project Information: Report To: <u>luc@luc.com</u> Copy To: <u>j.k@luc.com</u> Purchase Order No.: _____ Project Name: <u>CR</u> Project Number: _____	Section C Invoice Information: Attention: <u>Sharon Paradise</u> Company Name: _____ Address: _____ Pace Quote Reference: _____ Pace Project Manager: _____ Pace Profile #: <u>35807</u>
Page: _____ of _____ Invoice Number: 2024996	REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER	

ITEM #	Section D Required Client Information Matrix Codes MATRIX / CODE Drinking Water DW Waste Water WT Water WW Product P Soil/Solid SL Oil OL Wipe WP Air AR Tissue TS Other OT	SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE Other	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION		# OF CONTAINERS	Preservatives							Y/N	Requested Analysis Filtered (Y/N)	Pace Project No./ Lab I.D.														
					COMPOSITE START	COMPOSITE END/GRAB	DATE	TIME		DATE	TIME	Unpreserved	H2SO4	HNO3	HCl	NaOH				Na2S2O8	Methanol	Other											
1		AS-INFLUENT	WT-G	G	10:30																												
2		AS-EFFLUENT	WT-G	G	10:35																												
3		DPE-1			1140																												
4		DPE-2			1150																												
5		DPE-3			1155																												
6		DPE-4			1210																												
7		DPE-5			1225																												
8		DPE-6			1235																												
9		DPE-7			1240																												
10		DPE-8			1255																												
11																																	
12																																	

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	TEMP IN °C	Received on Ice (Y/N)	Sealed Cooler (Y/N)	Samples Intact (Y/N)

DATE Signed (MM/DD/YY): 08/10/16

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: Aaron Furk
 SIGNATURE of SAMPLER: *Aaron Furk*

3

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.



Section A Required Client Information:
 Company: Lowell Environmental
 Address: 2012 W 98th Street, Bloomington, MN
 Email To: aklwick@lowellenv.com
 Phone: _____
 Requested Due Date/TAT: _____

Section B Required Project Information:
 Report To: aklwick@lowellenv.com
 Copy To: jskowand@lowellenv.com
 Purchase Order No.: _____
 Project Name: CCL
 Project Number: _____

Section C Invoice Information:
 Attention: Shaver Paradise
 Company Name: _____
 Address: _____
 Pace Quote Reference: _____
 Pace Project Manager: _____
 Pace Profile #: 35807

Regulatory Agency:
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER _____

Site Location:
 STATE: _____

ITEM #	Section D Required Client Information SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE	Matrix Codes MATRIX / CODE		COLLECTED		SAMPLE TYPE (G=GRAB C=COMP) (see valid codes to left)	MATRIX CODE (see valid codes to left)	SAMPLE TEMP AT COLLECTION		# OF CONTAINERS	Preservatives							Y/N ↑	Requested Analysis Filtered (Y/N)															Temp in °C	Received on	Ice (Y/N)	Sealed Cooler Custody (Y/N)	Samples Intact (Y/N)											
		Drinking Water	Water Product	Oil	Wipe			Air	Other		DW	WT	WW	P	SL	OL	WP		AR	TS	OT	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other	Analysis Test ↑	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.																	
1	MN14					WT				3																																							
2	MN15									3																																							
3	MN16									3																																							
4	MN17									3																																							
5	MN18									3																																							
6	MN19									3																																							
7	MN20									3																																							
8																																																	
9																																																	
10																																																	
11																																																	
12																																																	

ADDITIONAL COMMENTS

RELINQUISHED BY / AFFILIATION _____ DATE _____ TIME _____

ACCEPTED BY / AFFILIATION _____ DATE _____ TIME _____

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: Aaron Beck
 SIGNATURE of SAMPLER:

DATE SIGNED (MM/DD/YY): 06/20/16

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days. F-ALL-Q-020rev.07, 15-May-2007

Attachment C

Attachment C - Table 1

DPE System Operational Data
 MN Bio Business Center
 221 1st Avenue SW
 Rochester, Minnesota

Date	Time	Extraction Well	DPE Pump Hours	Hours per Period	Days per Period	Flow Rate				DPE Air Flow (scf)	Pump Inlet Vacuum (in. Hg)	Post-MS-2 Vacuum (in. Hg)	Post-MS-1 Vacuum (in. Hg)	DPE Well/Pre-MS-1 Vacuum (in. Hg)		Pre-Manifold Vacuum (in. Hg)	DPE Well Casing Vacuum (in. H ₂ O)	DPE Pump Outlet Pressure		DPE Pump Outlet Temp. (Deg. F)		DPE Exhaust PID (ppm)	Extraction Well Bleed Valve % Open	DPE Pump Bleed Valve % Open	Comments	
						Field (scfm)	Analog (scfm)	Analog (m ³ /s)	Analog (acfm)					Analog	Field			Analog (psf)	Field (in H ₂ O)	Analog	Field					
6/29/2009	1640	DPE-1	88.0	88.0	NA	25	20.9	0.010	134.3	6,000	25.29	NA	NR	24.95	24.5	24.0	NR	0	0	229	200	NR	0	0		
9/4/2009	805	DPE-1	957.0	869.0	36.2	25	24.3	0.011	109.5	1,208,000	23.32	NA	9.4	9.66	9.8	9.1	86	0.02	0	307	310	34	100	0	DPE Pump Screen plugged	
9/4/2009	946	DPE-1	957.0	0.0	0.0	40	36.1	0.017	120.5	1,209,000	21.01	NA	21.0	20.43	21.0	20.0	149	0	0	210	248	>4000	100	0	DPE & AS exhaust sampled	
9/4/2009	1135	DPE-1	959.0	2.0	0.1	25	27.3	0.013	117.2	1,212,000	22.99	NA	22.5	22.70	22.5	22.5	>150	0	0	275	270	>4000	30	0	1 micron MS filter installed	
10/15/2009	1120	DPE-1	1899.0	940.0	39.2	35	31.6	0.015	135.9	2,658,000	23.00	NA	22.5	22.22	22.5	22.5	>150	0	0	283	270	ND	20	0	Exhaust sampled	
10/16/2009	621	DPE-1	1911.0	12.0	0.5	35	32.4	0.015	142.2	2,684,000	23.14	NA	22.5	22.35	22.5	22.0	>150	NR	0	291	299	ND	100	0	6-hr composite air sample collected	
10/23/2009	922	DPE-3	1924.0	13.0	0.5	70	70.6	0.033	143.0	2,715,000	15.23	NA	14.1	14.58	14.0	13.8	90	0	NR	199	190	ND	100	0		
11/17/2009	1800	DPE-1	2361.0	437.0	18.2	30	28.6	0.013	144.2	3,992,000	24.02	NA	23.5	23.01	23.5	23.0	>150	0.00	0	301	300	>4000	100	0	6-hr composite air sample collected	
12/17/2009	907	DPE-5	2960.0	599.0	25.0	NR	62.1	0.029	177.8	6,218,000	19.53	NA	19.0	18.70	18.9	18.9	155	0.00	0	247	248	850	NR	0	6-hr composite air sample collected	
12/28/2009	1300	DPE-2	3228.0	268.0	11.2	60	60.7	0.029	187.9	7,333,000	20.31	NA	17.2	17.21	17.20	17.2	122	0.00	0	266	268	720	NR	0		
1/14/2010	923	DPE-5	3568.0	340.0	14.2	100	97.8	0.046	201.1	8,769,000	15.45	NA	14.9	14.46	NR	14.9	98	0.00	0	182	156	NR	NR	0	6-hr composite air sample collected	
1/27/2010	NR	DPE-7	3789.0	221.0	9.2	75	88.6	0.042	215.3	9,633,000	17.68	NA	18.0	16.87	16.00	16.0	68	0.00	0	156	165	NR	NR	0		
2/22/2010	800	DPE-8	4161.0	372.0	15.5	105	101.5	0.048	224.8	11,221,000	16.49	NA	15.5	15.33	14.50	14.5	91	0.00	0	215	219	ND	NR	0	6-hr composite air sample collected	
3/9/2010	NR	DPE-8	4472.0	311.0	13.0	105	103.6	0.049	226.1	12,597,000	16.29	NA	15.8	15.64	15.10	14.8	NR	0.00	NR	160	161	NR	NR	0	Pump inlet screen removed; DPE oil changed	
3/25/2010 ¹	742	DPE-2	4868.0	396.0	16.5	110	110.1	0.052	243.2	14,285,000	16.45	NA	16.1	15.66	15.10	14.9	165	0.02	0	251	248	105	100	0	6-hr composite air sample collected	
4/16/2010	731	DPE-3	5308.0	440.0	18.3	72	72.7	0.034	218.0	16,587,000	20.00	18.5	18.5	19.21	18.00	18.0	130	0.03	0	255	251	17.5	100	0	6-hr composite air sample collected	
5/12/2010	1330	DPE-5	5908.0	600.0	25.0	135	132.4	0.062	293.5	19,502,000	16.50	16.1	15.8	15.61	14.90	15.0	75	0.07	0	222	224	0.8	100	0	6-hr composite air sample collected	
6/17/2010	1047	DPE-2	6768.0	860.0	35.8	35	36.9	0.017	146.6	22,356,000	22.43	22.5	22	21.38	21.00	21.0	210	0.08	0	287	276	8.5	100	0	6-hr composite air sample collected	
7/26/2010	1100	DPE-8	7671.0	903.0	37.6	105	99.8	0.047	225.3	25,890,000	16.74	16.5	16.5	15.91	15.00	14.5	80	0.10	0	226	220	3.8	100	0	3-hr composite air sample collected due to flow controller malfunction	
9/27/2010	1530	DPE-5	8222.0	551.0	23.0	135	122.7	0.058	257.6	28,334,000	15.75	15.0	15.0	14.93	14.00	14.0	90	0.02	0	211	210	>4000	100	0	30-minute composite air sample collected due to flow controller malfunction	
10/18/2010	950	DPE-5	8662.0	440.0	18.3	130	128.3	0.061	275.4	30,379,000	16.06	15.1	15.1	15.31	15.00	15.0	100	0.00	0	200	198	ND	100	0	6-hr composite air sample collected	
12/22/2010	1200	DPE-1	9378.0	716.0	29.8	50	51.5	0.024	219.8	37,039,000	22.95	NR	23.0	22.02	22.00	22.0	60	0.02	0	229	209	10.1	100	0	6-hr composite air sample collected	
1/6/2011	800	DPE-1	9717.0	339.0	14.1	75	75.5	0.036	264.3	41,669,000	21.42	24.5	20.5	20.49	20.50	19.0	54	0.00	0	164	151	17.8	100	0		
1/20/2011	800	DPE-8	10034.0	317.0	13.2	120	119	0.056	252.2	44,097,000	15.88	15.0	15.0	15.12	NR	14.5	14	0.00	0	202	186	3.1	100	0	6-hr composite air sample collected	
2/27/2011	1100	DPE-8	10969.0	935.0	39.0	100	103.6	0.049	257.7	48,884,000	17.96	18.0	16.5	17.07	16.50	16.5	84	0.00	0	224	218	0.8	100	0	6-hr composite air sample collected	
3/7/2011	800	DPE-5	11014.0	45.0	1.9	115	117.8	0.056	271.7	49,157,000	17.02	NR	16.0	16.15	15.50	15.5	115	0.00	0	110	112	22.7	100	0		
3/18/2011	1330	DPE-1	11274.0	260.0	10.8	55	55	0.026	187.0	50,861,000	21.17	22.0	21.5	21.17	19.50	19.5	55	0.00	0	235	213	3.0	100	0		
3/23/2011	900	DPE-7	11277.0	3.0	0.1	75	72.7	0.034	188.6	50,872,000	18.45	18.5	17.0	17.44	16.00	16.5	30	0.00	0	209	185	8.6	100	0	6-hr composite air sample collected	
4/22/2011	910	DPE-7	11995.0	718.0	29.9	75	72.7	0.034	191.4	53,741,000	18.62	18.5	17.5	17.70	17.00	17.0	29	0.02	0	240	250	5.4	100	0	6-hr composite air sample collected	
5/3/2011	2100	DPE-5	12268.0	273.0	11.4	65	72.4	0.034	229.4	54,865,000	20.53	20.5	19.0	19.28	18.50	18.0	NR	0.00	0	165	168	NR	NR	NR		
5/5/2011	NR	DPE-4	12313.0	45.0	1.9	65	62.1	0.029	196.7	55,073,000	20.53	20.5	19.0	19.23	18.50	18.0	NR	0.00	0	155	149	NR	NR	NR		
5/19/2011	600	DPE-2	12645.0	332.0	13.8	40	40.9	0.019	165.5	56,604,000	22.57	22.5	22.0	21.34	19.30	19.0	125	0.00	0	234	239	7.1	100	0	6-hr composite air sample collected	
6/16/2011	1200	DPE-1	13314.0	669.0	27.9	45	44	0.021	172.5	59,908,000	22.33	22.5	22.0	21.37	21.00	19.0	55	0.02	0	256	240	0.5	100	0	6-hr composite air sample collected	
7/25/2011	900	DPE-1	14169.0	855.0	35.6	40	39	0.018	157.0	63,072,000	22.53	23.0	21.5	21.50	20.50	19.6	60	0.04	0	235	225	55.1	100	0	6-hr composite air sample collected	
8/28/2011	1100	DPE-7	14962.0	793.0	33.0	70	68.4	0.032	200.7	66,305,000	19.78	19.5	17.0	18.71	18.00	18.1	49	0.00	0	244	225	0.0	100	0	6-hr composite air sample collected	
9/29/2011	1140	DPE-4	15722.0	760.0	31.7	65	66	0.031	205.4	69,249,000	20.36	20.0	17.0	19.58	18.00	16.5	130	0.04	MF	245	225	2.8	100	0	6-hr composite air sample collected	
10/18/2011	NR	DPE-4	15799.0	77.0	3.2	NR	66.7	0.031	210.4	69,540,000	20.49	NR	NR	19.83	NR	NR	NR	0.02	NR	221	NR	NR	NR	NR	0	
10/27/2011	800	DPE-2	16013.0	214.0	8.9	40	38.1	0.018	157.0	70,230,000	22.70	22.5	22.0	22.40	20.00	19.0	95	0.03	0	250	226	177.0	100	0	6-hr composite air sample collected	
11/21/2011	1100	DPE-2	16619.0	606.0	25.3	40	39.2	0.018	161.5	72,526,000	22.70	22.5	21.5	22.50	19.00	18.9	151	0.03	0	256	238	365.0	100	0	6-hr composite air sample collected	
1/20/2012	800	DPE-1	16879.0	260.0	10.8	50	44.7	0.021	101.9	73,361,000	16.87	16.5	15.0	16.83	14.50	14.5	50	0.00	0	201	196	5.7	100	0		
1/27/2012	900	DPE-2	17042.0	163.0	6.8	30	29.3	0.014	92.7	73,847,000	20.52	20.5	18.5	20.18	18.00	17.5	149	0.03	NR	245	224	6.4	100	0	6-hr composite air sample collected	
2/16/2012	900	DPE-2	17520.0	478.0	19.9	30	27.5	0.013	104.4	75,246,000	22.08	22.0	21.0	21.64	18.00	18.5	151	0.02	0	262	235	6.0	100	0	6-hr composite air sample collected	
3/16/2012	1100	DPE-4	18219.0	699.0	29.1	70	71.2	0.034	137.4	77,432,000	14.50	14.0	12.5	14.40	12.50	12.0	80	0.03	0	199	185	NA	100	0	6-hr composite air sample collected	
3/27/2012	700	DPE-1	18443.0	224.0	9.3	30	29.2	0.014	101.0	78,086,000	21.32	21.0	19.5	20.73	19.00	18.5	48	0.00	0	146	148	10.3	100			

Attachment C - Table 2

Moisture Separator and Sump Operational Data
 MN Bio Business Center
 221 1st Avenue SW
 Rochester, Minnesota

Date	Time	MS Vacuum Valve hours	MS pump Hours	MS Pump Flow Totalizer (gal)		MS Pump Flow Rate (gpm)		MS Pump Pressure (psi)	Elevator Sump Water Flow (gal)		Comments
				Analog	Field	Analog	Field		Analog	Field	
6/29/2009	1640	49	48	8,464	8,473	NR	10.2	NR	300	NR	
9/4/2009	805	49	96	38,299	38,213	NP	12.0	21.0	300	500	
10/15/2009	1120	49	131	62,643	64,283	NP	11.8	44.0	300	500	
10/16/2009	621	49	131	62,886	NR	NP	NR	NR	300	500	
10/23/2009	922	49	132	63,113	NR	NR	NR	NR	300	500	
11/17/2009	1800	49	148	73,800	75,787	11.09	11.2	28.0	300	NR	
12/17/2009	907	49	175	89,800	92,293	NR	10.3	30.8	330	NR	
12/28/2009	1300	49	187	97,028	99,694	NR	11.0	NR	330	NR	
1/14/2010	923	49	202	106,024	108,984	NR	10.7	36.0	330	NR	
1/27/2010	NR	49	210	111,633	114,661	12.85	12.2	16.0	330	NR	
2/22/2010	8:00	49	232	122,167	128,552	12.90	12.9	14.0	330	500	
3/9/2010	NR	50	255	131,361	137,839	12.91	12.9	14.0	330	NR	
3/25/2010	742	50	270	141,405	148,206	NR	12.9	15.0	330	500	
4/16/2010	731	50	287	154,622	161,857	12.85	12.9	14.0	330	500	
5/12/2010	1330	50	308	170,079	177,797	12.83	12.9	14.0	330	500	
6/17/2010	1047	50	337	191,958	200,398	13.90	12.9	14.0	330	500	
7/26/2010	1100	50	371	217,314	226,504	12.94	13.1	15.0	330	500	
9/27/2010	1030	50	389	228,896	240,247	13.19	13.2	14.0	350	514	
10/18/2010	950	50	408	243,396	255,417	12.70	12.9	14.0	350	514	
12/22/2010	1200	50	445	270,572	283,957	12.85	12.9	14.0	450	514	
1/6/2011	NR	50	484	292,343	306,476	12.68	12.7	14.0	450	NR	
1/20/2011	800	50	504	314,178	328,912	12.84	12.8	14.0	460	514	
2/27/2011	1100	50	547	342,283	357,774	12.77	12.8	14.0	470	514	
3/7/2011	800	170	549	343,924	359,443	12.79	12.7	14.0	470	514	
3/18/2011	1330	170	562	350,182	369,445	13.30	12.5	17.0	470	514	
3/23/2011	900	171	562	350,324	369,603	12.60	12.6	20.0	470	514	
4/22/2011 ¹	910	171	608	461,499	373,802	MF	MF	18.0	470	514	
5/3/2011	2100	171	625	462,745	MF	12.80	12.8	16.0	480	NR	
5/5/2011	NR	171	628	464,860	2,307	12.66	12.3	16.0	480	NR	
5/19/2011	600	171	650	480,836	18,817	12.50	12.6	16.0	480	514	
6/16/2011	1200	171	691	487,852	27,076	MF	MF	16.0	480	514	
7/25/2011	900	171	745	606,917	MF	14.21	14.4	25.0	490	541	
8/28/2011	1100	197	875	645,249	63,442	12.80	12.9	14.0	490	NA	
9/29/2011	1140	198	921	673,352	94,268	12.07	12.5	15.0	490	515	
10/18/2011	NR	199	978	681,235	NR	NR	NR	NR	560	NR	
10/27/2011 ²	800	199	992	694,330	115,245	11.60	12.0	15.0	560	541	
11/21/2011	1100	199	1040	716,049	143,520	12.08	12.2	16.5	NR	541	
1/20/2012	800	199	1057	725,742	153,493	12.60	12.7	18.0	610	541	
1/27/2012	900	199	1065	731,337	159,280	12.20	12.2	17.0	610	541	
2/16/2012	900	199	1090	746,725	175,164	10.10	10.0	16.0	610	541	
3/16/2012	1100	199	1127	757,124	184,976	12.40	12.5	20.0	610	541	
3/27/2012	700	200	1142	764,672	192,639	11.91	12.0	18.0	610	NR	
4/17/2012	1025	206	1201	783,561	210,594	12.20	12.2	21.0	610	541	
5/17/2012	1000	211	1255	809,091	236,394	11.96	12.0	21.0	610	541	
5/31/2012	1059	215	1290	819,567	NR	11.20	11.2	20.0	610	NR	
6/14/2012	1017	220	1335	830,565	256,390	10.90	11.0	26.0	610	541	
7/19/2012	1111	220	1364	835,414	260,681	9.80	9.8	35.0	610	541	
8/23/2012	730	302	1399	849,507	275,367	13.20	13.2	12.0	610	541	
9/26/2012	2012	302	1414	860,318	286,603	14.00	14.0	8.0	610	541	
10/26/2012	600	309	1536	951,486	300,594	11.80	12.0	16.0	610	541	
12/21/2012	830	385	1662	MF ³	302,693	MF	MF	12.0	610	541	meter failure; DPE system shut down from Oct. 26 thru Dec. 21
1/4/2013	940	497	1735	1,523,769	309,790	48.00	MF	NR	610	541	
1/30/2013	600	640	1827	1,789,194	314,080	48.00	NA	12.0	610	541	
2/13/2013	800	684	1864	1,894,598	NR	12.00	NR	NR	NR	NR	
2/26/2013	600	684	1883	1,905,916	327,383	10.82	11.0	16.0	610	541	
3/21/2013	800	684	1916	1,925,225	347,509	11.30	10.8	18.0	610	541	
5/23/2013	1600	684	1950	1,941,137	363,736	12.60	12.3	15.0	610	541	
6/26/2013	1040	684	2035	1,954,470	374,605	1.80	9.0	14.0	610	541	
8/26/2013	1730	693	2201	1,981,481	NR	0.00	12.8	NR	610	541	
10/13/2015	1400	693	2205	1,982,572	NR	0.81	NR	NR	610	541	
12/15/2015	1300	693	2205	1,982,639	NR	11.64	NR	NR	610	541	
1/12/2016	1430	693	2260	1,993,342	407,700	4.73	4.4	MF	610	541	
2/23/2016	1250	693	2347	2,232,374	408,210	48.00	NR	MF	610	NR	Both analog and field flow totalizer reading indicate the flow meter is failing
3/30/2016	1440	693	2436	2,489,395	408,366	48.00	MF	MF	610	NR	Both analog and field flow totalizer reading indicate the flow meter is failing
4/20/2016	915	693	2515	2,716,043	408,480	48.00	MF	8.0	610	NR	Both analog and field flow totalizer reading indicate the flow meter is failing
5/18/2016	1415	693	2637	3,068,238	408,749	48.00	MF	8.0	610	541	Both analog and field flow totalizer reading indicate the flow meter is failing
7/28/2016	1800	698	2871	3,740,682	467,017	48.00	MF	10.5	610	NR	Both analog and field flow totalizer reading indicate the flow meter is failing
8/10/2016	1045	698	2906	3,841,318	495,431	48.00	MF	11.5	610	NR	Both analog and field flow totalizer reading indicate the flow meter is failing

Notes:

NR: Not recorded.

NP: Not pumping

MF: Meter Failure

1. Discharge flowmeter malfunction caused invalid field totalizer reading; therefore, analog flow totalizer was used.

2. Analog flow totalizer reading estimated from field readings from Oct. 27 and Sept 29, 2011.

3. Flow meter and totalizer not working. The DPE system was off from Oct. 26 through Dec. 21, 2012; therefore, the volume discharged during this period was 0 gallons.

Attachment C - Table 3

**Air Stripper Operational Data
MN Bio Business Center
221 1st Avenue SW
Rochester, Minnesota**

Date	Time	AS Blower Hours	AS Discharge Pump Hours	AS Blower Pressure (in. H ₂ O)	AS Exhaust Pressure (in. H ₂ O)	AS Discharge Pump Pressure (psi)	AS Exhaust PID (ppm)	Comments
9/27/2010	1030	2578	192	18	7	25	ND	
10/18/2010	950	2742	204	24	5	18	ND	
12/22/2010	1200	3049	226	18	9	24	ND	
1/6/2011	800	NR	244	18	7	25	ND	
1/20/2011	800	3524	263	18	6	24	ND	
2/27/2011	1100	3867	288	17	9	26	ND	
3/7/2011	800	3885	289	18	9	25	ND	
3/18/2011	1330	4060	298	17	10	25	ND	
3/23/2011	900	4060	298	17	8	26	ND	
4/22/2011	910	4408	325	18	9	25	ND	
5/3/2011	2100	4540	335	18	NR	25	NR	
5/5/2011	NR	4564	336	18	NR	25	NR	
5/19/2011	600	4734	349	17	11	26	ND	
6/16/2011	1200	5140	374	17	NR	25	25.7	
7/25/2011	900	5575	405	17	8	25	4.3	
8/28/2011	1100	5892	432	16	9	26	0.0	
9/29/2011	1140	6332	455	17	7	25	0.0	
10/18/2011	NR	6398	458	NR	NR	NR	NR	
10/27/2011	800	6524	465	17	9	25	ND	
11/21/2011	1100	6884	485	17	9	24	ND	
1/20/2012	800	7025	493	16	9	25	ND	
1/27/2012	900	7103	498	16	8	25	ND	
2/16/2012	900	7329	510	17	9	24	ND	
3/16/2012	1100	7664	530	16	8	26	NR	
3/27/2012	700	7767	535	16	9	25	ND	
4/17/2012	1025	8019	549	16	10	24	ND	
5/17/2012	1000	8359	563	16	9	24	ND	
5/31/2012	1059	8498	574	16	8	NR	ND	
6/14/2012	1017	8602	586	17	9	18	ND	
7/19/2012	1111	8903	602	16	8	19	ND	
8/23/2012	730	9110	615	9	16	19	ND	
9/26/2012	2012	9268	626	16	9	19	ND	
10/26/2012	600	9527	638	17	11	NR	ND	
12/21/2012	830	9625	639	16	9	NR	ND	
1/4/2013	940	9777	644	17	9	16	ND	
1/30/2013	600	10054	658	16	9	19	ND	
2/13/2013	800	10788	665	NR	NR	NR	NR	
2/26/2013	600	10381	684	15	9	18	ND	
3/21/2013	800	10711	696	5	16	21	ND	
5/23/2013	1600	11032	714	19	8	16	ND	
6/26/2013	1040	11713	757	16	4	20	ND	
8/26/2013	1730	12844	823	16	8	18	ND	
10/13/2015	1400	12850	824	17	9	18	ND	
12/15/2015	1300	12868	825	16	10	18	NR	
1/12/2016	1430	13367	854	16	8	18	0.0	
2/23/2016	1250	14040	893	12	8	16	0.0	
3/30/2016	1440	14599	924	16	13	18	0.0	
4/20/2016	915	14992	947	16	9	18	0.0	
5/18/2016	1415	15487	978	16	11	17	0.0	
7/28/2016	1800	16214	1016	16	10	16	0.0	
8/10/2016	1045	16516	1044	16	7	16	0.0	

Notes:

NR: Not recorded.

NP: Not pumping.

ND: Not detected.

Attachment C - Table 4

DPE Well Casing Vacuum Data (in. H₂O)
 MN Bio Business Center
 221 1st Avenue SW
 Rochester, Minnesota

Date	DPE-1	DPE-2	DPE-3	DPE-4	DPE-5	DPE-6	DPE-7	DPE-8
7/9/2009	129.0	2.6	0.1	0.1	0.4	1.9	2.4	0.0
8/11/2009	117.0	0.0	0.0	0.8	0.0	2.2	2.9	0.0
9/4/2009	86.0	NR	NR	NR	NR	NR	NR	NR
9/4/2009	149.0	NR	NR	NR	NR	NR	NR	NR
9/4/2009	>150	NR	NR	NR	NR	NR	NR	NR
10/15/2009	>150	3.4	0.3	0.9	1.3	1.9	0.5	0.04
10/23/2009	0.001	0.002	90.0	0.001	0.002	0.002	0.003	0.001
11/17/2009	0.000	0.000	0.000	0.000	>150	0.000	0.000	0.000
2/22/2010	48	200	128	99	90	108	70	91
3/25/2010	51	168	125	140	86	120	64	94
4/16/2010	48	210	130	130	98	88	55	NA
5/12/2010	51	195	127	87	75	148	68	86
6/17/2010	50	210	125	88	79	115	71	81
7/26/10*	10	158	126	148	100	115	70	80
9/27/2010	52	200	130	125	90	100	40	90
10/18/2010	60	151	126	85	100	110	31	60
12/22/2010	60	150	170	77	110	118	185	90
1/6/2011	54	149	120	148	75	98	30	70
1/20/2011	62	145	120	130	120	145	30	70
2/27/2011	35	145	98	64	74	138	32	84
3/7/2011	55	148	135	70	115	99	30	74
3/18/2011	55	148	150	130	115	100	35	80
3/23/2011	58	145	135	120	120	90	30	80
4/22/2011	68	150	125	128	120	100	29	80
5/19/2011	40	125	140	80	75	85	30	75
6/16/2011	55	200	125	130	120	100	40	85
7/25/2011	60	145	125	120	110	105	40	80
8/28/2011	58	158	130	140	120	100	49	75
9/29/2011	50	150	135	130	110	150	65	80
10/27/2011	50	150	124	89	100	128	48	74
11/21/2011	49	151	148	125	115	105	49	75
1/20/2012	50	115	98	75	100	98	33	65
1/27/2012	40	148	130	120	110	105	40	80
2/16/2012	40	151	147	128	110	108	50	80
3/16/2012	48	130	115	80	80	105	48	80
3/27/2012	48	150	125	120	110	100	28	78
4/17/2012	48	149	130	130	110	100	49	75
5/17/2012	42	98	126	90	100	98	30	68
5/31/2012	32	149	126	140	85	100	48	95
6/14/2012	35	130	126	90	90	120	50	80
7/19/2012	35	148	126	125	100	109	48	80
8/23/2012	27	112	75	95	78	75	25	60
9/26/2012	40	128	135	128	115	109	49	80
10/26/2012	50	120	130	115	80	100	45	75
12/21/2012	50	128	125	118	100	100	49	75
1/30/2013	55	125	125	115	100	100	40	75
2/26/2013	45	145	120	115	105	115	48	80
3/21/2013	37	148	127	125	98	120	49	80
5/23/2013	50	126	120	110	95	95	35	75
6/26/2013	45	115	125	90	115	80	30	60
8/26/2013	25	95	75	130	100	75	30	70
10/13/2015	NR	NR	NR	NR	NR	NR	NR	NR
12/14/2015**	204	102	41	NR	177	157	190	122
1/12/2016	230	225	230	245	180	190	NR	195
2/23/2016	235	235	225	250	200	210	200	175
3/30/2016	240	235	225	250	210	215	200	200
4/20/2016	250	245	230	250	205	215	225	205
5/18/2016	250	250	220	250	215	220	215	200
7/28/2016	215	***	200	185	165	150	175	150
8/10/2016	250	250	250	250	250	225	250	225

Notes:

Bold indicates the current operating extraction well.

NR: Not recorded

* - DPE-1 issues

** - Pressure readings taken off the manifold piping in inches of Hg and converted to in. H₂O

*** - DPE-2 was not working. Solenoid is going bad.

Attachment C - Table 5

**DPE Well PID Readings
221 1st Avenue SW
Rochester, Minnesota**

Well ID	Date	PID (ppm)	DPE Exhaust Flow Rate (scfm)	DPE Pump Inlet Vacuum (in. Hg)
DPE-1	27-Oct-09	37.0	45.0	18.00
DPE-1	16-Nov-09	4,000.0	56.3	20.28
DPE-1	17-Dec-09	4,000.0	62.1	19.53
DPE-1	28-Dec-09	1,120.0	NR	NR
DPE-1	14-Jan-10	NR	NR	NR
DPE-1	22-Feb-10	914.0	35.0	22.5
DPE-1	25-Mar-10	868.0	40.0	23
DPE-1	16-Apr-10	287.0	40.0	22
DPE-1	12-May-10	9.9	45.0	23.5
DPE-1	17-Jun-10	32.1	30.0	22
DPE-1*	26-Jul-10	1.4	40.0	19
DPE-1	27-Sep-10	>1750	82.0	18.23
DPE-1	18-Oct-10	25.0	40.0	20
DPE-1	22-Dec-10	10.1	55.0	22.95
DPE-1	6-Jan-11	17.8	82.0	20.2
DPE-1	20-Jan-11	12.1	55.0	20.9
DPE-1	27-Feb-11	6.4	61.0	20.66
DPE-1	7-Mar-11	33.4	50.0	21.23
DPE-1	18-Mar-11	3.0	57.0	21.1
DPE-1	23-Mar-11	1.3	40.0	21
DPE-1	22-Apr-11	17.5	39.0	21.26
DPE-1	19-May-11	4.4	30.0	21.5
DPE-1	16-Jun-11	27.0	37.0	22
DPE-1	25-Jul-11	55.1	35.3	21.53
DPE-1	28-Aug-11	27.5	45.5	21.4
DPE-1	29-Sep-11	12.2	46.7	22.41
DPE-1	27-Oct-11	41.7	30.0	22.6
DPE-1	21-Nov-11	580.0	44.0	22.08
DPE-1	20-Jan-12	5.7	51.6	16.79
DPE-1	27-Jan-12	12.0	34.3	20.3
DPE-1	16-Feb-12	3.5	30.6	20.65
DPE-1	16-Mar-12	NA	23.0	21.14
DPE-1	27-Mar-12	10.5	29.6	20.73
DPE-1	17-Apr-12	11.3	25.5	21.05
DPE-1	17-May-12	13.1	16.0	20.9
DPE-1	31-May-12	31.4	24.0	20.12
DPE-1	14-Jun-12	6.9	37.0	19.4
DPE-1	19-Jul-12	10.9	40.9	18.6
DPE-1	23-Aug-12	13.6	30.9	14.4
DPE-1	26-Sep-12	6.9	30.4	19.11
DPE-1	26-Oct-12	6.2	27.0	13.65
DPE-1	21-Dec-12	66.0	31.0	17
DPE-1	4-Jan-13	42.7	NR	NR
DPE-1	30-Jan-13	43.4	26.0	18
DPE-1	13-Feb-13	64.8	NR	NR
DPE-1	25-Feb-13	10.8	36.0	20.35
DPE-1	21-Mar-13	10.6	37.0	18.2
DPE-1	23-May-13	18.6	30.6	18.8
DPE-1	26-Jun-13	11.3	27.0	20
DPE-1	26-Aug-13	0.3	184.3	16.98
DPE-1	13-Oct-15	54.2	35.0	20
DPE-1	14-Dec-15	45.3	55.0	17.91
DPE-1	12-Jan-16	45.6	55.0	18.94
DPE-1	23-Feb-16	25.0	55.0	19.48
DPE-1	30-Mar-16	31.5	55.0	19.64
DPE-1	20-Apr-16	21.8	50.0	20
DPE-1	18-May-16	8.3	50.0	20.45
DPE-1	28-Jul-16	15.5	160**	17.58**
DPE-1	10-Aug-16	3.8	115.0	20.57

Attachment C - Table 5

**DPE Well PID Readings
221 1st Avenue SW
Rochester, Minnesota**

Well ID	Date	PID (ppm)	DPE Exhaust Flow Rate (scfm)	DPE Pump Inlet Vacuum (in. Hg)
DPE-2	27-Oct-09	50.6	40.0	19.00
DPE-2	16-Nov-09	0.0	39.0	22.13
DPE-2	17-Dec-09	11.8	NR	NR
DPE-2	28-Dec-09	720.0	NR	NR
DPE-2	14-Jan-10	NR	NR	NR
DPE-2	22-Feb-10	27.1	45.0	21.5
DPE-2	25-Mar-10	10.5	50.0	22
DPE-2	16-Apr-10	6.0	50.0	21
DPE-2	12-May-10	10.1	55.0	22
DPE-2	17-Jun-10	8.5	35.0	20
DPE-2	26-Jul-10	0.6	40.0	22
DPE-2	27-Sep-10	>4000	52.4	20.98
DPE-2	18-Oct-10	15.7	55.0	19
DPE-2	22-Dec-10	2.8	70.0	22.14
DPE-2	6-Jan-11	23.6	76.0	20.2
DPE-2	20-Jan-11	2.6	55.0	21.5
DPE-2	27-Feb-11	15.1	64.0	20.8
DPE-2	7-Mar-11	19.8	50.0	21.34
DPE-2	18-Mar-11	2.1	55.0	21.2
DPE-2	23-Mar-11	1.2	40.0	21
DPE-2	22-Apr-11	2.0	39.0	21.3
DPE-2	19-May-11	7.1	45.0	21
DPE-2	16-Jun-11	21.0	38.1	22.5
DPE-2	25-Jul-11	13.5	38.1	21.43
DPE-2	28-Aug-11	10.2	45.0	21.8
DPE-2	29-Sep-11	11.8	46.0	22.63
DPE-2	27-Oct-11	177.0	38.0	22
DPE-2	21-Nov-11	365.0	39.0	22.4
DPE-2	20-Jan-12	7.2	46.3	16.76
DPE-2	27-Jan-12	6.4	29.2	20.19
DPE-2	16-Feb-12	6.0	26.7	21.6
DPE-2	16-Mar-12	NA	30.0	21.5
DPE-2	27-Mar-12	14.5	25.5	21.5
DPE-2	17-Apr-12	6.4	21.6	21.69
DPE-2	17-May-12	12.1	20.4	20.87
DPE-2	31-May-12	21.2	20.0	20
DPE-2	14-Jun-12	5.0	29.0	19.7
DPE-2	19-Jul-12	5.4	31.5	18.7
DPE-2	23-Aug-12	3.6	36.0	10.8
DPE-2	26-Sep-12	4.3	31.3	19.18
DPE-2	26-Oct-12	4.6	29.0	16.8
DPE-2	21-Dec-12	56.0	32.0	17
DPE-2	4-Jan-13	48.1	NR	NR
DPE-2	30-Jan-13	9.4	25.0	19.5
DPE-2	13-Feb-13	25.7	NR	NR
DPE-2	25-Feb-13	5.8	29.0	20.5
DPE-2	21-Mar-13	8.2	26.0	19.7
DPE-2	23-May-13	12.7	24.7	19.2
DPE-2	26-Jun-13	3.0	34.0	20.7
DPE-2	26-Aug-13	0.4	186.1	15.12
DPE-2	13-Oct-15	20.6	35.0	20
DPE-2	14-Dec-15	21.6	55.0	17.75
DPE-2	12-Jan-16	20.1	55.0	18.77
DPE-2	23-Feb-16	17.3	55.0	19.2
DPE-2	30-Mar-16	16.6	60.0	19.34
DPE-2	20-Apr-16	6.2	55.0	19.7
DPE-2	18-May-16	2.9	55.0	20.11
DPE-2	28-Jul-16	**	**	**
DPE-2	10-Aug-16	2.3	115.0	20.43

Attachment C - Table 5

**DPE Well PID Readings
221 1st Avenue SW
Rochester, Minnesota**

Well ID	Date	PID (ppm)	DPE Exhaust Flow Rate (scfm)	DPE Pump Inlet Vacuum (in. Hg)
DPE-3	27-Oct-09	15.7	73.0	15.00
DPE-3	16-Nov-09	1,600.0	65.0	18.94
DPE-3	17-Dec-09	57.5	NR	NR
DPE-3	28-Dec-09	22.8	NR	NR
DPE-3	14-Jan-10	NR	NR	NR
DPE-3	22-Feb-10	43.4	70.0	19.5
DPE-3	25-Mar-10	31.4	70.0	19
DPE-3	16-Apr-10	17.5	75.0	18
DPE-3	12-May-10	23.7	80.0	20
DPE-3	17-Jun-10	18.1	55.0	18
DPE-3	26-Jul-10	0.0	65.0	17.5
DPE-3	27-Sep-10	>3260	68.6	19.5
DPE-3	18-Oct-10	36.4	85.0	17.5
DPE-3	22-Dec-10	28.2	78.0	21.75
DPE-3	6-Jan-11	23.9	109.0	18.5
DPE-3	20-Jan-11	4.5	77.0	18.6
DPE-3	27-Feb-11	23.3	82.0	18.8
DPE-3	7-Mar-11	25.6	55.0	20.1
DPE-3	18-Mar-11	8.4	65.0	18.7
DPE-3	23-Mar-11	5.8	65.0	18.5
DPE-3	22-Apr-11	31.3	66.0	18.5
DPE-3	19-May-11	8.0	65.0	19
DPE-3	16-Jun-11	34.0	60.1	20
DPE-3	25-Jul-11	23.2	63.2	18.24
DPE-3	28-Aug-11	62.8	71.0	19.4
DPE-3	29-Sep-11	18.7	73.6	19.53
DPE-3	27-Oct-11	201.0	70.6	19.2
DPE-3	21-Nov-11	429.0	68.0	19.6
DPE-3	20-Jan-12	16.2	52.3	16.03
DPE-3	27-Jan-12	4.2	50.6	17.8
DPE-3	16-Feb-12	16.8	43.0	18.09
DPE-3	16-Mar-12	NA	44.0	18.5
DPE-3	27-Mar-12	20.4	41.0	18.2
DPE-3	17-Apr-12	22.5	35.2	18.74
DPE-3	17-May-12	16.4	31.3	17.2
DPE-3	31-May-12	54.5	31.0	18.8
DPE-3	14-Jun-12	15.8	46.0	19
DPE-3	19-Jul-12	15.6	49.2	18.3
DPE-3	23-Aug-12	11.4	33.0	10.8
DPE-3	26-Sep-12	11.6	45.8	19.3
DPE-3	26-Oct-12	12.2	40.9	14.2
DPE-3	21-Dec-12	97.0	48.0	18
DPE-3	1-Apr-13	21.7	NR	NR
DPE-3	30-Jan-13	29.0	38.0	19.5
DPE-3	13-Feb-13	50.4	NR	NR
DPE-3	25-Feb-13	27.4	44.0	20.2
DPE-3	21-Mar-13	6.9	39.0	19.3
DPE-3	23-May-13	123.0	37.0	19.4
DPE-3	26-Jun-13	3.1	60.0	19.9
DPE-3	26-Aug-13	2.1	188.1	13.68
DPE-3	13-Oct-15	85.1	35.0	20
DPE-3	14-Dec-15	128.3	50.0	18.37
DPE-3	12-Jan-16	60.5	50.0	19.44
DPE-3	23-Feb-16	71.3	55.0	19.67
DPE-3	30-Mar-16	19.0	55.0	19.89
DPE-3	20-Apr-16	37.4	55.0	20.2
DPE-3	18-May-16	14.5	50.0	20.69
DPE-3	28-Jul-16	18.4	165**	17.31**
DPE-3	10-Aug-16	28.8	110.0	20.65

Attachment C - Table 5

**DPE Well PID Readings
221 1st Avenue SW
Rochester, Minnesota**

Well ID	Date	PID (ppm)	DPE Exhaust Flow Rate (scfm)	DPE Pump Inlet Vacuum (in. Hg)
DPE-4	27-Oct-09	23.9	35.0	22.00
DPE-4	16-Nov-09	3.7	28.6	23.94
DPE-4	17-Dec-09	4,000.0	NR	NR
DPE-4	28-Dec-09	3.4	NR	NR
DPE-4	14-Jan-10	NR	NR	NR
DPE-4	22-Feb-10	13.5	60.0	20.5
DPE-4	25-Mar-10	55.3	55.0	22
DPE-4	16-Apr-10	4,000.0	70.0	18
DPE-4	12-May-10	7.0	70.0	21
DPE-4	17-Jun-10	0.0	45.0	21
DPE-4	26-Jul-10	19.0	60.0	20
DPE-4	27-Sep-10	>2300	58.3	20.28
DPE-4	18-Oct-10	ND	64.0	17.5
DPE-4	22-Dec-10	23.1	80.0	21.25
DPE-4	6-Jan-11	13.8	102.0	19
DPE-4	20-Jan-11	3.2	72.0	19
DPE-4	27-Feb-11	11.5	67.0	20.2
DPE-4	7-Mar-11	27.9	60.0	20.45
DPE-4	18-Mar-11	5.9	62.0	19
DPE-4	23-Mar-11	6.2	60.0	19.5
DPE-4	22-Apr-11	3.5	60.0	19.5
DPE-4	19-May-11	15.6	60.0	19.5
DPE-4	16-Jun-11	49.2	52.4	21
DPE-4	25-Jul-11	3.1	56.3	19.04
DPE-4	28-Aug-11	14.0	63.0	20.4
DPE-4	29-Sep-11	2.8	66.0	20.36
DPE-4	27-Oct-11	156.0	64.0	20.5
DPE-4	21-Nov-11	120.0	65.0	20
DPE-4	20-Jan-12	8.0	51.3	16.41
DPE-4	27-Jan-12	0.0	40.9	19.7
DPE-4	16-Feb-12	8.6	37.0	19.17
DPE-4	16-Mar-12	NA	35.0	19.6
DPE-4	27-Mar-12	14.6	35.0	19.4
DPE-4	17-Apr-12	13.0	31.5	19.48
DPE-4	17-May-12	0.5	60.1	14.2
DPE-4	31-May-12	6.8	27.0	19.34
DPE-4	14-Jun-12	8.5	38.0	19
DPE-4	19-Jul-12	8.5	40.9	18.04
DPE-4	23-Aug-12	3.3	34.0	12.6
DPE-4	26-Sep-12	5.0	42.0	12.45
DPE-4	26-Oct-12	0.8	30.9	17.3
DPE-4	21-Dec-12	51.0	43.0	20
DPE-4	4-Jan-13	30.4	NR	NR
DPE-4	30-Jan-13	25.0	35.0	19.7
DPE-4	13-Feb-13	46.7	NR	NR
DPE-4	25-Feb-13	12.6	40.0	20.1
DPE-4	21-Mar-13	3.2	36.0	20
DPE-4	23-May-13	64.3	39.0	17.2
DPE-4	26-Jun-13	1.2	56.0	20.3
DPE-4	26-Aug-13	1.4	141.6	18.82
DPE-4	13-Oct-15	45.3	30.0	21
DPE-4	14-Dec-15	31.8	50.0	19.04
DPE-4	12-Jan-16	152.5	50.0	19.85
DPE-4	23-Feb-16	38.8	50.0	20.2
DPE-4	30-Mar-16	23.7	50.0	20.41
DPE-4	20-Apr-16	19.6	50.0	20.76
DPE-4	18-May-16	12.1	50.0	20.95
DPE-4	28-Jul-16	19.2	195**	14.93**
DPE-4	10-Aug-16	13.5	95.0	21.25

Attachment C - Table 5

**DPE Well PID Readings
221 1st Avenue SW
Rochester, Minnesota**

Well ID	Date	PID (ppm)	DPE Exhaust Flow Rate (scfm)	DPE Pump Inlet Vacuum (in. Hg)
DPE-5	27-Oct-09	3.8	40.0	22.00
DPE-5	16-Nov-09	4,000.0	30.4	23.88
DPE-5	17-Dec-09	850.0	NR	NR
DPE-5	28-Dec-09	4,000.0	NR	NR
DPE-5	14-Jan-10	NR	NR	NR
DPE-5	22-Feb-10	ND	100.0	16
DPE-5	25-Mar-10	5.7	75.0	18
DPE-5	16-Apr-10	4,000.0	120.0	14.5
DPE-5	12-May-10	0.8	115.0	18
DPE-5	17-Jun-10	0.0	75.0	16
DPE-5	26-Jul-10	5.7	100.0	15
DPE-5	27-Sep-10	>4000	119.0	15.78
DPE-5	18-Oct-10	ND	125.0	15
DPE-5	22-Dec-10	17.7	150.0	15.8
DPE-5	6-Jan-11	1.5	130.0	17
DPE-5	20-Jan-11	12.8	109.0	15.5
DPE-5	27-Feb-11	0.0	104.0	16.9
DPE-5	7-Mar-11	22.7	117.0	16.15
DPE-5	18-Mar-11	3.3	95.0	15.8
DPE-5	23-Mar-11	4.1	90.0	16.5
DPE-5	22-Apr-11	3.8	96.0	15.9
DPE-5	19-May-11	11.2	85.0	16.5
DPE-5	16-Jun-11	50.8	72.7	18
DPE-5	25-Jul-11	0.2	79.3	15.86
DPE-5	28-Aug-11	0.7	93.0	17.2
DPE-5	29-Sep-11	6.4	104.6	16.87
DPE-5	27-Oct-11	197.0	90.0	17.8
DPE-5	21-Nov-11	270.0	97.6	16.9
DPE-5	20-Jan-12	0.0	70.7	15.29
DPE-5	27-Jan-12	0.0	67.8	15.48
DPE-5	16-Feb-12	2.2	59.0	15.5
DPE-5	16-Mar-12	NA	52.0	17.6
DPE-5	27-Mar-12	3.6	58.0	15.9
DPE-5	17-Apr-12	4.2	46.9	16.6
DPE-5	17-May-12	1.2	46.0	16.12
DPE-5	31-May-12	2.1	36.0	18.5
DPE-5	14-Jun-12	2.4	60.0	15
DPE-5	19-Jul-12	3.5	60.4	16.5
DPE-5	23-Aug-12	1.1	42.0	11.6
DPE-5	26-Sep-12	1.4	59.0	17.2
DPE-5	26-Oct-12	0.0	51.0	14.2
DPE-5	21-Dec-12	14.7	65.0	19
DPE-5	4-Jan-13	9.1	NR	NR
DPE-5	30-Jan-13	4.6	50.0	19
DPE-5	13-Feb-13	5.8	NR	NR
DPE-5	25-Feb-13	2.1	59.0	18.8
DPE-5	21-Mar-13	0.6	46.0	19.8
DPE-5	23-May-13	16.1	52.0	19
DPE-5	26-Jun-13	0.0	76.0	18.1
DPE-5	26-Aug-13	0.0	165.3	14.49
DPE-5	13-Oct-15	24.1	60.0	17.5
DPE-5	14-Dec-15	16.9	70.0	15.08
DPE-5	12-Jan-16	21.5	75.0	15.49
DPE-5	23-Feb-16	10.0	75.0	16
DPE-5	30-Mar-16	10.3	75.0	16.72
DPE-5	20-Apr-16	0.1	75.0	16.67
DPE-5	18-May-16	5.2	80.0	16.91
DPE-5	28-Jul-16	8.1	225**	12.42**
DPE-5	10-Aug-16	8.5	160.0	18.2

Attachment C - Table 5

**DPE Well PID Readings
221 1st Avenue SW
Rochester, Minnesota**

Well ID	Date	PID (ppm)	DPE Exhaust Flow Rate (scfm)	DPE Pump Inlet Vacuum (in. Hg)
DPE-6	27-Oct-09	ND	55.0	17.00
DPE-6	16-Nov-09	4,000.0	66.9	18.78
DPE-6	17-Dec-09	1,680.0	NR	NR
DPE-6	28-Dec-09	901.0	NR	NR
DPE-6	14-Jan-10	NR	NR	NR
DPE-6	22-Feb-10	7.1	65.0	19
DPE-6	25-Mar-10	0.0	70.0	20
DPE-6	16-Apr-10	4,000.0	75.0	18.1
DPE-6	12-May-10	0.0	90.0	19
DPE-6	17-Jun-10	0.0	50.0	19
DPE-6	26-Jul-10	4.4	60.0	18
DPE-6	27-Sep-10	>4000	92.0	18.08
DPE-6	18-Oct-10	10.2	80.0	18.5
DPE-6	22-Dec-10	11.4	105.0	19.8
DPE-6	6-Jan-11	2.8	110.0	19
DPE-6	20-Jan-11	6.3	108.0	18
DPE-6	27-Feb-11	6.2	100.0	18.1
DPE-6	7-Mar-11	16.5	75.0	19.29
DPE-6	18-Mar-11	2.8	65.0	19
DPE-6	23-Mar-11	6.7	63.0	NR
DPE-6	22-Apr-11	5.6	57.0	19.6
DPE-6	19-May-11	7.6	60.0	19.5
DPE-6	16-Jun-11	48.2	53.5	19
DPE-6	25-Jul-11	2.5	56.3	19.21
DPE-6	28-Aug-11	4.8	62.0	20.6
DPE-6	29-Sep-11	6.6	69.8	20.26
DPE-6	27-Oct-11	127.0	65.0	20.1
DPE-6	21-Nov-11	40.0	62.0	20.4
DPE-6	20-Jan-12	0.0	57.8	16.12
DPE-6	27-Jan-12	0.0	46.7	18.49
DPE-6	16-Feb-12	0.9	37.8	18.68
DPE-6	16-Mar-12	NA	40.0	18.9
DPE-6	27-Mar-12	2.1	36.0	19.1
DPE-6	17-Apr-12	1.7	32.3	19.3
DPE-6	17-May-12	0.8	29.6	18.1
DPE-6	31-May-12	1.0	28.0	18.3
DPE-6	14-Jun-12	1.4	45.0	16
DPE-6	19-Jul-12	3.7	49.6	15.7
DPE-6	23-Aug-12	4.8	34.0	10.5
DPE-6	26-Sep-12	1.8	46.0	17.2
DPE-6	26-Oct-12	0.0	47.0	13.3
DPE-6	21-Dec-12	13.7	49.0	18
DPE-6	4-Jan-13	9.7	NR	NR
DPE-6	30-Jan-13	2.3	37.0	18.8
DPE-6	13-Feb-13	2.7	NR	NR
DPE-6	25-Feb-13	1.0	45.0	18.2
DPE-6	21-Mar-13	0.0	39.0	19.4
DPE-6	23-May-13	11.9	37.0	19.6
DPE-6	26-Jun-13	0.0	54.0	19
DPE-6	26-Aug-13	0.0	139.3	18.39
DPE-6	13-Oct-15	21.6	70.0	15
DPE-6	14-Dec-15	12.7	80.0	12.89
DPE-6	12-Jan-16	66.7	70.0	16.29
DPE-6	23-Feb-16	7.3	80.0	16.84
DPE-6	30-Mar-16	5.3	70.0	17.43
DPE-6	20-Apr-16	0.5	70.0	17.61
DPE-6	18-May-16	3.9	70.0	17.91
DPE-6	28-Jul-16	7.1	220**	12.68**
DPE-6	10-Aug-16	6.1	160.0	17.39

Attachment C - Table 5

**DPE Well PID Readings
221 1st Avenue SW
Rochester, Minnesota**

Well ID	Date	PID (ppm)	DPE Exhaust Flow Rate (scfm)	DPE Pump Inlet Vacuum (in. Hg)
DPE-7	27-Oct-09	ND	60.0	16.00
DPE-7	16-Nov-09	4,000.0	75.5	17.70
DPE-7	17-Dec-09	490.0	NR	NR
DPE-7	28-Dec-09	905.0	NR	NR
DPE-7	14-Jan-10	NR	NR	NR
DPE-7	22-Feb-10	ND	80.0	17.5
DPE-7	25-Mar-10	0.0	90.0	17
DPE-7	16-Apr-10	4,000.0	115.0	11
DPE-7	12-May-10	0.0	110.0	18
DPE-7	17-Jun-10	0.0	70.0	18
DPE-7	26-Jul-10	0.1	75.0	17
DPE-7	27-Sep-10	>4000	96.7	17.18
DPE-7	18-Oct-10	ND	105.0	15.5
DPE-7	22-Dec-10	10.7	65.0	22
DPE-7	6-Jan-11	2.4	130.0	17.5
DPE-7	20-Jan-11	0.4	100.0	18.21
DPE-7	27-Feb-11	0.0	90.0	17.9
DPE-7	7-Mar-11	29.1	95.0	16.2
DPE-7	18-Mar-11	3.1	75.0	17
DPE-7	23-Mar-11	8.6	70.0	17.5
DPE-7	22-Apr-11	5.4	72.0	17.7
DPE-7	19-May-11	6.1	70.0	18
DPE-7	16-Jun-11	47.4	56.3	20
DPE-7	25-Jul-11	0.1	60.4	18.95
DPE-7	28-Aug-11	0.0	67.0	19.8
DPE-7	29-Sep-11	6.0	82.0	18.5
DPE-7	27-Oct-11	88.0	66.0	19.7
DPE-7	21-Nov-11	10.0	66.0	19.7
DPE-7	20-Jan-12	0.0	57.8	15.9
DPE-7	27-Jan-12	0.0	52.4	17.66
DPE-7	16-Feb-12	0.3	42.1	18.2
DPE-7	16-Mar-12	NA	46.0	17.9
DPE-7	27-Mar-12	0.2	48.0	17.4
DPE-7	17-Apr-12	0.7	34.3	18.8
DPE-7	17-May-12	0.6	32.3	17.16
DPE-7	31-May-12	0.5	30.0	18.4
DPE-7	14-Jun-12	0.8	49.0	17
DPE-7	19-Jul-12	2.2	53.5	15.72
DPE-7	23-Aug-12	1.1	30.0	11.3
DPE-7	26-Sep-12	0.2	50.0	17.3
DPE-7	26-Oct-12	0.0	47.0	13.6
DPE-7	21-Dec-12	8.7	53.0	18
DPE-7	4-Jan-13	5.6	NR	NR
DPE-7	30-Jan-13	0.8	40.0	18.8
DPE-7	13-Feb-13	0.5	NR	NR
DPE-7	25-Feb-13	0.3	46.0	18.6
DPE-7	21-Mar-13	0.3	39.0	19.3
DPE-7	23-May-13	7.9	40.0	19.7
DPE-7	26-Jun-13	0.0	56.0	20
DPE-7	26-Aug-13	0.0	142.3	18.53
DPE-7	13-Oct-15	17.6	45.0	17.5
DPE-7	14-Dec-15	13.7	75.0	14.65
DPE-7	12-Jan-16	44.5	75.0	15.55
DPE-7	23-Feb-16	4.7	65.0	16.21
DPE-7	30-Mar-16	3.5	70.0	16.62
DPE-7	20-Apr-16	0.0	75.0	16.69
DPE-7	18-May-16	2.6	80.0	17.07
DPE-7	28-Jul-16	5.9	220**	12.01**
DPE-7	10-Aug-16	0.0	170.0	17.25

Attachment C - Table 5

**DPE Well PID Readings
221 1st Avenue SW
Rochester, Minnesota**

Well ID	Date	PID (ppm)	DPE Exhaust Flow Rate (scfm)	DPE Pump Inlet Vacuum (in. Hg)
DPE-8	27-Oct-09	ND	45.0	22.00
DPE-8	16-Nov-09	4,000.0	29.3	23.87
DPE-8	17-Dec-09	559.0	NR	NR
DPE-8	28-Dec-09	595.0	NR	NR
DPE-8	14-Jan-10	NR	NR	NR
DPE-8	22-Feb-10	ND	100.0	16
DPE-8	25-Mar-10	4,000.0	105.0	16
DPE-8	16-Apr-10	4,000.0	NA	NA
DPE-8	12-May-10	0.0	130.0	16.5
DPE-8	17-Jun-10	0.0	85.0	14
DPE-8	26-Jul-10	3.8	105.0	14.5
DPE-8	27-Sep-10	>4000	125.5	15.91
DPE-8	18-Oct-10	ND	65.0	19.5
DPE-8	22-Dec-10	11.4	150.0	15.08
DPE-8	6-Jan-11	10.2	140.0	16
DPE-8	20-Jan-11	3.1	128.0	15.92
DPE-8	27-Feb-11	0.8	97.0	17.8
DPE-8	7-Mar-11	44.6	95.0	17.5
DPE-8	18-Mar-11	3.1	80.0	16
DPE-8	23-Mar-11	7.4	90.0	15.5
DPE-8	22-Apr-11	5.1	97.0	15.1
DPE-8	19-May-11	4.9	75.0	17
DPE-8	16-Jun-11	52.3	81.3	17
DPE-8	25-Jul-11	0.5	87.0	15.4
DPE-8	28-Aug-11	0.0	104.0	15.38
DPE-8	29-Sep-11	0.3	108.0	16.7
DPE-8	27-Oct-11	79.8	102.0	16.9
DPE-8	21-Nov-11	0.6	94.0	17.3
DPE-8	20-Jan-12	0.6	72.7	15.22
DPE-8	27-Jan-12	0.0	71.0	15.06
DPE-8	16-Feb-12	0.9	63.6	15.2
DPE-8	16-Mar-12	NA	66.0	15.13
DPE-8	27-Mar-12	0.9	64.0	15.3
DPE-8	17-Apr-12	1.1	55.3	15.62
DPE-8	17-May-12	1.0	44.7	16.45
DPE-8	31-May-12	1.2	34.0	18.4
DPE-8	14-Jun-12	1.1	65.0	14
DPE-8	19-Jul-12	1.8	65.5	13.4
DPE-8	23-Aug-12	0.7	44.0	10.8
DPE-8	26-Sep-12	0.0	66.0	16.8
DPE-8	26-Oct-12	0.0	56.0	12.3
DPE-8	21-Dec-12	7.2	67.0	18
DPE-8	4-Jan-13	7.5	NR	NR
DPE-8	30-Jan-13	2.6	57.0	17
DPE-8	13-Feb-13	3.3	NR	NR
DPE-8	25-Feb-13	1.4	61.0	17.6
DPE-8	21-Mar-13	0.0	56.0	18.5
DPE-8	23-May-13	13.9	50.6	19.2
DPE-8	26-Jun-13	1.0	69.0	19.8
DPE-8	26-Aug-13	0.0	167.8	18.08
DPE-8	13-Oct-15	18.9	80.0	14.5
DPE-8	14-Dec-15	12.5	95.0	12.28
DPE-8	12-Jan-16	36.7	85.0	14.25
DPE-8	23-Feb-16	5.0	80.0	13.56
DPE-8	30-Mar-16	2.7	90.0	15.07
DPE-8	20-Apr-16	0.4	85.0	15.42
DPE-8	18-May-16	1.5	95.0	15.69
DPE-8	28-Jul-16	5.3	230**	11.37**
DPE-8	10-Aug-16	4.8	180.0	17.28

Attachment C - Table 5

**DPE Well PID Readings
221 1st Avenue SW
Rochester, Minnesota**

Well ID	Date	PID (ppm)	DPE Exhaust Flow Rate (scfm)	DPE Pump Inlet Vacuum (in. Hg)
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* - temporarily operating with DPE-8 because of vacuum issues

** - DPE-2 solenoid going bad which affected readings.
No data collected for DPE-2

Attachment D

Petroleum Remediation Program Air Emissions Screening Spreadsheet

Soil Vapor Extraction (SVE) and/or Air Stripper (AS) Data Input Worksheet

Doc Type: Corrective Action Design

MPCA Leak ID:		Enter SVE Standard Parameters		Enter AS Standard Parameters			
Sample Date: 8/10/2016		Distance to Nearest Receptor (feet):	33	Distance to Nearest Receptor (feet):	33		
Person Completing Worksheet: ADK		SVE Stack Height (feet):	26.2	Air Stripper Stack Height (feet):	26.2		
Notes: Use this area to provide comments regarding the sampling event, input parameters, etc.		SVE Stack Flow Rate (SCFM ¹):	138	Air Stripper Influent Flow Rate (L/s):	0.018		
		Enter SVE Modeling Parameters (if applicable)		Enter AS Modeling Parameters (if applicable)			
		SVE Stack Diameter (inches):		AS Stack Diameter (inches):			
		SVE Stack Exit Velocity ² (feet per second):		AS Stack Exit Velocity ² (feet per second):			
		SVE Stack Exit Temperature (°F):		AS Stack Exit Temperature (°F):			
		SVE Annual Dispersion Factor ((µg/m ³)/g/s)	Contact MPCA	AS Annual Dispersion Factor ((µg/m ³)/g/s)	Contact MPCA		
		SVE 1-hr Dispersion Factor ((µg/m ³)/g/s)	Contact MPCA	AS 1-hr Dispersion Factor ((µg/m ³)/g/s)	Contact MPCA		
Chemical Name	CAS #	SVE Emission Concentration (µg/m ³)	SVE Emission Rate (µg/sec)	AS Influent Groundwater Concentration (µg/L)	AS Effluent Groundwater Concentration (µg/L)	Removal Factor (dimensionless)	AS Emission Rate (µg/sec)
Acetone	67-64-1	44	3				
Benzene	71-43-2	1	0				
Benzyl chloride	100-44-7						
Bromodichloromethane	75-27-4						
Bromoform	75-25-2						
Bromomethane (Methyl bromide)	74-83-9						
1,3-Butadiene	106-99-0						
2-Butanone (Methyl ethyl ketone, MEK)	78-93-3	4	0				
Carbon disulfide	75-15-0						
Carbon tetrachloride	56-23-5						
Chlorobenzene	108-90-7						
Chloroethane (Ethyl chloride)	75-00-3						
Chloroform	67-66-3						
Chloromethane (Methyl chloride)	74-87-3	2	0				
Cyclohexane	110-82-7						
Dibromochloromethane	124-48-1						
1,2-Dibromoethane (Ethylene dibromide, EDB)	106-93-4						
1,2-Dichlorobenzene	95-50-1						
1,3-Dichlorobenzene	541-73-1						
1,4-Dichlorobenzene	106-46-7						
1,1-Dichloroethane	75-34-3						
1,2-Dichloroethane (DCA)	107-06-2						
1,1-Dichloroethene (DCE)	75-35-4						
cis-1,2-Dichloroethene	156-59-2						
trans-1,2-Dichloroethene	156-60-5						
Dichlorodifluoromethane (Freon 12)	75-71-8	3	0				
1,2-Dichloropropane	78-87-5						
cis-1,3-Dichloropropene	10061-01-5						
trans-1,3-Dichloropropene	10061-02-6						
Dichlorotetrafluoroethane (Freon 114)	76-14-2						
Ethanol	64-17-5	250	16				
Ethyl acetate	141-78-6						
Ethylbenzene	100-41-4						
4-Ethyltoluene	622-96-8						
n-Heptane	142-82-5						
Hexachloro-1,3-butadiene	87-68-3						
n-Hexane	110-54-3	4	0				
2-Hexanone (Methyl butyl ketone)	591-78-6						
4-Methyl-2-pentanone (Methyl isobutyl ketone, MIBK)	108-10-1						
Methylene chloride (Dichloromethane)	75-09-2	16	1				
Methyl-tert-butyl ether (MTBE)	1634-04-4						
Naphthalene	91-20-3						
2-Propanol (Isopropyl alcohol)	67-63-0	270	18				

Petroleum Remediation Program Air Emissions Screening Spreadsheet

Soil Vapor Extraction (SVE) and/or Air Stripper (AS) Data Input Worksheet

Doc Type: Corrective Action Design

MPCA Leak ID:		Enter SVE Standard Parameters			Enter AS Standard Parameters		
Sample Date: 8/10/2016		Distance to Nearest Receptor (feet):	33	Distance to Nearest Receptor (feet):	33		
Person Completing Worksheet: ADK		SVE Stack Height (feet):	26.2	Air Stripper Stack Height (feet):	26.2		
Notes: Use this area to provide comments regarding the sampling event, input parameters, etc.		SVE Stack Flow Rate (SCFM ¹):	138	Air Stripper Influent Flow Rate (L/s):	0.018		
		Enter SVE Modeling Parameters (if applicable)			Enter AS Modeling Parameters (if applicable)		
		SVE Stack Diameter (inches):		AS Stack Diameter (inches):			
		SVE Stack Exit Velocity ² (feet per second):		AS Stack Exit Velocity ² (feet per second):			
		SVE Stack Exit Temperature (°F):		AS Stack Exit Temperature (°F):			
		SVE Annual Dispersion Factor ((µg/m ³)/g/s)	Contact MPCA	AS Annual Dispersion Factor ((µg/m ³)/g/s)	Contact MPCA		
SVE 1-hr Dispersion Factor ((µg/m ³)/g/s)	Contact MPCA	AS 1-hr Dispersion Factor ((µg/m ³)/g/s)	Contact MPCA				
Chemical Name	CAS #	SVE Emission Concentration (µg/m ³)	SVE Emission Rate (µg/sec)	AS Influent Groundwater Concentration (µg/L)	AS Effluent Groundwater Concentration (µg/L)	Removal Factor (dimensionless)	AS Emission Rate (µg/sec)
Propylene (methylene or propene)	115-07-1						
Styrene	100-42-5						
1,1,2,2-Tetrachloroethane	79-34-5						
Tetrachloroethylene (PCE)	127-18-4	15	1	21	0	1.00	0
Tetrahydrofuran	109-99-9						
Toluene (Methylbenzene)	108-88-3	4		0			
1,2,4-Trichlorobenzene	120-82-1						
1,1,1-Trichloroethane (Methyl chloroform)	71-55-6						
1,1,2-Trichloroethane	79-00-5						
Trichloroethylene (TCE)	79-01-6						
Trichlorofluoromethane (Freon 11)	75-69-4						
Trichlorotrifluoroethane (Freon 113)	76-13-1	970	63				
1,2,4-Trimethylbenzene	95-63-6						
1,3,5-Trimethylbenzene	108-67-8						
Vinyl acetate	108-05-4						
Vinyl chloride	75-01-4						
m&p-Xylene	108-38-3	2	0				
o-Xylene	95-47-6						

¹SCFM = standard cubic feet per minute based on a standard temperature of 77° F (25° C, 298.15 K) and a standard pressure of 1 atmosphere (14.7 pounds per square inch, 29.92 inches of mercury, 760 millimeters of mercury).

²Provide stack exit velocity for actual exit conditions (i.e., at the actual temperature and pressure of the air being discharged).

Petroleum Remediation Program Air Emissions Screening Spreadsheet

Soil Vapor Extraction and/or Air Stripper Risk Evaluation Worksheet

Doc Type: Corrective Action Design

MPCA Leak ID:
 Sample Date: 8/10/2016
 Person Completing Worksheet: ADK

Chemical Name	CAS #	Acute Mixtures Evaluation				Chronic Noncancer Mixtures Evaluation									Excess Lifetime Cancer Risk (guideline value = 1E-5)		
		Acute Hazard Quotient	CNS	IRRIT	REPRO	Chronic Noncancer Hazard Quotient	CNS	CV/BLD	IMMUN	KIDN	LIVER/GI	REPRO	RESP	WHOLE BODY			
Acetone	67-64-1	0.0	0.0			0.0	0.0										
Benzene	71-43-2	0.0			0.0	0.0		0.0	0.0								2E-10
Benzyl chloride	100-44-7																
Bromodichloromethane	75-27-4																
Bromoform	75-25-2																
Bromomethane (Methyl bromide)	74-83-9																
1,3-Butadiene	106-99-0																
2-Butanone (Methyl ethyl ketone, MEK)	78-93-3	0.0		0.0		0.0						0.0					
Carbon disulfide	75-15-0																
Carbon tetrachloride	56-23-5																
Chlorobenzene	108-90-7																
Chloroethane (Ethyl chloride)	75-00-3																
Chloroform	67-66-3																
Chloromethane (Methyl chloride)	74-87-3	0.0	0.0			0.0	0.0										
Cyclohexane	110-82-7																
Dibromochloromethane	124-48-1																
1,2-Dibromoethane (Ethylene dibromide, EDB)	106-93-4																
1,2-Dichlorobenzene	95-50-1																
1,3-Dichlorobenzene	541-73-1																
1,4-Dichlorobenzene	106-46-7																
1,1-Dichloroethane	75-34-3																
1,2-Dichloroethane (DCA)	107-06-2																
1,1-Dichloroethene (DCE)	75-35-4																
cis-1,2-Dichloroethene	156-59-2																
trans-1,2-Dichloroethene	156-60-5																
Dichlorodifluoromethane (Freon 12)	75-71-8					0.0					0.0						
1,2-Dichloropropane	78-87-5																
cis-1,3-Dichloropropene*	10061-01-5																
trans-1,3-Dichloropropene*	10061-02-6																
Dichlorotetrafluoroethane (Freon 114)	76-14-2																
Ethanol	64-17-5	0.0		0.0		0.0							0.0				
Ethyl acetate	141-78-6																
Ethylbenzene	100-41-4																
4-Ethyltoluene	622-96-8																
n-Heptane	142-82-5																
Hexachloro-1,3-butadiene	87-68-3																
n-Hexane	110-54-3					0.0	0.0						0.0				
2-Hexanone (Methyl butyl ketone)	591-78-6																
4-Methyl-2-pentanone (Methyl isobutyl ketone, MIBK)	108-10-1																
Methylene chloride (Dichloromethane)	75-09-2	0.0	0.0			0.0	0.0	0.0									8E-10
Methyl-tert-butyl ether (MTBE)	1634-04-4																
Naphthalene	91-20-3																
2-Propanol (Isopropyl alcohol)	67-63-0	0.0		0.0		0.0				0.0		0.0					
Propylene (methylethylene or propene)	115-07-1																
Styrene	100-42-5																
1,1,1,2,2-Tetrachloroethane	79-34-5																
Tetrachloroethylene (PCE)	127-18-4	0.0	0.0	0.0		0.0	0.0										1E-09

Petroleum Remediation Program Air Emissions Screening Spreadsheet

Soil Vapor Extraction and/or Air Stripper Risk Evaluation Worksheet

Doc Type: Corrective Action Design

MPCA Leak ID:
Sample Date: 8/10/2016
Person Completing Worksheet: ADK

Chemical Name	CAS #	Acute Mixtures Evaluation				Chronic Noncancer Mixtures Evaluation								Excess Lifetime Cancer Risk (guideline value = 1E-5)			
		Acute Hazard Quotient	CNS	IRRIT	REPRO	Chronic Noncancer Hazard Quotient	CNS	CV/BLD	IMMUN	KIDN	LIVER/GI	REPRO	RESP		WHOLE BODY		
Tetrahydrofuran	109-99-9																
Toluene (Methylbenzene)	108-88-3	0.0	0.0	0.0		0.0	0.0										
1,2,4-Trichlorobenzene	120-82-1																
1,1,1-Trichloroethane (Methyl chloroform)	71-55-6																
1,1,2-Trichloroethane	79-00-5																
Trichloroethylene (TCE)	79-01-6																
Trichlorofluoromethane (Freon 11)	75-69-4																
Trichlorotrifluoroethane (Freon 113)	76-13-1					0.0								0.0			
1,2,4-Trimethylbenzene	95-63-6																
1,3,5-Trimethylbenzene	108-67-8																
Vinyl acetate	108-05-4																
Vinyl chloride	75-01-4																
m&p-Xylene**	108-38-3	0.0	0.0	0.0		0.0	0.0										
o-Xylene**	95-47-6																
Hazard Index:			0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1E-09

NOTES:

* based on 1,3-Dichloropropene (CAS # 542-75-6)
** based on total Xylenes (CAS # 1330-20-7)

In general, total excess lifetime cancer risk is not to exceed 1E-5 and a hazard index (or chemical-specific hazard quotient) is not to exceed 1. The additive results are shown with one decimal point, which is intended to show transparency with the addition of risk but not to imply a level of precision greater than one significant figure. Risk managers may want to round to one significant figure when comparing to a cancer risk of 1E-5 or a hazard index of 1. Exceedance of these levels, which are bolded in text when met or exceeded, may require air emission controls.

CNS = Central Nervous System
CV/BLD = Cardiovascular or Blood System
IMMUN = Immune System
IRRIT = Irritant (nasal, eye, throat irritation)
KIDN = Kidney
LIVER/GI = Liver/Gastrointestinal
REPRO = Reproductive System, including developmental effects
RESP = Respiratory System