SHALLOW GROUNDWATER INVESTIGATION

OF

CITY OF ANN ARBOR AND SCIO TOWNSHIP WASHTENAW COUNTY, MICHIGAN

FOR

GELMAN SCIENCES

OCTOBER 2016

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1.0 INTRODUCTION

Fleis & VandenBrink (F&V) was retained by Gelman Sciences to conduct a Shallow Groundwater Investigation (Investigation) of areas located in the western portion of the City of Ann Arbor and eastern portion of Scio Township (Investigation Area). The Investigation Area is shown on Figure 1.

Specifically, the Investigation was conducted in general accordance with the Michigan Department of Environmental Quality (MDEQ) Interoffice Correspondence dated July 19, 2016 titled "Shallow Groundwater Work Plan, Ann Arbor" (Appendix A).

The purpose of the Investigation was to collect groundwater elevation and groundwater quality data from the first occurrence of groundwater near select locations where the top of the groundwater table was believed to be located within 20 feet of the ground surface.

The objectives of the Investigation, as stated in the MDEQ Shallow Groundwater Work Plan, are:

1. Determine and evaluate the presence of 1,4-dioxane contaminants in the first occurrence of groundwater at select locations.
2. Better define the areal extent and characteristics of the 1,4-dioxane in the first occurrence of groundwater in residential areas downgradient from known deeper groundwater contamination.
3. Compare the groundwater data with proposed risk-based assumptions and screening levels in the April 15, 2016 proposed cleanup criteria rule revisions.

The Groundwater Investigation locations were selected by the MDEQ.

This Investigation fieldwork was conducted by F&V August 8-17, 2016. The MDEQ staff observed and documented the Investigation activities and collected split groundwater samples for independent laboratory analyses.

2.0 INVESTIGATION FIELD ACTIVITIES

Field activities conducted during the Investigation include the following:

- Temporary Monitoring Well Installation
- Groundwater Elevation Measurement
- Groundwater Sampling
- Surveying

Fieldwork and instrument calibration was conducted in accordance with F&V's Field Standard Operating Procedures.

2.1 Temporary Monitoring Well Installation

F&V contracted with TerraProbe of Ottawa Lake, Michigan (TerraProbe) who utilized a track-mounted Geoprobe® direct-push drilling rig to install temporary monitoring wells at the MDEQ-selected locations. At each location, a soil boring was installed using the Geoprobe® and a 2-inch diameter dual-tube sampling system. The inner 1-inch diameter core barrel was equipped with single-use acetate liners. A continuous core of soils was collected at each location from the surface to the water table interface or 20 feet below the ground surface (bgs), whichever was encountered first.

Soils were observed and logged by the F&V Geologist and boring logs are included in Appendix B. The water table was identified by the observation of saturated soils in the sampling liners. If the water table was not encountered within 20 feet bgs, a temporary well was not installed and the soil boring was plugged with bentonite hole plug.

At the locations where groundwater was encountered, a temporary monitoring well was installed using the Geoprobe®. The temporary monitoring wells were constructed of one-inch diameter polyvinyl chloride

(PVC) flush-coupled well riser equipped with a 5-foot PVC well screen. The well screen was set in the upper 5 feet of the first encountered water-bearing unit and/or materials considered productive to yield sufficient groundwater volumes to sample. Each well was developed by purging with a peristaltic pump until the purged water was relatively free of suspended sediment. Details regarding temporary monitoring well construction are provided on the boring logs.

The Investigation locations are shown on Figure 1 and in greater detail on Figures 2A-2H. The MDEQ originally identified 29 sample locations. Three locations (14, 15 and 20) were eliminated from the Investigation by the MDEQ. In total, 16 temporary wells were installed. Water was not encountered within 20 feet bgl at 10 locations and therefore temporary wells were not installed.

2.2 Surveying

The MDEQ-selected groundwater assessment locations were surveyed and staked by Atwell of Ann Arbor, Michigan (Atwell). Atwell also surveyed and determined the ground level elevation of each Investigation location, nearby residential homes, and nearby sewer manhole covers. The survey information prepared by Atwell is provided in Appendix C. The Investigation locations and ground surface elevation data are shown on Figures 3A -3H.

2.3 Groundwater Elevation Measurement

The depth to groundwater was measured from the top of casing (TOC) in each temporary well using a decontaminated, electronic water level indicator. The groundwater elevation was calculated by subtracting the TOC stick-up measurement from the depth to groundwater and then subtracting that resultant from the ground surface elevation. The groundwater elevation values for each location where groundwater was encountered are shown on Figures 3A-3H.

2.4 Groundwater Sampling

Groundwater samples were collected from each temporary monitoring well using low flow sampling methods. Field measurement of temperature, pH, specific conductance, dissolved oxygen, and turbidity was conducted at the time of sample collection. Groundwater samples were collected upon stabilization of the field parameters or after one hour of purging, whichever occurred first. Low flow sampling records are provided in Appendix D.

2.5 Field Quality Control Samples

Duplicate samples were collected at a frequency of one 1 duplicate per 10 investigative samples. Trip blanks were included in the shipping coolers. The MDEQ collected split samples and submitted the samples to the State Environmental Laboratory for independent analyses.

2.6 Sample Handling, Custody and Analysis

2.6.1 Sample Containers and Preservation

The sample containers were provided by the analytical laboratory. Each sample was collected directly into the laboratory prepared containers. Sample preservation was used to prevent or retard the degradation or modification of chemical compounds during transit and storage prior to laboratory extraction and analysis. Sample preservatives were based on the type of sample and required analyses.

2.6.2 Chain of Custody

Chain-of-custody procedures are intended to document sample possession from collection to disposal in accordance with federal guidelines. A chain-of-custody record was used to document and track possession of the samples.

2.6.3 Sample Storage, Transport and Analysis

Samples were held on ice in an insulated cooler during the collection process. The samples were submitted to Gelman Sciences Laboratory for analysis of 1,4-dioxane, and to Ann Arbor Technical Services, Inc. of Ann Arbor, Michigan (ATS) for analysis of volatile organic compounds (VOCs) by USEPA Method 8260B.

The MDEQ collected and handled their split samples and submitted them to the MDEQ Environmental Laboratory in Lansing, Michigan for analysis of 1,4-dioxane by USEPA Method 8260 - Modified (Selective Ion Monitoring) and VOCs by USEPA Method 8260B.

The laboratory analytical data reports provided by Gelman Sciences, ATS and the State laboratory are included in Appendix E.

The analytical data for the collected samples are summarized on Table 1.

2.7 Investigative-Derived Waste

Excess soil cuttings were mixed with bentonite chips and used to fill the borehole where the drill cuttings were generated. Excess purged groundwater was returned to the ground surface adjacent to the well where it was generated.

2.8 Boring and Temporary Well Abandonment

Upon completion of site assessment activities, borings and temporary monitoring wells were abandoned. Temporary well materials were removed from the boreholes and properly disposed offsite. Boreholes were abandoned by placing bentonite chips and/or bentonite chips mixed with soil cuttings into the borehole until each was completely filled. The grout was hydrated using distilled or tap water.

2.9 Equipment Decontamination

Contact sampling equipment was decontaminated prior to use and in between sampling events to ensure the accuracy of data collected. Single-use sampling equipment was properly disposed after use.

2.10 Field Documentation

Detailed records of the field activities were maintained in field notebooks, field forms, laboratory data sheets and chain of custody forms. These records documented field activities including sampling locations, sampling times, types of samples collected, weather conditions and other information pertinent to the assessment.

3.0 DATA ANALYSIS

3.1 1,4-Dioxane

The data provided by the Gelman Sciences laboratory indicated that 1,4-dioxane was detected in only two of 16 groundwater samples:

- RL-12 3.3 ug/L
- RL-13 1.9 ug/L

The data provided by the MDEQ Environmental Laboratory indicated that 1,4-dioxane was detected in only two of 15 groundwater samples at the same locations. An MDEQ split-sample was not collected at RL-8 because the temporary well went dry.

- RL-12 2.7 ug/L (estimated)
- RL-13 2.0 ug/L (estimated)

Please note that the MDEQ Environmental Laboratory qualifies results reported below 5 ug/L as estimated because the analysis is performed using selective ion monitoring (SIM).

3.2 VOCs

ATS detected the following VOC compounds:

- RL-2 Chloroform (5 ug/L)
- RL-7 1,1,1-trichloroethane (14 ug/L)

The MDEQ Environmental Laboratory detected the same VOCs at the same locations:

- RL-2 Chloroform (5.8 ug/L)
- RL-7 1,1,1-trichloroethane (12 ug/L)

While the Gelman Sciences laboratory did not specifically analyze for VOCs, measurable peaks for numerous tentatively identified compounds (TICs) were detected in the groundwater samples (see Table II – Data Summary in Appendix E):

- RL-2 trichloroethylene and 1,1,1-trichloroethane
- RL-3 2,4-dimethyl-hexane
- RL-4 2,4-dimethyl-hexane
- RL-7 1,1,1-trichloroethane
- RL-8 2,4-dimethyl-hexane
- RL-21 tetrachloroethylene

No measurable peaks for 1,4-dioxane were observed except at the two locations listed in Section 3.1, above.

4.0 SUMMARY OF FINDINGS

Shallow groundwater was encountered at depths less than 20 feet bgl at 16 of the 27 drilling locations.

Groundwater sampled from the temporary wells identified 1,4-dioxane at only 2 locations:

- RL-12 (2.7-3.3 ug/L)
- RL-13 (1.9-2.0 ug/L)

Two VOCs were detected at levels above their respective reporting limits at two separate locations:

- RL-2 Chloroform (5-5.8 ug/L)
- RL-7 1,1,1-trichloroethane (12-14 ug/L)

The detected concentrations of 1,4-dioxane and 1,1,1-trichloroethane are well below the proposed residential vapor intrusion Tier 1 screening levels set forth in the draft Revised Administrative Rules for Part 201, Environmental Contamination (posted 10/5/16), for those compounds:

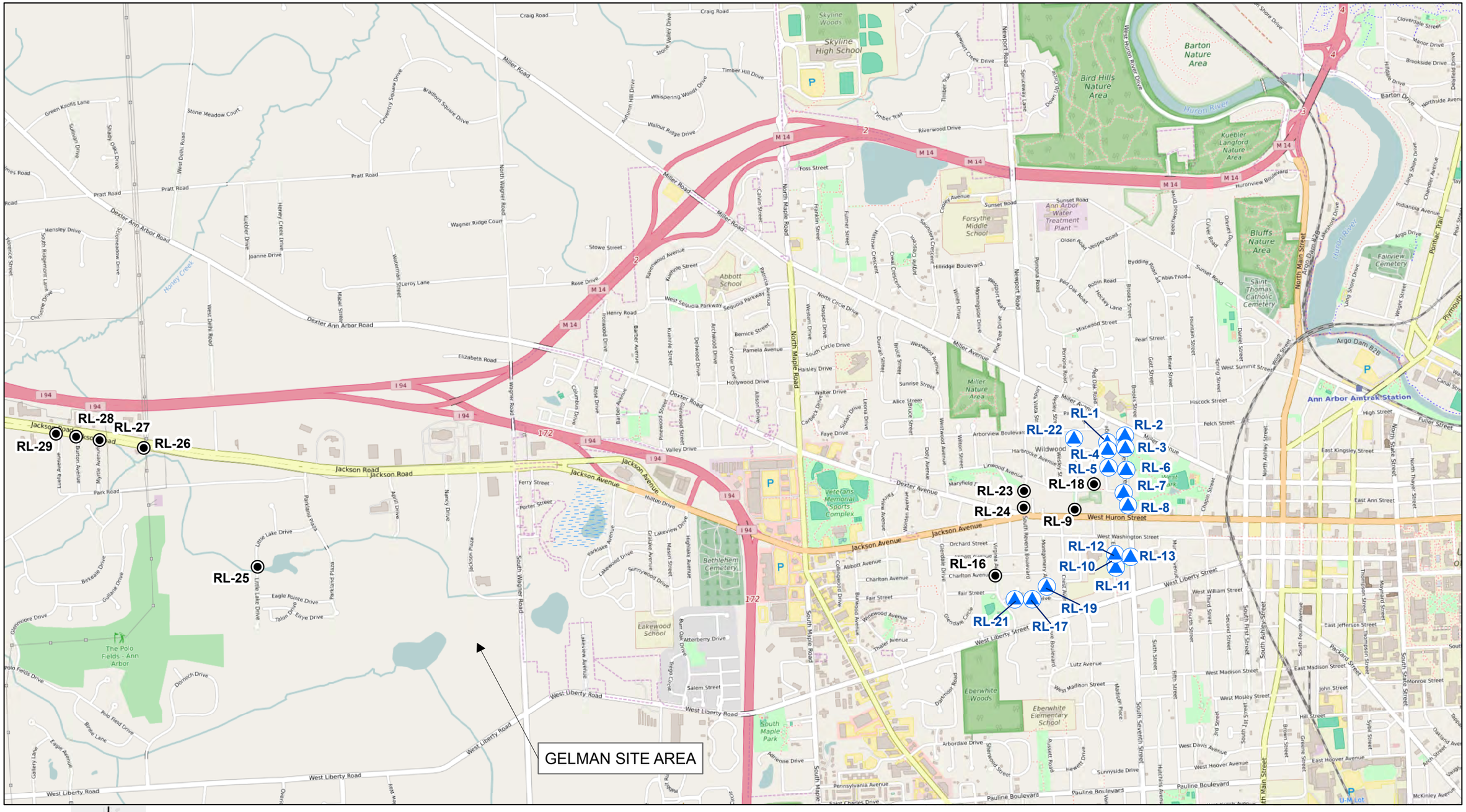
Parameter	Concentration Detected	Proposed Tier 1 Screening Level
1,4-dioxane	1.9-3.3 ug/L	29 ug/L
1,1,1-trichloroethane	12-14 ug/L	630 ug/L

However, the detected concentrations for Chloroform (5-5.8 ug/L) are well above the proposed residential vapor intrusion Tier 1 screening level of 1.0 ug/L. (1.0 ug/L is the default screening level based on the compound's target detection limit. The heath-based Tier 1 screening level for Chloroform is listed in the draft Revised Administrative Rules as 0.49 ug/L).

Neither of the two VOCs detected above their respective reporting limit nor the numerous VOC TICs identified by the Gelman Sciences lab are related to the Gelman Sciences site.

FIGURES

806500_2016_ShallowGW_1 / amberp 9/20/2016



NORTH

0 800 1,600 3,200

Feet

Legend

- SOIL BORING / TEMP WELL
- SOIL BORING (DRY TO 20' BELOW GRADE)

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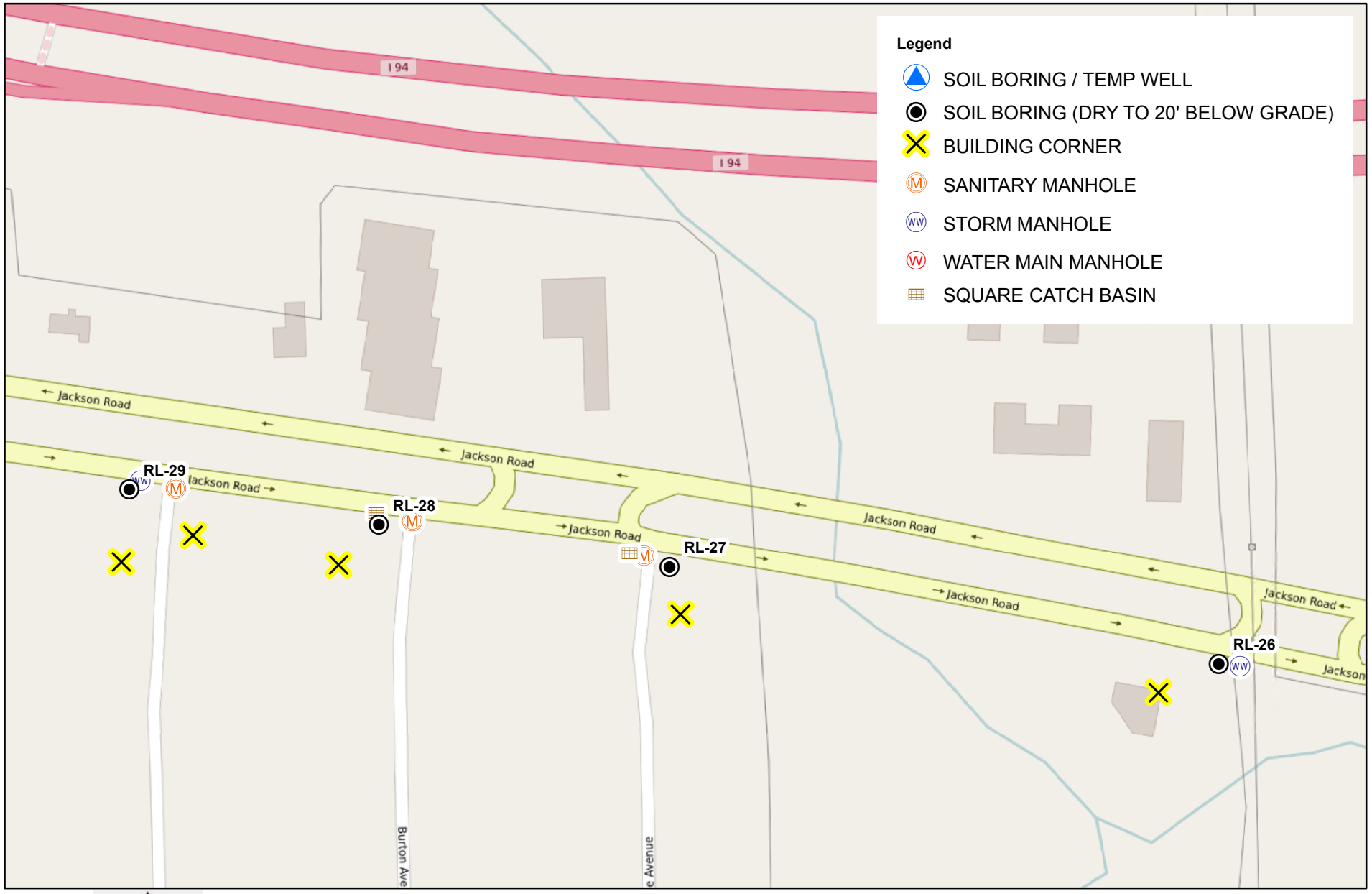
FIGURE 1: SOIL BORING AND TEMPORARY WELL LOCATIONS

F&V PROJECT NO. 806500

F&V

806500_2016_ShallowGW_2A / amberp 9/20/2016



NORTH

0 100 200 400

Feet

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FIGURE 2A: SOIL BORING AND TEMPORARY WELL LOCATIONS

F&V PROJECT NO. 806500

F&V

806500_2016_ShallowGW_2B / amberp 9/20/2016

NORTH

0 50 100 200

Feet

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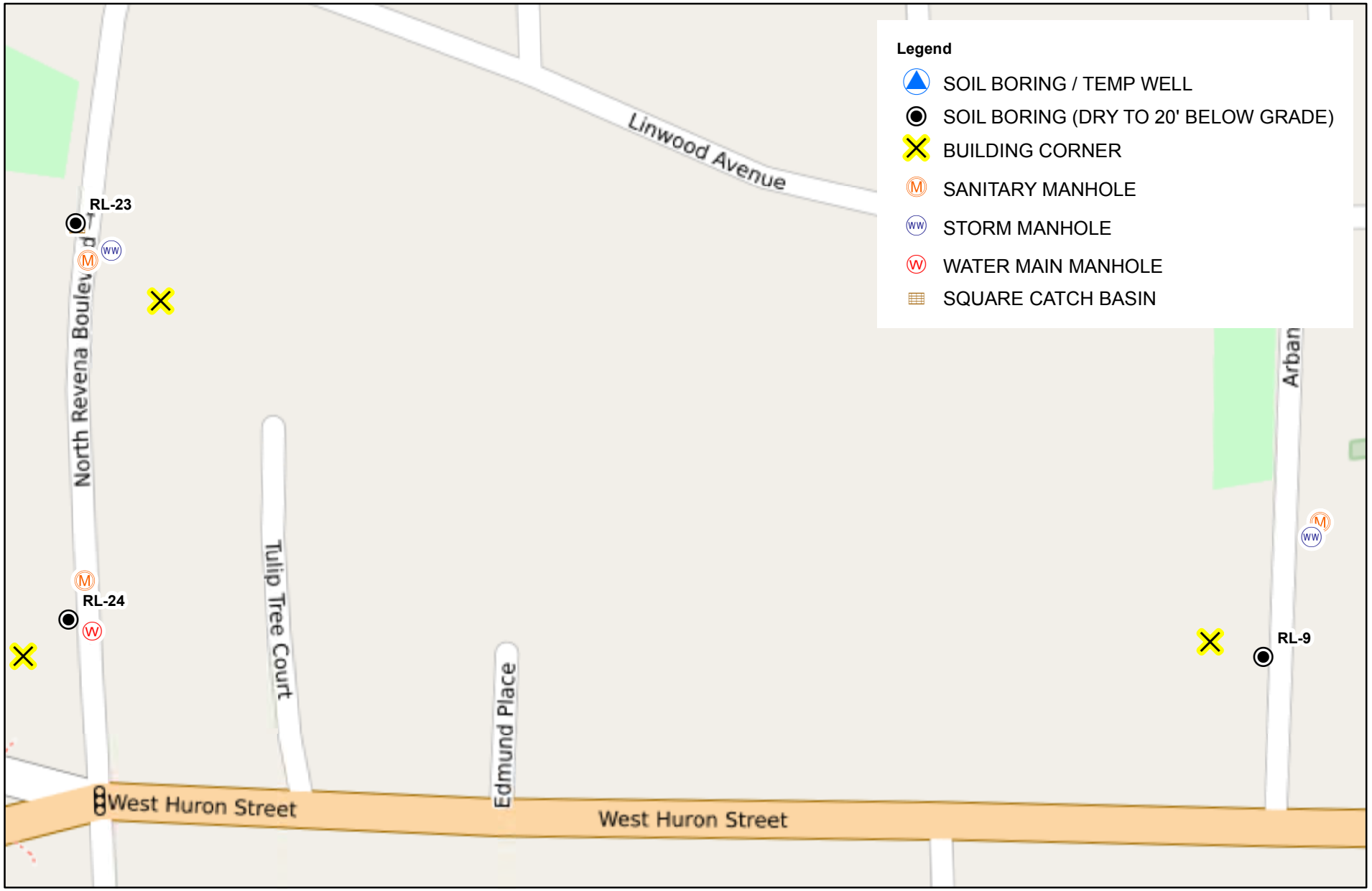
FIGURE 2B: SOIL BORING AND TEMPORARY WELL LOCATIONS

F&V PROJECT NO. 806500

F&V

806500_2016_ShallowGW_2C / amberp 9/21/2016



NORTH

0 50 100 200

Feet

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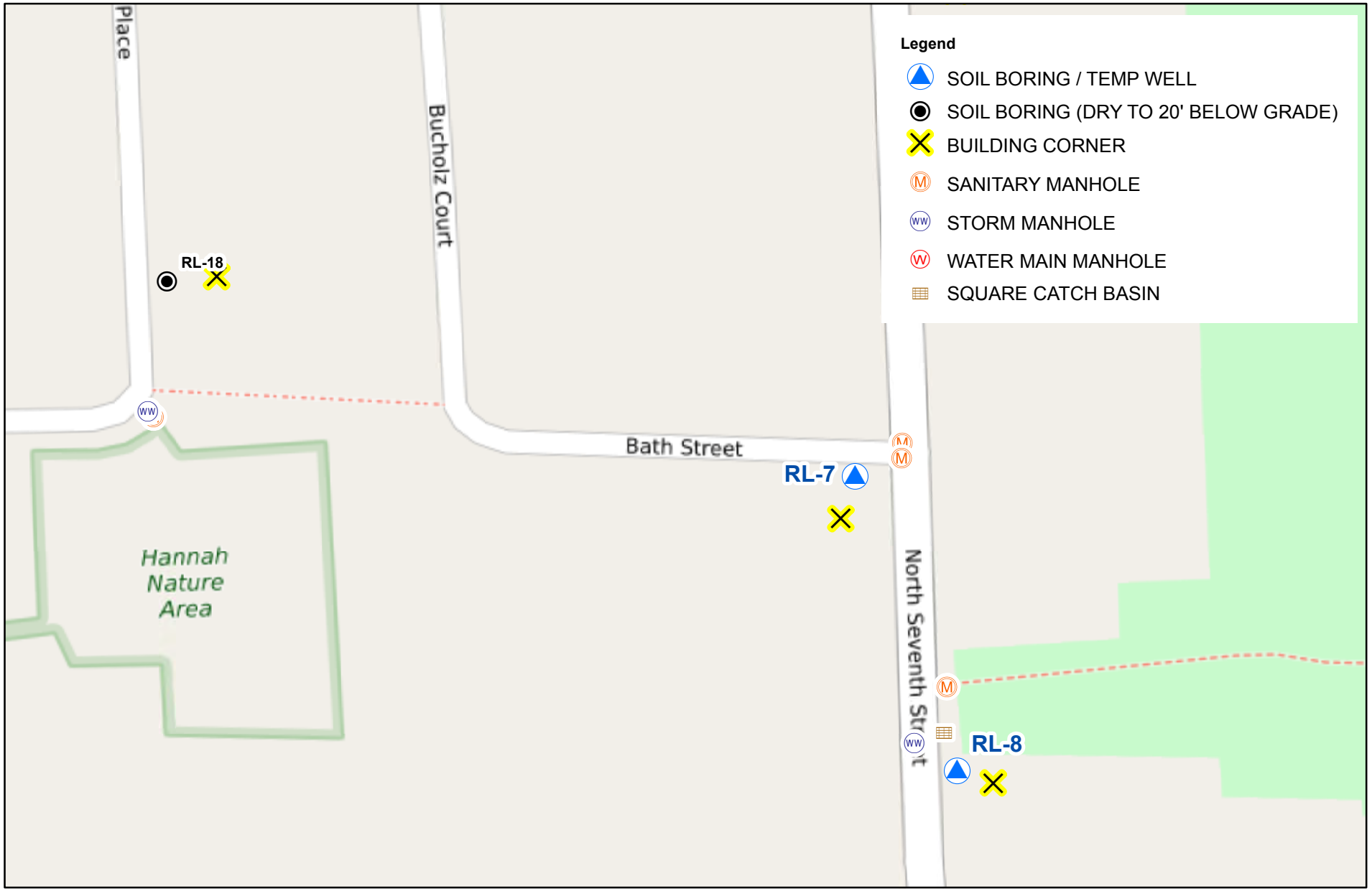
FIGURE 2C: SOIL BORING AND TEMPORARY WELL LOCATIONS

F&V PROJECT NO. 806500

806500_2016_ShallowGW_2D / amberp 9/20/2016



NORTH

0 50 100 200

Feet

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FIGURE 2D: SOIL BORING AND TEMPORARY WELL LOCATIONS

F&V PROJECT NO. 806500

F&V

806500_2016_ShallowGW_2E / amberp 9/20/2016

NORTH

0 50 100 200

Feet

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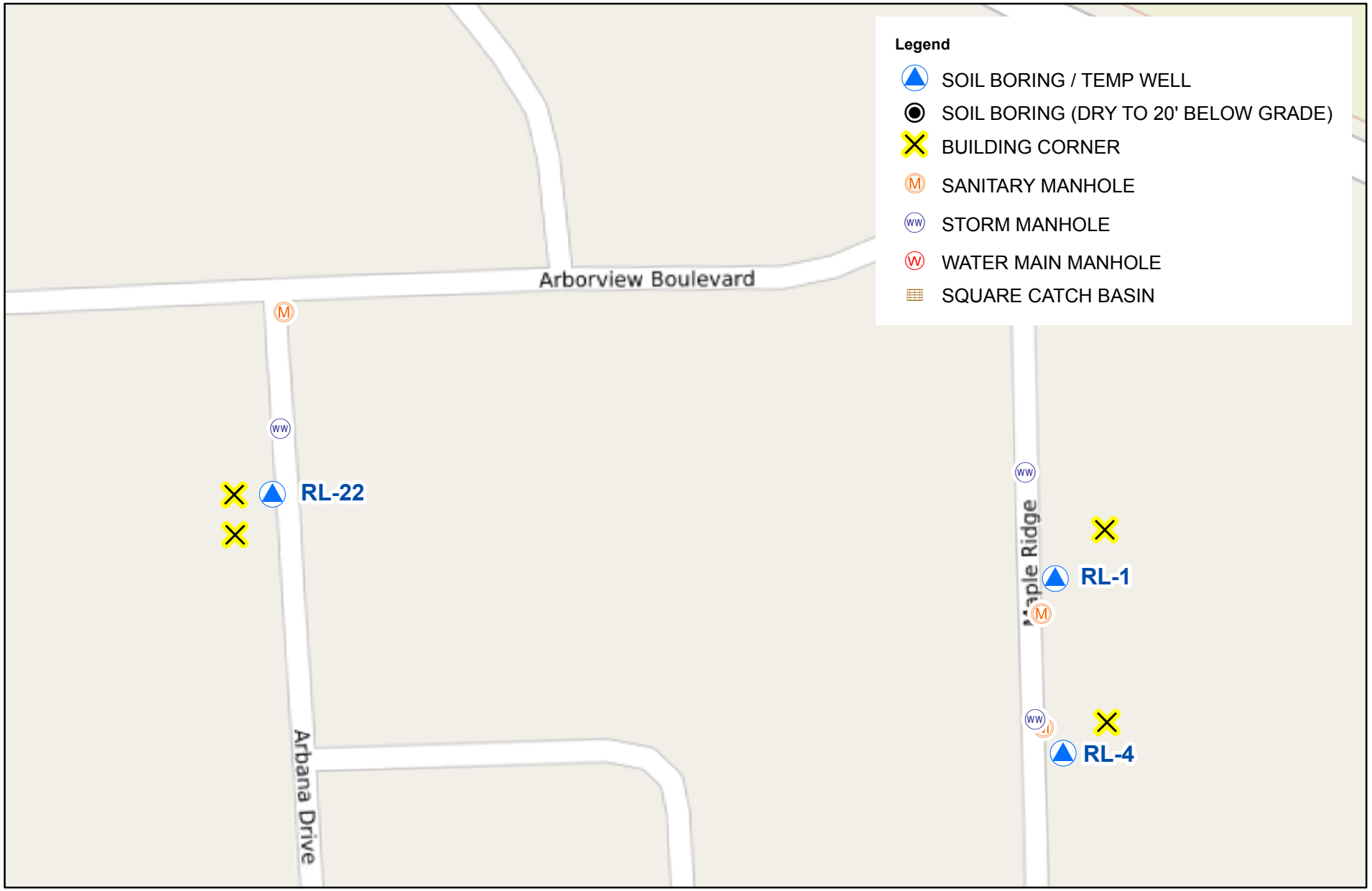
FIGURE 2E: SOIL BORING AND TEMPORARY WELL LOCATIONS

F&V PROJECT NO. 806500

F&V

806500_2016_ShallowGW_2F / amberp 9/20/2016



NORTH

0 50 100 200

Feet

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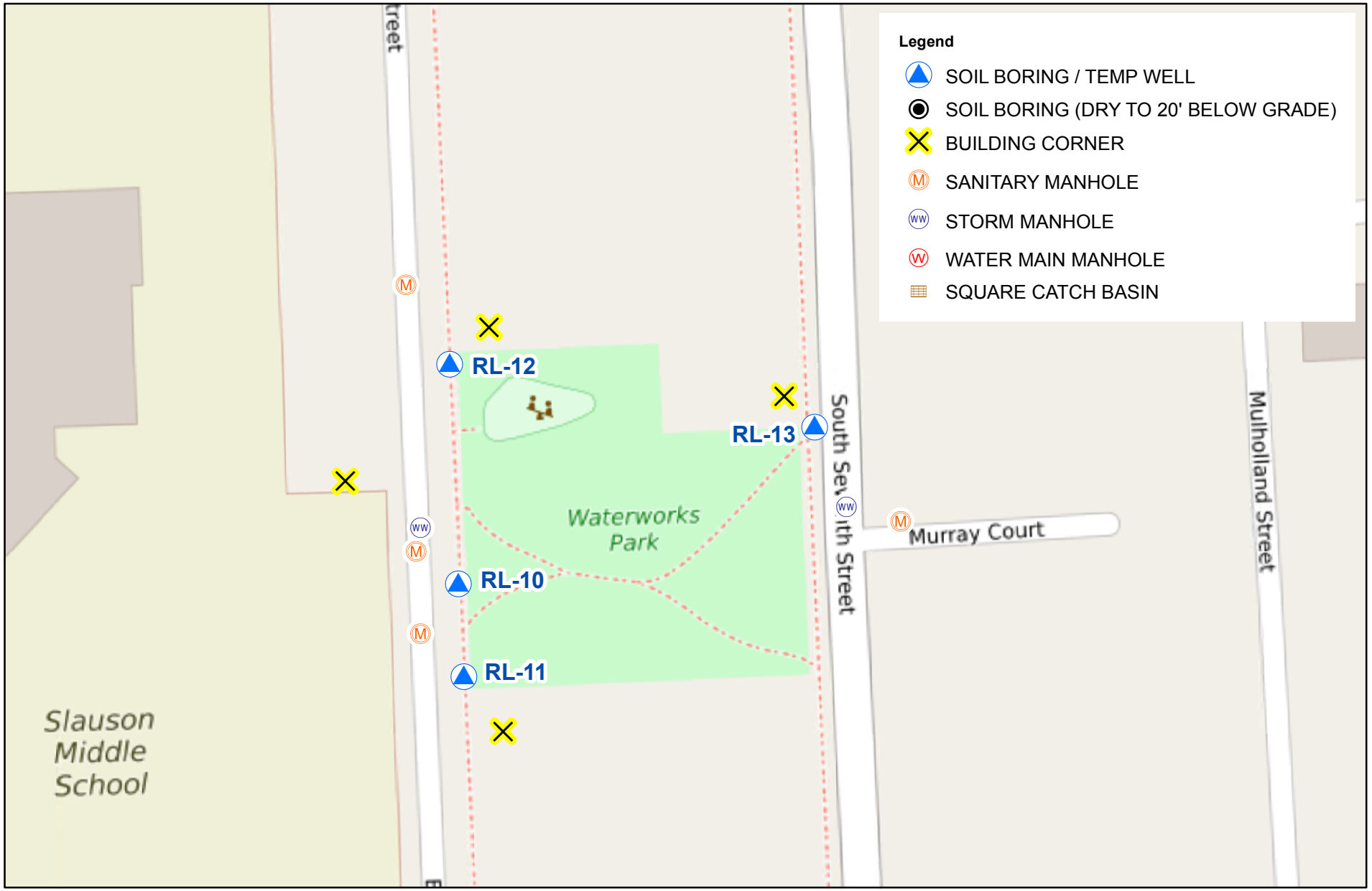
FIGURE 2F: SOIL BORING AND TEMPORARY WELL LOCATIONS

F&V PROJECT NO. 806500

F&V

806500_2016_ShallowGW_2G / amberp 9/20/2016



NORTH

0 50 100 200

Feet

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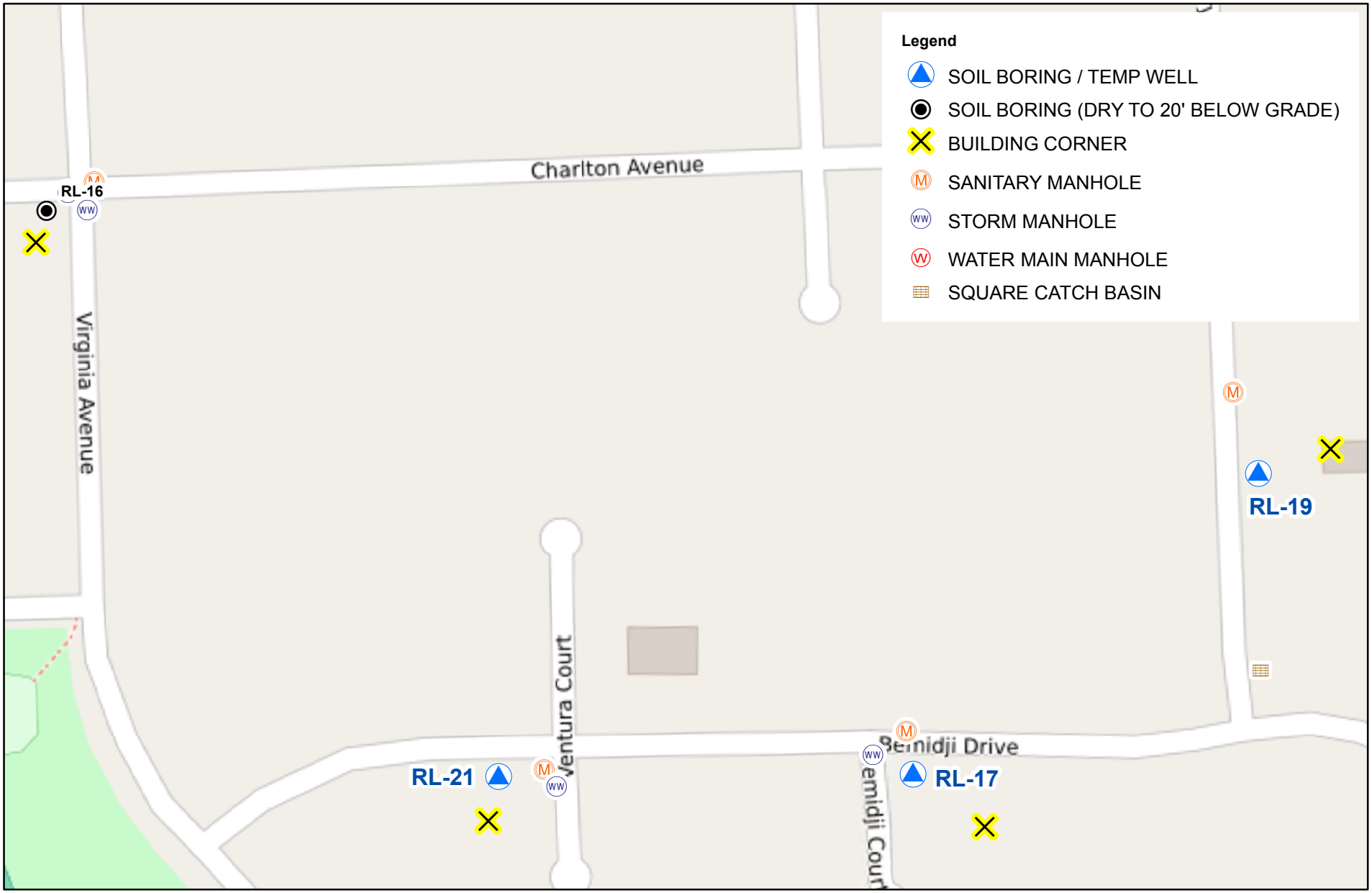
FIGURE 2G: SOIL BORING AND TEMPORARY WELL LOCATIONS

F&V PROJECT NO. 806500

806500_2016_ShallowGW_2H / amberp 9/20/2016



NORTH

0 50 100 200

Feet

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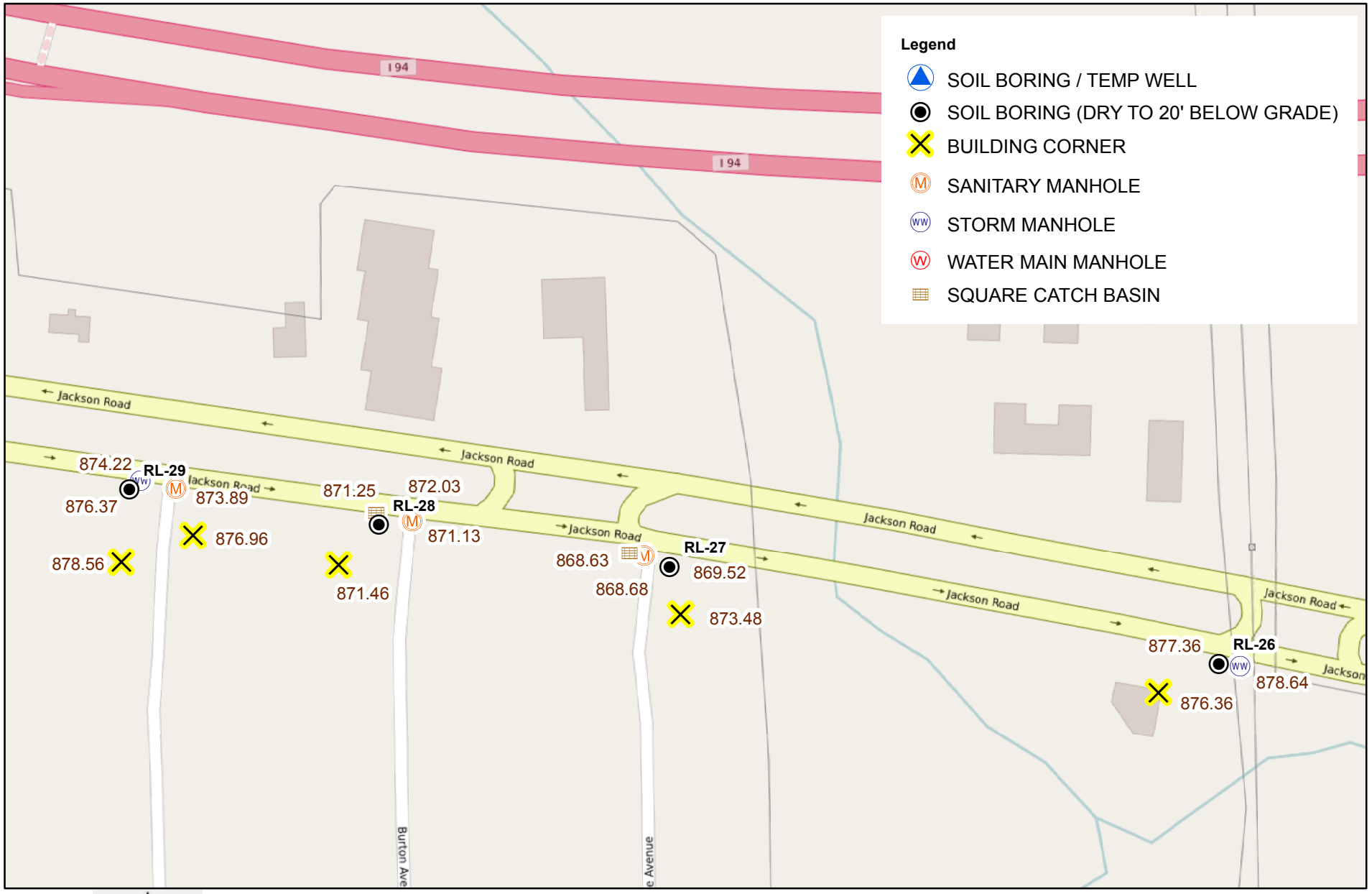
FIGURE 2H: SOIL BORING AND TEMPORARY WELL LOCATIONS

F&V PROJECT NO. 806500

806500_2016_ShallowGW_3A / amberp 9/20/2016



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NORTH

0 100 200 400

Feet

821.22 - GROUNDWATER ELEVATIONS

831.72 - SURFACE ELEVATIONS

ELEVATIONS MEASURED IN NAVD 88 (FEET)

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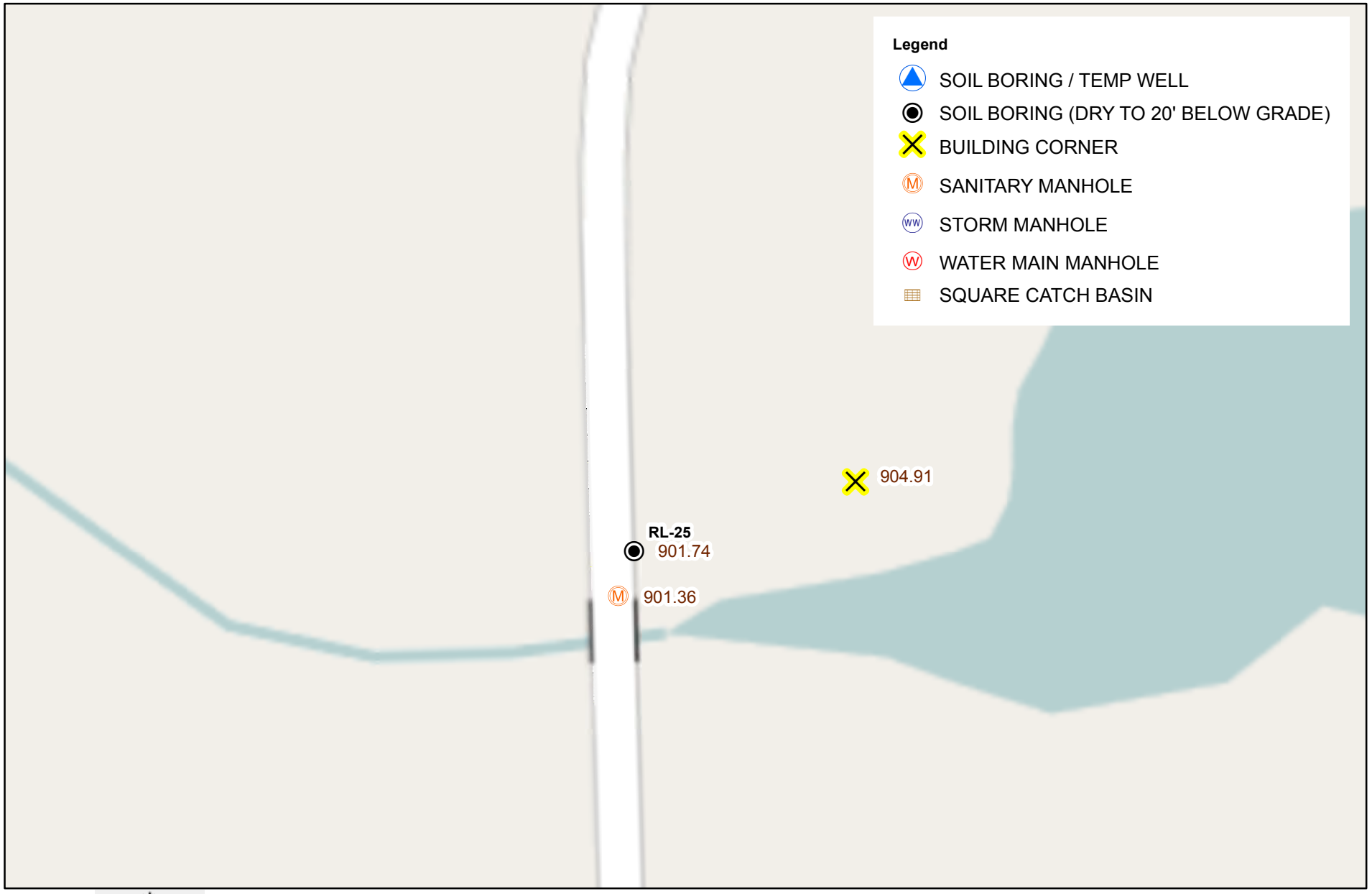
FIGURE 3A: ELEVATION DATA

F&V PROJECT NO. 806500

F&V

806500_2016_ShallowGW_3B / amberp 9/20/2016



NORTH

0 50 100 200

Feet

821.22 - GROUNDWATER ELEVATIONS

831.72 - SURFACE ELEVATIONS

ELEVATIONS MEASURED IN NAVD 88 (FEET)

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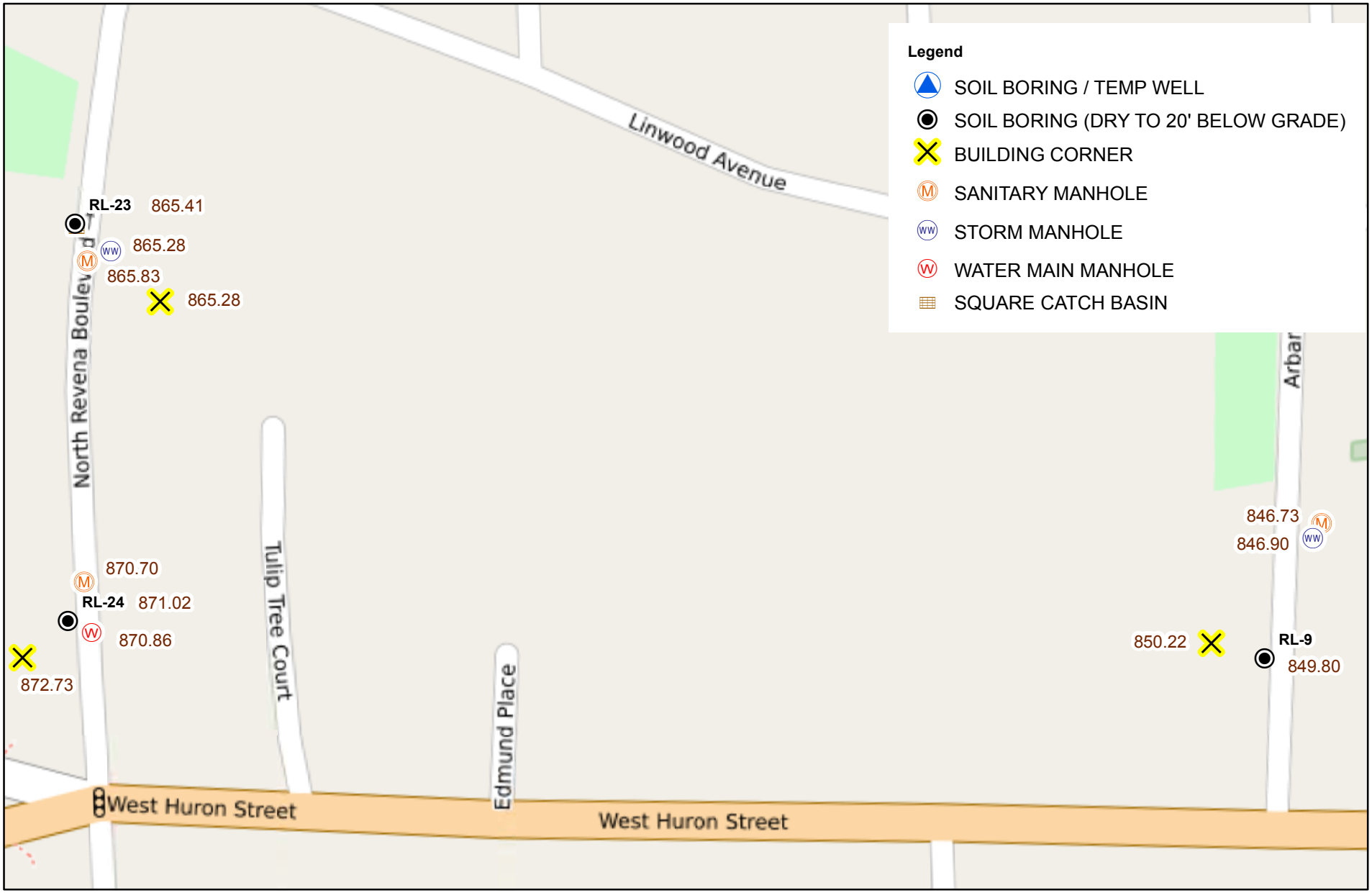
SHALLOW GROUNDWATER INVESTIGATION 2016

FIGURE 3B: ELEVATION DATA

F&V PROJECT NO. 806500

F&V

806500_2016_ShallowGW_3C / amberp 9/20/2016



NORTH

0 50 100 200

Feet

821.22 - GROUNDWATER ELEVATIONS

831.72 - SURFACE ELEVATIONS

ELEVATIONS MEASURED IN NAVD 88 (FEET)

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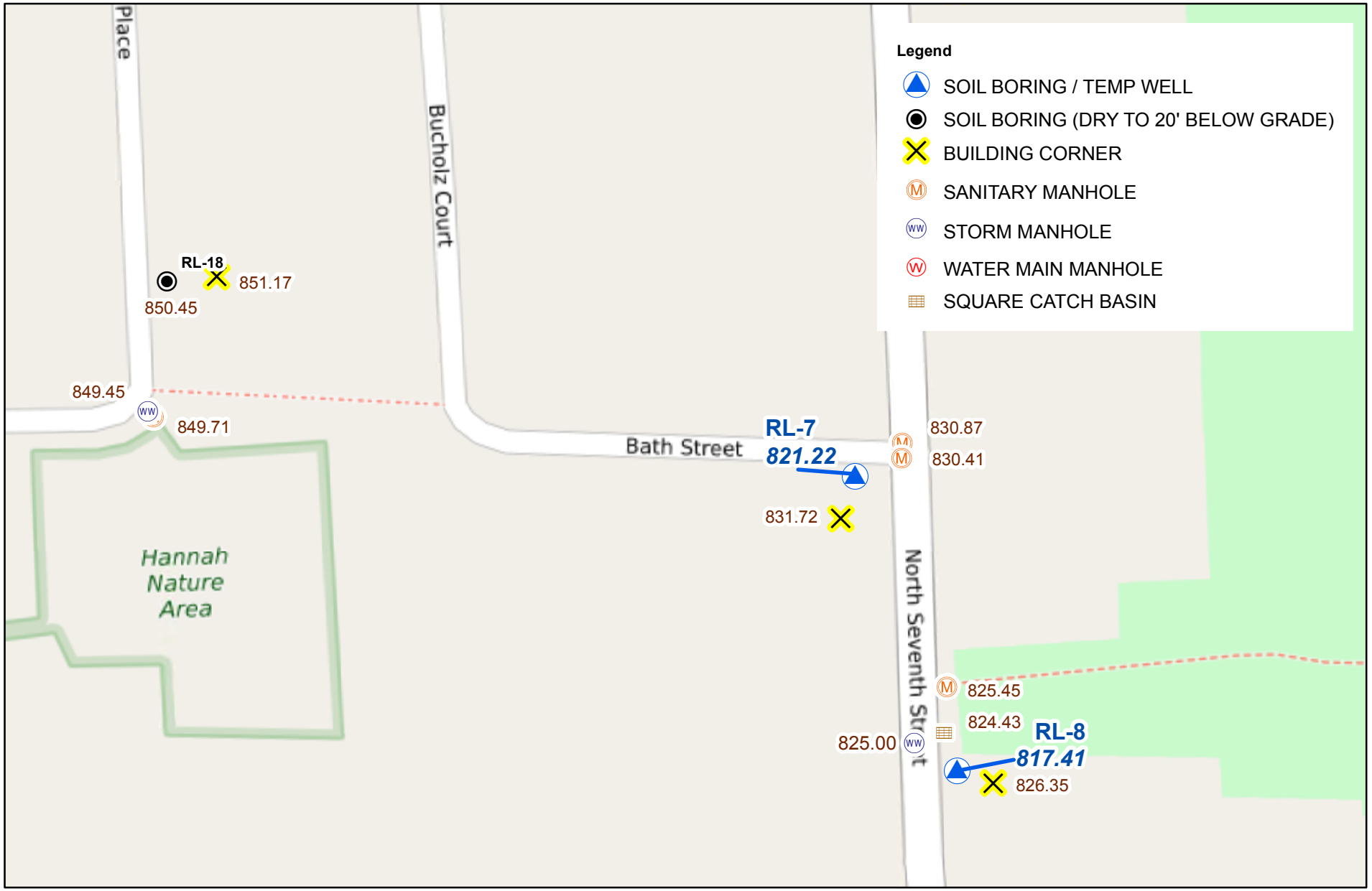
SHALLOW GROUNDWATER INVESTIGATION 2016

FIGURE 3C: ELEVATION DATA

F&V PROJECT NO. 806500

F&V

806500_2016_ShallowGW_3D / amberp 9/20/2016



NORTH

0 50 100 200

Feet

821.22 - GROUNDWATER ELEVATIONS

831.72 - SURFACE ELEVATIONS

ELEVATIONS MEASURED IN NAVD 88 (FEET)

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FIGURE 3D: ELEVATION DATA

F&V PROJECT NO. 806500

F&V

806500_2016_ShallowGW_3E / amberp 9/20/2016

NORTH

0 50 100 200

Feet

821.22 - GROUNDWATER ELEVATIONS

831.72 - SURFACE ELEVATIONS

ELEVATIONS MEASURED IN NAVD 88 (FEET)

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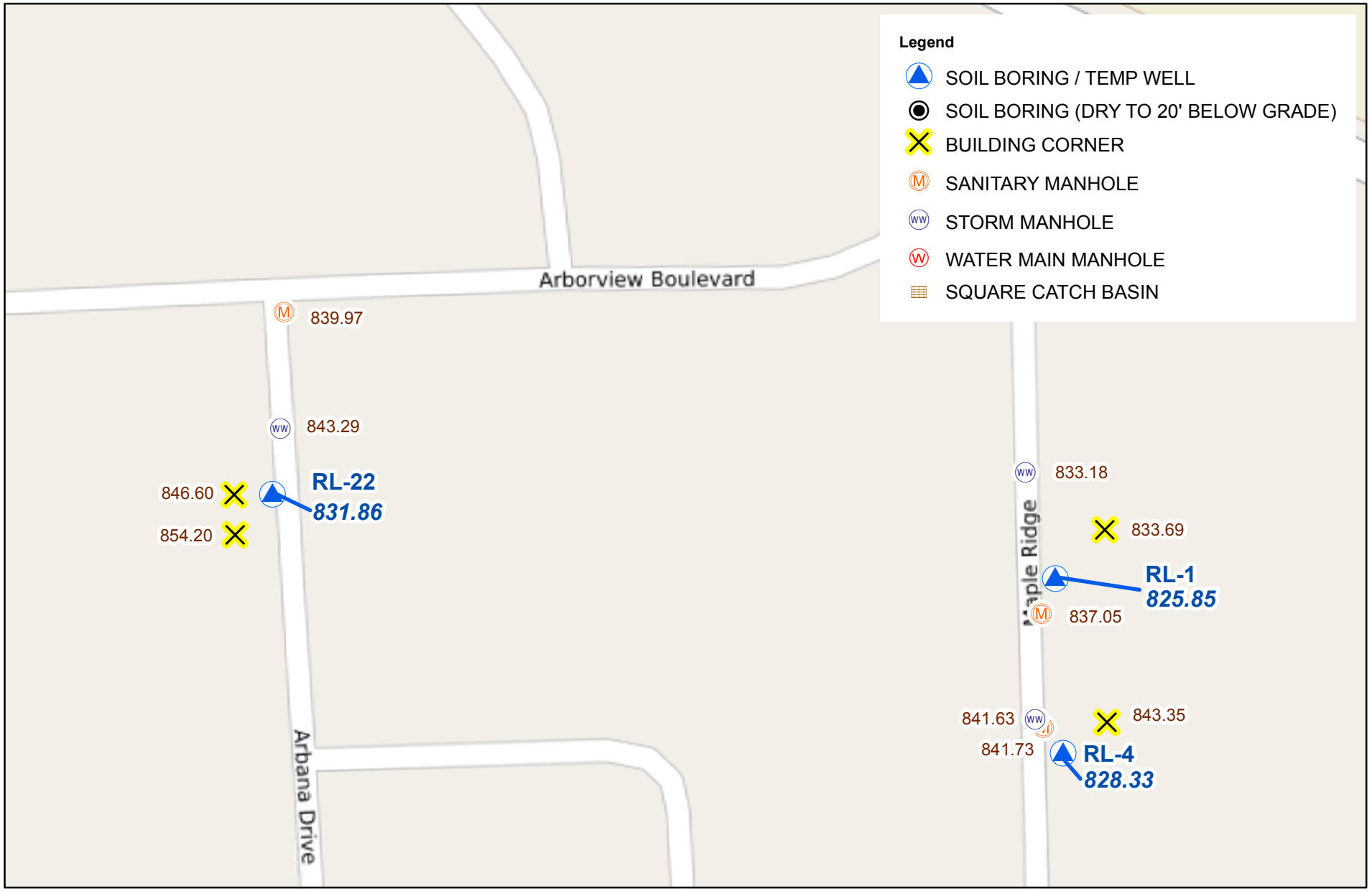
SHALLOW GROUNDWATER INVESTIGATION 2016

FIGURE 3E: ELEVATION DATA

F&V PROJECT NO. 806500

F&V

806500_2016_ShallowGW_3F / amberp 9/20/2016



NORTH

0 50 100 200

Feet

821.22 - GROUNDWATER ELEVATIONS

831.72 - SURFACE ELEVATIONS

ELEVATIONS MEASURED IN NAVD 88 (FEET)

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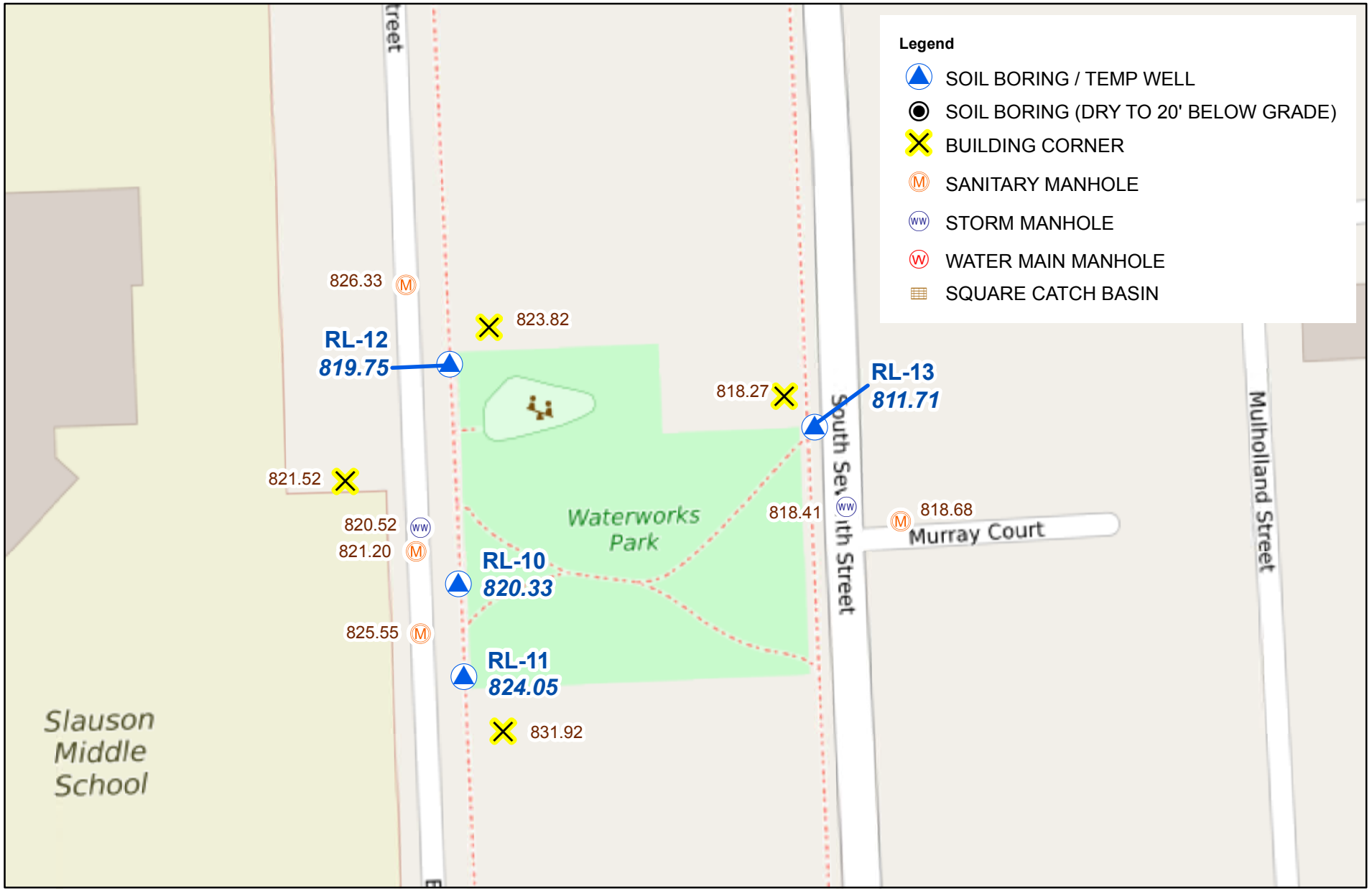
FIGURE 3F: ELEVATION DATA

F&V PROJECT NO. 806500

F&V

806500_2016_ShallowGW_3G / amberp 9/20/2016



NORTH

0 50 100 200

Feet

821.22 - GROUNDWATER ELEVATION

831.72 - SURFACE ELEVATION

ELEVATIONS MEASURED IN NAVD 88 (FEET)

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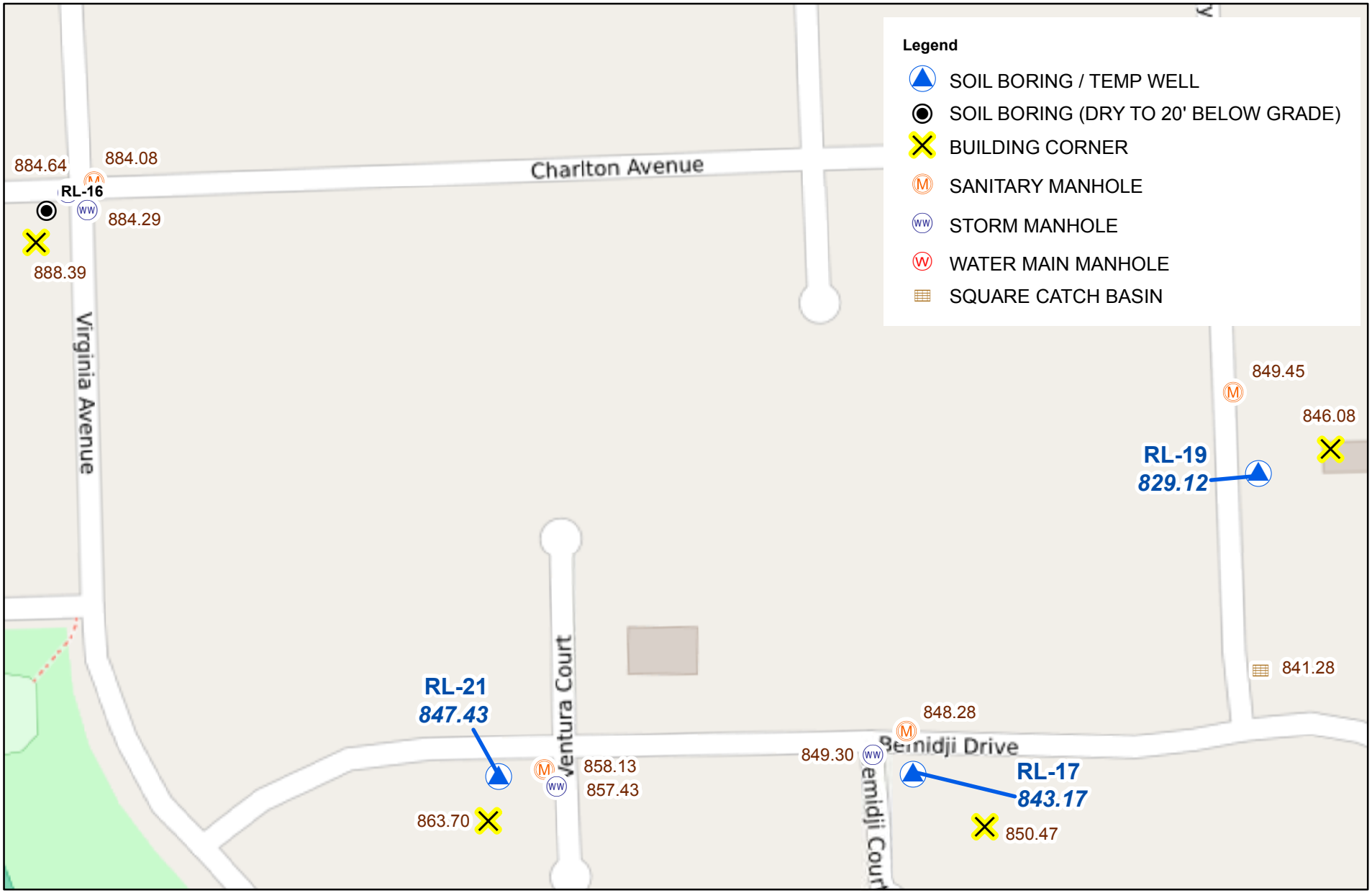
FIGURE 3G: ELEVATION DATA

F&V PROJECT NO. 806500

F&V

806500_2016_ShallowGW_3H / amberp 9/20/2016



NORTH

0 50 100 200

Feet

821.22 - GROUNDWATER ELEVATION

831.72 - SURFACE ELEVATION

ELEVATIONS MEASURED IN NAVD 88 (FEET)

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FIGURE 3H: ELEVATION DATA

F&V PROJECT NO. 806500

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TABLES

Table 1: Groundwater Analytical Results Summary
806500 Gelman Sciences
September 2016

	Sampling Location	RL-1	RL-1	RL-2	RL-2	RL-3	RL-3	RL-4	RL-4	RL-5	RL-5	RL-6	RL-6	RL-7	RL-7	RL-8	RL-8	RL-10	RL-10	RL-11	RL-11	RL-12	RL-12	RL-13	RL-13	RL-17	RL-17	RL-19	RL-19
	Lab Source	GS/ATS	MDEQ	GS/ATS	MDEQ	GS/ATS	MDEQ	GS/ATS	MDEQ	GS/ATS	MDEQ	GS/ATS	MDEQ	GS/ATS	MDEQ	GS/ATS	MDEQ	GS/ATS	MDEQ	GS/ATS	MDEQ	GS/ATS	MDEQ	GS/ATS	MDEQ	GS/ATS	MDEQ	GS/ATS	MDEQ
	Collection Date	08/16/16	08/16/16	08/16/16	08/16/16	08/16/16	08/16/16	08/16/16	08/16/16	08/16/16	08/16/16	08/16/16	08/16/16	08/16/16	08/16/16	08/17/16	--	08/17/16	08/17/16	08/17/16	08/17/16	08/17/16	08/17/16	08/17/16	08/15/16	08/15/16	08/15/16	08/15/16
Hazardous Substance	Chemical Abstract Service Number																												
1,4-Dioxane (I)	123911	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	3.3	2.7	1.9	2.0	<1	<1	<1	<1
VOLATILES (8260B)																													
Acetonitrile	75058	<1	NS	<1	NS	<1	NS	<1	NS	<1	NS	<1	NS	<1	NS	<1	NS	<1	NS	<1	NS	<1	NS	<1	NS	<1	NS	<1	NS
Benzene (I)	71432	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromobenzene (I)	108861	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	75274	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	75252	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	74839	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	NS	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5
n-Butylbenzene	104518	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	135988	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
t-Butylbenzene (I)	98066	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide (I,R)	75150	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	NS	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1
Carbon tetrachloride	56235	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene (I)	108907	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	75003	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	NS	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5
Chloroform	67663	<1	<1	5.0	5.8	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane (I)	74873	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	NS	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5
Dibromochloromethane	124481	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromochloropropane	96128	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	74953	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	95501	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	541731	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	106467	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	75718	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	NS	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5
1,1-Dichloroethane	75343	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane (I)	107062	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethylene (I)	75354	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethylene	156592	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethylene	156605	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane (I)	78875	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Diethyl ether	60297	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene (I)	100414	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylene dibromide	106934	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Hexachloroethane	67721	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	591786	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	NS	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Isopropyl benzene	98828	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl-tert-butyl ether (MTBE)	1634044	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	75092	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	NS	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5
2-Butanone (MEK) (I)	78933	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	NS	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Methylnaphthalene	91576	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	NS	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5
4-Methyl-2-pentanone (MIBK) (I)	108101	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	NS	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5
Naphthalene	91203	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	NS	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5	<1	<5
n-Propylbenzene (I)	103651	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Styrene	100425	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethylene	127184	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrahydrofuran	109999	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene (I)	108883	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	120821	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	71556	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	14	12	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	79005	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethylene	79016	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	75694	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene (I)	95636	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene (I)	108678	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	75014	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes (I)	1330207	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	NS	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3

*Part 201 Residential Generic Cleanup Criteria and Screening Levels; Part 213 Tier 1 Risk-Based Screening Levels (RBSLs), MDEQ, December 31, 2013
Values in micrograms per liter (µg/L).
NS - Not Sampled
Bolded values exceed one or more of the criterion.

Table 1: Groundwater Analytical Results Sum
806500 Gelman Sciences
September 2016

	Sampling Location	RL-21	RL-21	RL-22	RL-22	DUP	DUP	DUP
	Lab Source	GS/ATS	MDEQ	GS/ATS	MDEQ	GS/ATS	MDEQ	GS/ATS
	Collection Date	08/15/16	08/15/16	08/17/16	08/17/16	08/16/16	08/16/16	08/17/16
Hazardous Substance	Chemical Abstract Service Number							
1,4-Dioxane (I)	123911	<1	<1	<1	<1	<1	<1	<1
VOLATILES (8260B)								
Acetonitrile	75058	<1	NS	<1	NS	<1	NS	<1
Benzene (I)	71432	<1	<1	<1	<1	<1	<1	<1
Bromobenzene (I)	108861	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	75274	<1	<1	<1	<1	<1	<1	<1
Bromoform	75252	<1	<1	<1	<1	<1	<1	<1
Bromomethane	74839	<1	<5	<1	<5	<1	<5	<1
n-Butylbenzene	104518	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene	135988	<1	<1	<1	<1	<1	<1	<1
t-Butylbenzene (I)	98066	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide (I,R)	75150	<5	<1	<5	<1	<5	<1	<5
Carbon tetrachloride	56235	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene (I)	108907	<1	<1	<1	<1	<1	<1	<1
Chloroethane	75003	<1	<5	<1	<5	<1	<5	<1
Chloroform	67663	<1	<1	<1	<1	<1	<1	<1
Chloromethane (I)	74873	<1	<5	<1	<5	<1	<5	<1
Dibromochloromethane	124481	<1	<1	<1	<1	<1	<1	<1
Dibromochloropropane	96128	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	74953	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	95501	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	541731	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	106467	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	75718	<1	<5	<1	<5	<1	<5	<1
1,1-Dichloroethane	75343	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane (I)	107062	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethylene (I)	75354	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethylene	156592	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethylene	156605	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane (I)	78875	<1	<1	<1	<1	<1	<1	<1
Diethyl ether	60297	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene (I)	100414	<1	<1	<1	<1	<1	<1	<1
Ethylene dibromide	106934	<1	<1	<1	<1	<1	<1	<1
Hexachloroethane	67721	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	591786	<5	<5	<5	<5	<5	<5	<5
Isopropyl benzene	98828	<1	<1	<1	<1	<1	<1	<1
Methyl-tert-butyl ether (MTBE)	1634044	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	75092	<1	<5	<1	<5	<1	<5	<1
2-Butanone (MEK) (I)	78933	<5	<5	<5	<5	<5	<5	<5
2-Methylnaphthalene	91576	<1	<5	<1	<5	<1	<5	<1
4-Methyl-2-pentanone (MIBK) (I)	108101	<1	<5	<1	<5	<1	<5	<1
Naphthalene	91203	<1	<5	<1	<5	<1	<5	<1
n-Propylbenzene (I)	103651	<1	<1	<1	<1	<1	<1	<1
Styrene	100425	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethylene	127184	<1	<1	<1	<1	<1	<1	<1
Tetrahydrofuran	109999	<1	<1	<1	<1	<1	<1	<1
Toluene (I)	108883	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	120821	<1	<1	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	71556	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	79005	<1	<1	<1	<1	<1	<1	<1
Trichloroethylene	79016	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	75694	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene (I)	95636	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene (I)	108678	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	75014	<1	<1	<1	<1	<1	<1	<1
Xylenes (I)	1330207	<3	<3	<3	<3	<3	<3	<3

*Part 201 Residential Generic Cleanup Criteria and Screening Levels; Part 213 Tier 1 Risk-Based Screening Levels (RBSLs), MDEQ, December 31, 2013
Values in micrograms per liter (µg/L).
NS - Not Sampled
Bolded values exceed one or more of the criterion.

APPENDIX A

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE COMMUNICATION

TO: Dan Hamel, Project Manager
Remediation and Redevelopment Division
Jackson District

FROM: Kevin Lund, Geologist
Remediation and Redevelopment Division
Jackson District

DATE: July 19, 2016

SUBJECT: Shallow Groundwater Work Plan, Ann Arbor Michigan.

Introduction

This Work Plan scope is primarily to collect groundwater elevation and groundwater quality data from the first occurrence of groundwater in order to compare observations to the proposed 1-4,Dioxane residential vapor intrusion Tier 1 screening levels at select locations near residential homes located in Ann Arbor and Scio Township Michigan. The field activities will be conducted for the Michigan Department of Environmental Quality (DEQ), Remediation and Redevelopment Division by the DEQ Geological Services Unit.
The objective of conducting this groundwater assessment project is:

1) Determine and evaluate the presence of 1-4,Dioxane contaminants in the first occurrence of groundwater at select locations.

2) Better define the areal extent and characteristics of the 1-4,Dioxane in the first occurrence of groundwater in residential areas downgradient from known deeper groundwater contamination.

3) Compare the groundwater data with proposed risk based assumptions and screening levels in the April 15, 2016 proposed cleanup criteria rule revisions.

I reviewed 65 boring logs completed by Pall since 2001 to determine the depth to first occurrence of groundwater less than 20 feet below ground surface and reviewed analytical results of the first observation of groundwater. From this review I identified the area in the vicinity of 7th Avenue, west of West Park between Miller and Liberty; low areas along 7th avenue south of Huron and locations west of Wagner Road. These select areas are down gradient of deeper groundwater contamination and possible locations where groundwater might interact with basements. MDEQ and City of Ann Arbor made a public request of homeowners with wet basement issues to contact the DEQ. The DEQ received multiple requests for information and sampling of basement sumps; the homes making a request are presented in Figure 1. The investigation is being conducted to determine the elevation of the first occurrence of groundwater and groundwater quality as a first step to assess the VI pathway in light of the April 2016 proposed criteria.

Figure 1. Proposed Groundwater Sample Locations in Ann Arbor

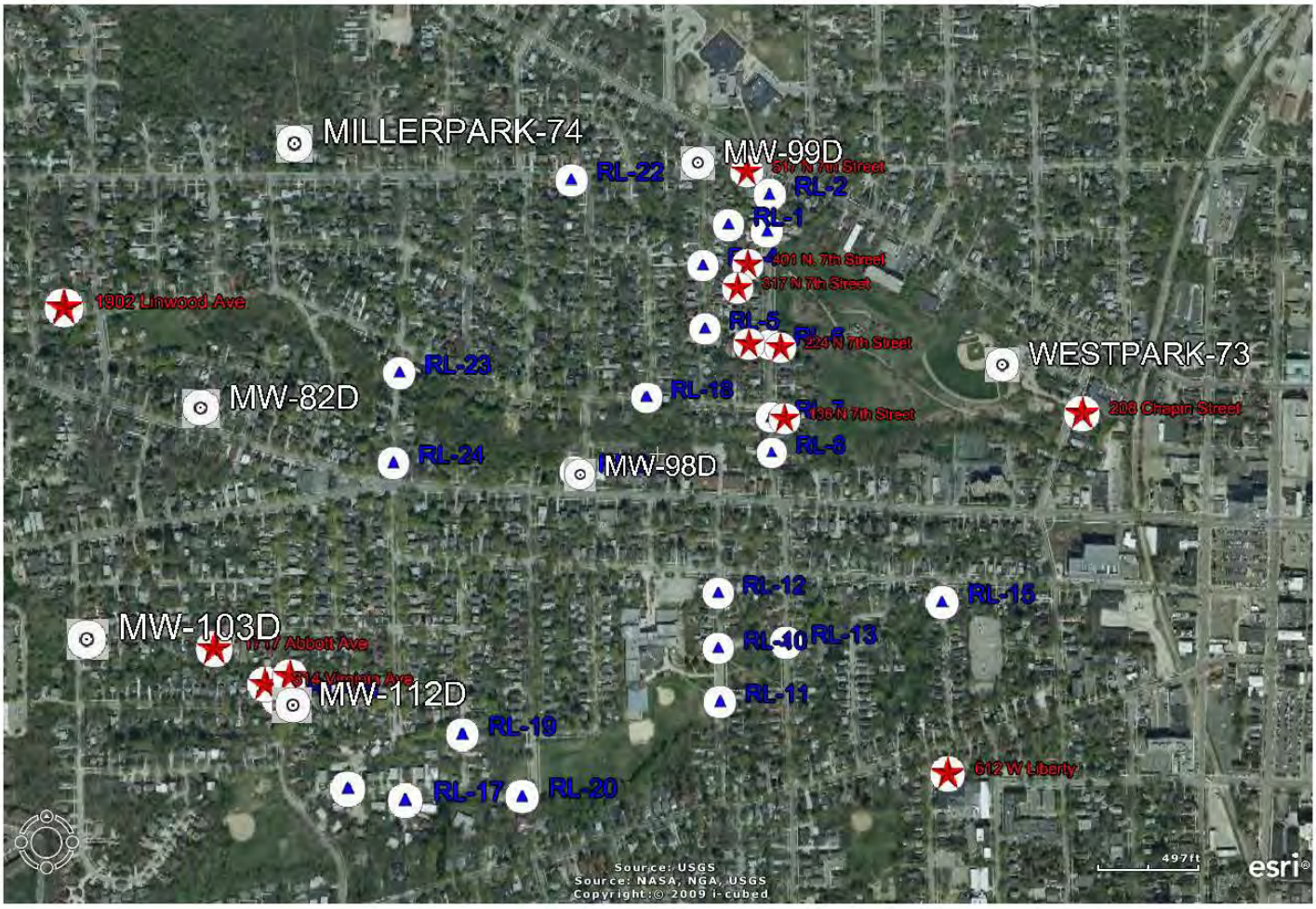
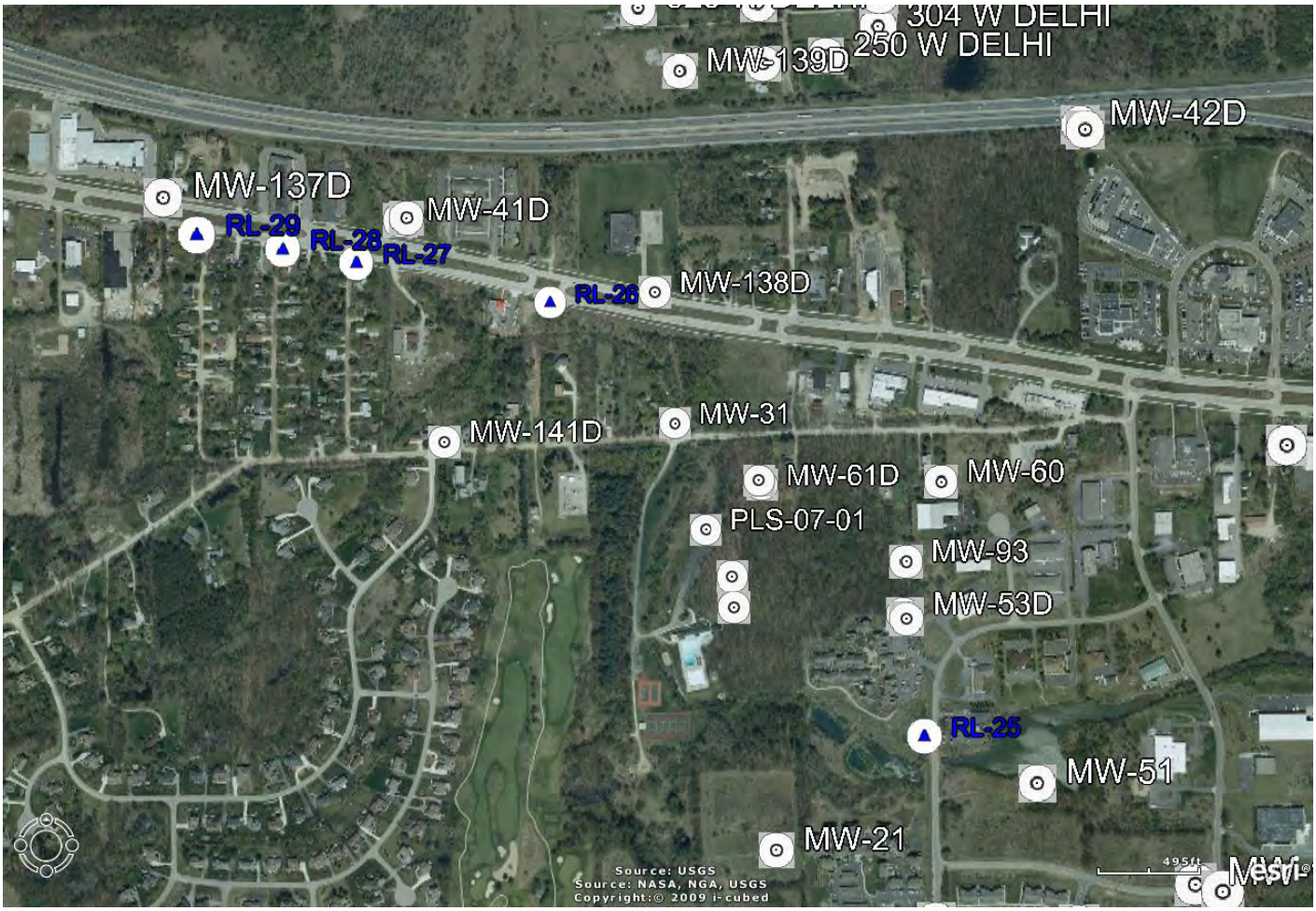


Figure 2. Proposed Groundwater sample Locations west of Wagner Road



The white circles in a square are existing monitoring wells, blue triangles in a white circle are the proposed shallow groundwater sample locations and the Red Stars in a white circle are the locations of home owners with wet basements.

Table 1, Proposed boring location Coordinates (State Plane Feet Zone MI South)

Name	Easting (ft)	Northing (ft)
RL-1	13287614.94	286826.96
RL-2	13287813.53	286976.59
RL-3	13287802.80	286795.92
RL-4	13287492.83	286630.51
RL-5	13287503.86	286321.24
RL-6	13287820.38	286245.80
RL-7	13287826.76	285893.09
RL-8	13287832.69	285720.29
RL-9	13286877.36	285623.22
RL-10	13287583.25	284765.94
RL-11	13287590.81	284507.38
RL-12	13287578.98	285040.01
RL-13	13287915.30	284797.06
RL-15	13288680.01	284996.96

Table 1, Proposed boring location Coordinates (Continued)

Name	Easting (ft)	Northing (ft)
RL-16	13285469.72	284533.56
RL-17	13286071.03	284028.03
RL-18	13287223.44	285985.40
RL-19	13286343.72	284351.47
RL-20	13286634.94	284050.82
RL-21	13285794.35	284084.77
RL-22	13286850.51	287041.24
RL-23	13286024.83	286095.35
RL-24	13286000.26	285657.60
RL-25	13272106.14	284982.58
RL-26	13270299.98	287043.52
RL-27	13269355.66	287231.57
RL-28	13268999.70	287294.84
RL-29	13268583.12	287360.90

SAMPLING AND ANALYSIS PLAN

This Sampling and Analysis Plan (SAP) will be used to evaluate the potential presence of 1-4,Dioxane in the first occurrence of groundwater at select areas in Ann Arbor and Scio Township. The glacial stratigraphic sequence anticipated in this investigation is composed of weathered silty clay, clay with lenses of a fine sand fraction and or till material consisting of gravel and pebbles. The depth of investigation will be limited to the first occurrence of groundwater. This investigation will use an air knife to clear the first five feet and sample first contact with groundwater using a Geoprobe™ duel tube drilling and sampling techniques. The investigation is designed to collect data necessary to complete a screening risk evaluation in accordance with the proposed Volatilization to Indoor Air Screening Levels and Criteria (Proposed Rule 27 of the proposed Administrative Rules for Part 201, Environmental Contamination). The vapor intrusion pathway is evaluated using a tiered process as described in Rule 27.
DEQ and U.S. EPA approved methods will be used for sampling and analysis. The following sections describe the sampling strategy, rationale, investigative methods and procedures, sample analysis program, sample handling, decontamination procedures, and management of investigation-derived wastes.

SAMPLING STRATEGY, RATIONALE, AND APPROACH

The field activities consist of groundwater sampling to determine the depth to first observed groundwater and groundwater quality. The field work will be performed by a DEQ Geological Services Unit (GSU) geologist. The field work will be performed in accordance with the GSU Health and Safety protocols and procedures.

The GSU will conduct the direct-push drilling (Geoprobe™) and groundwater sampling to determine the elevation of the first observed groundwater as specified in this Work Plan.
The Jackson District RRD staff will arrange access agreements, utility clearance and obtain the required permit(s) before subsurface investigation activities commence. It is anticipated that an access agreement will be required for groundwater sampling in the City of Ann Arbor Right-of-Way (issued through the City) and Washtenaw County (issued by the County).

The DEQ Environmental Laboratory (laboratory) will be utilized to analyze groundwater samples for 1,4-Dioxane by Method 8260 Modified. The sampling approaches for the groundwater investigation are described in the following sections. Sample designations are listed in Table 1.

Continuous Core Borings and Soil Sampling

The purpose of the continuous core boring and soil sampling is to assess geologic conditions at locations proposed in Figure 1 and Figure 2. Previous lithologic logs have described the soil at the study area as sand with some amounts of clay at depths of approximately 10 ft. bgs. The continuous core sample locations will be advanced to the first occurrence of groundwater or to a depth no greater than 20 ft. bgs. Lithologic logs will be prepared for the continuous core borings. A groundwater sample and a depth to groundwater from the ground surface measurement will be collected from each location. The soils in the core will be described on a boring log. Soil samples may be collected from the core using a soil sampler.. The soil sample may also be characterized using a sieve or alternative method to identify the grain size of the soil materials.

Groundwater Sampling

The purpose of the groundwater sampling is to assess the potential for 1,4-Dioxane in the first occurrence of groundwater. Groundwater samples will be collected in the boring using a temporary monitoring well. For quality assurance/quality control (QA/QC) a duplicate sample will be collected from two locations. The duplicate locations will be selected in the field and based on availability of groundwater. The groundwater samples will be collected using low flow techniques, transferred to appropriate sample containers provided by the laboratory, and submitted for laboratory analysis of 1,4-Dioxine using U.S. EPA Methods 8260 modified and volatile organic compounds using U. S. EPA method 8260.

SAMPLING METHODS AND PROCEDURES

This section describes the methods and procedures used to conduct a utility clearance and to collect soil, and grab groundwater samples.

Utility Clearance

DEQ will contact MISSDIG before commencement of field activities to locate subsurface utilities. As part of this task, a site walk will be conducted with a utility clearing contractor to confirm and mark proposed sample locations. The proposed drilling locations will be clearly marked. The utility owners of record, or their designated agents, will be expected to clearly mark the position of their utilities on the ground surface throughout the area designated for subsurface investigation. The purpose of the survey will be to locate and delineate any utilities, pipelines, or other buried structures that may exist in the ROW. Prior to drilling by GSU, the location will be cleared by the utility clearing contractor using an air knife as described below.

GEOPROBE™ utilized to collect Grab Groundwater Sampling

Prior to using the Geoprobe ™ an air knife will be used to clear the first 5 feet of the soil boring. After the utilities clearance is completed, the Geoprobe will be utilized to advance soil borings utilizing a direct push rig equipped with a 2-inch Dual Tube probe. Continuous soil samples will be collected to record stratigraphy and to collect groundwater samples. Drilling will be advanced until the first saturated conditions are encountered. Based on current knowledge of the geology in the area it is

anticipated that a mill slot pipe will be used as a temporary monitoring well to collect a groundwater sample. The depth to groundwater will be measured to determine the groundwater depth from ground surface. The ground surface elevation of the sample location and of nearby homes will be determined in order to evaluate the relationship of groundwater to the basement. The hole will be filled with soils and bentonite chips to surface.

In the event that artesian conditions are encountered, GSU will collect the water sample and use a pump to deliver a concrete/grout mixture heavy enough to plug the shallow hole. Purge groundwater will be collected and returned to the boring after the sample is collected. Decontamination of drilling and sampling equipment will be conducted using high pressure steam washing techniques. Decontamination fluids will be containerized and properly disposed.

Survey

The ground elevation of each boring will be surveyed; the elevations from nearby sewer rim elevation will be used as a bench elevation. Ground elevation of nearby structures will be measured and the x-z location determined using a hand held GPS.

Data Evaluation

Data from temporary monitoring wells in Ann Arbor and temporary monitoring wells installed west of Wagner Road will help define the elevation of the first observed groundwater and presence of 1-4,Dioxane concentrations in groundwater in the vicinity of the residential dwellings suspected to have a basement in contact with groundwater in the eastern portion of the PZ and west of Wagner Road. These data will assist DEQ in the next steps to evaluate the vapor intrusion risk of 1-4,Dioxane exposure in the residential areas.
A final report prepared by G SU detailing the boring logs and global positioning system (GPS) locations from this investigation will be issued to Jackson District.

Current Estimated Schedule

Utility clearance and access agreement	July 8 – July 22
Field Work	July 25 – July 29
Report	August 29

CC: Mitch Adelman, District Supervisor

APPENDIX B

LOG OF BORING / WELL: RL-1

Project: Gelman Sciences

Location: Ann Arbor/Scio Twp, MI

Project No.: 806500

Logged By: JWB, Geologist

Start Date: 08/16/2016

End Date: 08/16/2016

Drilling Co.: Terra Probe Environmental

Drilling Method: Geoprobe

Sampling Methods: 2" Dual-Tube 1" Core Barrel

Total Depth (ft. below grade): 15'

Depth to Water.: 10.31 (feet below TOC)

Screened Interval: 7'-12'

TOC Stick Up: 3'

Notes: Temporary Well Removed and Boring Plugged with Bentonite Chips

SUBSURFACE PROFILE

Depth (ft.)	LITHOLOGY: Sample Invl. (ft.)/ Recovery (ft.)	LITHOLOGY: Graphic Log	LITHOLOGY: Description	PID Reading/ Sample Location	Monitoring Well Construction Detail	Depth (ft.)
0			Ground Surface			0
0	0' - 4' / 2.5' Recovery		TOPSOIL: Grading to Fill, Sandy, Black, Dry			0
1			SAND: Fill, Dry, Black			1
2					1" PVC Casing	2
3						3
4	4' - 8' / 3' Recovery		SAND: Fill, Topsoil last 8"			4
5						5
6						6
7						7
8	8' - 15'/ 3' Recovery		SAND: Well Sorted, Fine to Medium Grained, Saturated			8
9					1" PVC Screen Set at 7'-12'	9
10					Static Water Level	10
11			CLAYEY SILT: Well Sorted, Fine Grained, Saturated			11
12						12
13						13
14						14
15						15
16						16
17						17
18						18
19						19
20						20

LOG OF BORING / WELL: RL-2

Start Date: 08/16/2016
End Date: 08/16/2016
Drilling Co.: Terra Probe Environmental
Drilling Method: Geoprobe
Sampling Methods: 2" Dual-Tube 1" Core Barrel

Total Depth (ft. below grade): 20'
Depth to Water.: 12.82 (feet below TOC)
Screened Interval: 14'-19'
TOC Stick Up: 3'

Project: Gelman Sciences
Location: Ann Arbor/Scio Twp, MI
Project No.: 806500
Logged By: JWB, Geologist

Notes: Temporary Well Removed and Boring Plugged with Bentonite Chips

SUBSURFACE PROFILE

Depth (ft.)	Sample Invl. (ft.)/ Recovery (ft.)	Graphic Log	LITHOLOGY Description	PID Reading/ Sample Location	Monitoring Well Construction Detail	Depth (ft.)
0			Ground Surface			0
0	0' - 4' / 2.5' Recovery		TOPSOIL: Sandy, Brown, Dry			0
1			SAND: Fill, Brown, Dry			1
4	4' - 8' / 3' Recovery		SANDY SILT: Gravel Present, Brown to Gray, Dry		1" PVC Casing	4
8	8' - 12' / 3' Recovery		SAND & SILT: Increasing Gravel w/ Depth, Interstitial Clay, "Tacky", Reddish Brown			8
12	12' - 16' Recovery 3'		GRAVEL: Interstitial Clay, "Tacky", Reddish Brown, Saturated		Static Water Level	12
15			SAND: Coarse, Saturated, Few Gravel, Reddish Brown			15
16			SAND & SILT: Grading to Gravel w/ Depth, Interstitial Clays, "Tacky", Reddish Brown		1" PVC Screen Set at 14'-19'	16
20	16' - 20' / Recovery 4'					20

LOG OF BORING / WELL: RL-3

Start Date: 08/16/2016
End Date: 08/16/2016
Drilling Co.: Terra Probe Environmental
Drilling Method: Geoprobe
Sampling Methods: 2" Dual-Tube 1" Core Barrel

Total Depth (ft. below grade): 15'
Depth to Water.: Artesian Conditions
Screened Interval: 7'-12'
TOC Stick Up: 3"

Project: Gelman Sciences
Location: Ann Arbor/Scio Twp, MI
Project No.: 806500
Logged By: JWB, Geologist

Notes: Temporary Well Removed and Boring Plugged with Bentonite Chips

SUBSURFACE PROFILE

Depth (ft.)	Sample Invl. (ft.)/ Recovery (ft.)	Graphic Log	Description	PID Reading/ Sample Location	Monitoring Well Construction Detail	Depth (ft.)
0			Ground Surface			0
1	0' - 4'/ 3' Recovery		TOPSOIL: Grading to Fill, Sandy, Black, Dry			1
2			SAND: Fill, Dry, Black		1" PVC Casing	2
3						3
4	4' - 8' / 3' Recovery		SAND: Fill, Topsoil last 8"			4
5						5
6						6
7						7
8	8' - 12' / 3' Recovery		SAND: Well Sorted, Fine to Medium Grained, Saturated			8
9					1" PVC Screen Set at 7'-12'	9
10					Static Water Level	10
11						11
12			CLAYEY SILT: Well Sorted, Fine Grained, Saturated			12
13						13
14						14
15						15
16						16
17						17
18						18
19						19
20						20

LOG OF BORING / WELL: RL-4

Project: Gelman Sciences

Location: Ann Arbor/Scio Twp, MI

Project No.: 806500

Logged By: JWB, Geologist

Start Date: 08/16/2016

End Date: 08/16/2016

Drilling Co.: Terra Probe Environmental

Drilling Method: Geoprobe

Sampling Methods: 2" Dual-Tube 1" Core Barrel

Total Depth (ft. below grade): 20'

Depth to Water.: 15.17 (feet below TOC)

Screened Interval: 15'-20'

TOC Stick Up: 6"

Notes: Temporary Well Removed and Boring Plugged with Bentonite Chips

SUBSURFACE PROFILE

Depth (ft.)	LITHOLOGY: Sample Invl. (ft.)/ Recovery (ft.)	LITHOLOGY: Graphic Log	LITHOLOGY: Description	PID Reading/ Sample Location	Monitoring Well Construction Detail	Depth (ft.)
0			Ground Surface			0
0	0' - 4'/ 2' Recovery		SAND: Fine to Medium Grained, Well Sorted, Brown-Gray, Dry			0
4	4' - 8' / 3' Recovery		SAND: Fine to Medium Grained, Well Sorted, Brown-Gray, Saturated		1" PVC Casing	4
8	8' - 12' / 3' Recovery		SAND: Fine to Medium Grained, Well Sorted, Brown-Gray, Slightly Moist at Base			8
12	12' - 16' / 3' Recovery		SAND: Fine to Medium Grained, Well Sorted, Brown-Gray, Saturated last 8"		Static Water Level	12
16	16' - 20' 3' Recovery		SAND: Fine to Medium Grained, Well Sorted, Brown-Gray, Saturated Core		1" PVC Screen Set at 15'-20'	16
20						20

LOG OF BORING / WELL: RL-5

Project: Gelman Sciences

Location: Ann Arbor/Scio Twp, MI

Project No.: 806500

Logged By: JWB, Geologist

Start Date: 08/16/2016

End Date: 08/16/2016

Drilling Co.: Terra Probe Environmental

Drilling Method: Geoprobe

Sampling Methods: 2" Dual-Tube 1" Core Barrel

Total Depth (ft. below grade): 20'

Depth to Water.: 16.65 (feet below TOC)

Screened Interval: 15'-20'

TOC Stick Up: 4"

Notes: Temporary Well Removed and Boring Plugged with Bentonite Chips

SUBSURFACE PROFILE

Depth (ft.)	Sample Invl. (ft.)/ Recovery (ft.)	Graphic Log	Description	PID Reading/ Sample Location	Monitoring Well Construction Detail	Depth (ft.)
0			Ground Surface			0
0	0' - 4'/ 2.5' Recovery		TOPSOIL: Some Sand/Sil/Fill			0
1			SANDY SILT: Fill, Moist			1
2						2
3						3
4	4' - 8' / 3' Recovery		SAND: Fine to Medium Grained, Well Sorted, Brown, Dry			4
5						5
6						6
7						7
8	8' - 12' / 3' Recovery		SAND: Fine to Medium Grained, Well Sorted, Brown, Dry		1" PVC Casing	8
9						9
10						10
11			SILTY SAND: Increasing Silt Content w/ Depth, Moist			11
12	12' - 16' / 3' Recovery		SAND: Fine to Medium Grained, Well Sorted, Some Silt, Moist at Base			12
13						13
14						14
15						15
16	16' - 20' 3' Recovery		SAND: Fine to Medium Grained, Well Sorted, Brown, Saturated		Static Water Level	16
17						17
18					1" PVC Screen Set at 15'-20'	18
19						19
20						20

LOG OF BORING / WELL: RL-6

Project: Gelman Sciences

Location: Ann Arbor/Scio Twp, MI

Project No.: 806500

Logged By: JWB, Geologist

Start Date: 08/16/2016

End Date: 08/16/2016

Drilling Co.: Terra Probe Environmental

Drilling Method: Geoprobe

Sampling Methods: 2" Dual-Tube 1" Core Barrel

Total Depth (ft. below grade): 16'

Depth to Water.: 5.53 (feet below TOC)

Screened Interval: 9'-14'

TOC Stick Up: 1'

Notes: Temporary Well Removed and Boring Plugged with Bentonite Chips

SUBSURFACE PROFILE

Depth (ft.)	LITHOLOGY: Sample Invl. (ft.)/ Recovery (ft.)	LITHOLOGY: Graphic Log	LITHOLOGY: Description	PID Reading/ Sample Location	Monitoring Well Construction Detail	Depth (ft.)
0			Ground Surface			0
0	0' - 4'/ 2.5' Recovery		TOPSOIL: Sandy, Black			0
1			SANDY SILTY CLAY: Increasing Sand/Silt/Clay with Depth, Brown, Moist			1
2					1" PVC Casing	2
3						3
4	4' - 8' / 3' Recovery		SANDY SILTY CLAY: Brown, Moist to Saturated			4
5					Static Water Level	5
6						6
7						7
8	8' - 12' / 3' Recovery		MARL: Dark Brown-Black, Mottled, Moist			8
9						9
10						10
11					1" PVC Screen Set at 9'-14'	11
12	12' - 16' / 4' Recovery		SAND: Fine to Medium Grained, Well Sorted, Brown, Saturated			12
13						13
14						14
15						15
16						16
17						17
18						18
19						19
20						20

LOG OF BORING / WELL: RL-7

Project: Gelman Sciences

Location: Ann Arbor/Scio Twp, MI

Project No.: 806500

Logged By: JWB, Geologist

Start Date: 08/16/2016

End Date: 08/16/2016

Drilling Co.: Terra Probe Environmental

Drilling Method: Geoprobe

Sampling Methods: 2" Dual-Tube 1" Core Barrel

Total Depth (ft. below grade): 16'

Depth to Water.: 11.52 (feet below TOC)

Screened Interval: 9'-14'

TOC Stick Up: 1'

Notes: Temporary Well Removed and Boring Plugged with Bentonite Chips

SUBSURFACE PROFILE

Depth (ft.)	Sample Invl. (ft.)/ Recovery (ft.)	Graphic Log	Description	PID Reading/ Sample Location	Monitoring Well Construction Detail	Depth (ft.)
0			Ground Surface			0
0	0' - 4'/ 2.5' Recovery		TOPSOIL: Sandy, Moist, Some Silt			0
1			SAND: Very Fine to Very Coarse Grained, Poorly Sorted, Brown, Moist, Trace Gravel			1
2					1" PVC Casing	2
3						3
4	4' - 8' / 3' Recovery		SAND: Very Fine to Very Coarse Grained, Poorly Sorted, Trace Gravel, Brown, Moist, Laminated			4
5						5
6						6
7						7
8	8' - 12' / 3' Recovery					8
9						9
10						10
11			SAND: Very Fine to Very Coarse Grained, Trace Gravel, Brown, Laminated, Saturated		Static Water Level	11
12			SAND: Some Silt, Brown, Trace Gravel, Saturated			12
13					1" PVC Screen Set at 9'-14'	13
14	12' - 16' / 4' Recovery					14
15						15
16						16
17						17
18						18
19						19
20						20

LOG OF BORING / WELL: RL-8

Project: Gelman Sciences

Location: Ann Arbor/Scio Twp, MI

Project No.: 806500

Logged By: JWB, Geologist

Start Date: 08/16/2016

End Date: 08/16/2016

Drilling Co.: Terra Probe Environmental

Drilling Method: Geoprobe

Sampling Methods: 2" Dual-Tube 1" Core Barrel

Total Depth (ft. below grade): 12'

Depth to Water.: 11.25 (feet below TOC)

Screened Interval: 7-12'

TOC Stick Up: 2.5'

Notes: Temporary Well Removed and Boring Plugged with Bentonite Chips

SUBSURFACE PROFILE

Depth (ft.)	LITHOLOGY: Sample Invl. (ft.)/ Recovery (ft.)	LITHOLOGY: Graphic Log	LITHOLOGY: Description	PID Reading/ Sample Location	Monitoring Well Construction Detail	Depth (ft.)
0			Ground Surface			0
0	0' - 4'/ 3' Recovery		TOPSOIL: Sandy, Moist			0
1			SANDY SILT: Poorly Sorted, Dark Brown, Moist			1
2					1" PVC Casing	2
3						3
4	4' - 8' / 3' Recovery					4
5						5
6						6
7						7
8	8' - 12' / 3' Recovery				1" PVC Screen Set at 7'-12'	8
9						9
10						10
11					Static Water Level	11
12						12
13						13
14						14
15						15
16						16
17						17
18						18
19						19
20						20

LOG OF BORING / WELL: RL-9

Project: Gelman Sciences

Location: Ann Arbor/Scio Twp, MI

Project No.: 806500

Logged By: JWB, Geologist

Start Date: 08/16/2016

End Date: 08/16/2016

Drilling Co.: Terra Probe Environmental

Drilling Method: Geoprobe

Sampling Methods: 2" Dual-Tube 1" Core Barrel

Total Depth (ft. below grade): 20'

Depth to Water.: NA

Screened Interval: NA

TOC Stick Up: NA

Notes: No Well Set

SUBSURFACE PROFILE

Depth (ft.)	Sample Invl. (ft.)/ Recovery (ft.)	Graphic Log	Description	PID Reading/ Sample Location	Monitoring Well Construction Detail	Depth (ft.)
0			Ground Surface			0
0	0' - 4'/ 2.5' Recovery		TOPSOIL: Sandy, Black			0
1			SAND: Some Silt, Trace Gravel, Brown-Tan, Dry			1
2						2
3						3
4	4' - 8' / 2.5' Recovery		SAND: Clayey Silt Interbeds, Some Fill, Trace Gravel, Dark Brown, Dry			4
5						5
6						6
7						7
8	8' - 12' / 3.5' Recovery		SAND: Increased Silt w/ Depth, Brown, Dry			8
9						9
10						10
11						11
12	12' - 16' / 3.5' Recovery		SILT: Increased Very Fine Sand w/ Depth, Well Sorted, Brown, Dry			12
13						13
14						14
15						15
16	16' - 20' / 3' Recovery		SAND: Interbedded, Poorly Sorted, Dry			16
17						17
18						18
19						19
20						20

LOG OF BORING / WELL: RL-10

Project: Gelman Sciences

Location: Ann Arbor/Scio Twp, MI

Project No.: 806500

Logged By: JWB, Geologist

Start Date: 08/16/2016

End Date: 08/16/2016

Drilling Co.: Terra Probe Environmental

Drilling Method: Geoprobe

Sampling Methods: 2" Dual-Tube 1" Core Barrel

Total Depth (ft. below grade): 12'

Depth to Water.: 5.36 (feet below TOC)

Screened Interval: 6-11'

TOC Stick Up: 2'

Notes: Temporary Well Removed and Boring Plugged with Bentonite Chips

SUBSURFACE PROFILE

Depth (ft.)	Sample Invl. (ft.)/ Recovery (ft.)	Graphic Log	Description	PID Reading/ Sample Location	Monitoring Well Construction Detail
0			Ground Surface		
0	0' - 4'/ 3' Recovery		TOPSOIL: Dark Brown Silty Sand, Moist, Trace Gravel		
1			SAND: Very Fine to Very Coarse Grained, Brown, Saturated		1" PVC Casing
2					
3					
4	4' - 8' / 2.5' Recovery		SAND: Very Fine to Very Coarse Grained, Reddish Brown-Gray, Saturated		Static Water Level
5					
6					
7					
8	8' - 12' / 2' Recovery		SAND SILTY CLAY: Gray, Saturated		1" PVC Screen Set at 6'-11'
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

LOG OF BORING / WELL: RL-11

Start Date: 08/17/2016
End Date: 08/17/2016
Drilling Co.: Terra Probe Environmental
Drilling Method: Geoprobe
Sampling Methods: 2" Dual-Tube 1" Core Barrel

Total Depth (ft. below grade): 12'
Depth to Water.: 7.15 (feet below TOC)
Screened Interval: 7'-12'
TOC Stick Up: 2.3'

Project: Gelman Sciences
Location: Ann Arbor/Scio Twp, MI
Project No.: 806500
Logged By: JWB, Geologist

Notes: Temporary Well Removed and Boring Plugged with Bentonite Chips

SUBSURFACE PROFILE

Depth (ft.)	Sample Invl. (ft.)/ Recovery (ft.)	Graphic Log	LITHOLOGY Description	PID Reading/ Sample Location	Monitoring Well Construction Detail	Depth (ft.)
0			Ground Surface			0
0	0' - 4'/ 3' Recovery		TOPSOIL: Sandy, Very Fine to Very Coarse Grained, Trace Gravel, Poorly Sorted			0
1			SAND: Very Fine to Very Coarse Grained, Brown, Trace Gravel, Saturated		1" PVC Casing	1
2						2
3						3
4			FILL: Gravely, Gray, Dry			4
4	4' - 8' / 2' Recovery		GRAVEL: Very Coarse Grained, Angular, Interstitial Silt & Clay, Dry			4
5						5
6						6
7					Static Water Level	7
8			GRAVEL: Very Coarse Grained, Angular, Interstitial Silt and Clay, Saturated		1" PVC Screen Set at 7'-12'	8
8	8' - 12' / 2' Recovery					8
9						9
10						10
11						11
12						12
13						13
14						14
15						15
16						16
17						17
18						18
19						19
20						20

LOG OF BORING / WELL: RL-12

Project: Gelman Sciences

Location: Ann Arbor/Scio Twp, MI

Project No.: 806500

Logged By: JWB, Geologist

Start Date: 08/17/2016

End Date: 08/17/2016

Drilling Co.: Terra Probe Environmental

Drilling Method: Geoprobe

Sampling Methods: 2" Dual-Tube 1" Core Barrel

Total Depth (ft. below grade): 12'

Depth to Water.: 5.46 (feet below TOC)

Screened Interval: 6'-11'

TOC Stick Up: 3'

Notes: Temporary Well Removed and Boring Plugged with Bentonite Chips

SUBSURFACE PROFILE

Depth (ft.)	LITHOLOGY: Sample Invl. (ft.)/ Recovery (ft.)	LITHOLOGY: Graphic Log	LITHOLOGY: Description	PID Reading/ Sample Location	Monitoring Well Construction Detail	Depth (ft.)
0			Ground Surface			0
0	0' - 4'/ 2' Recovery		TOPSOIL: Sandy, Dark Brown, Moist			0
1			SILTY/CLAY: Sand Present, Fill Present, Trace Gravel, Brown, Moist			1
2					1" PVC Casing	2
3						3
4	4' - 8' / 2' Recovery		SAND: Dark Brown, Silt/Clay Present, Trace Gravel, Moist			4
5					Static Water Level	5
6						6
7			PEAT/MARL: Organic Fibrous			7
8	8' - 12' / 0.5' Recovery		SAND & GRAVEL: Very Coarse Grained, Saturated, Brownish Gray		1" PVC Screen Set at 6'-11'	8
9						9
10						10
11						11
12						12
13						13
14						14
15						15
16						16
17						17
18						18
19						19
20						20

LOG OF BORING / WELL: RL-13

Start Date: 08/17/2016
End Date: 08/17/2016
Drilling Co.: Terra Probe Environmental
Drilling Method: Geoprobe
Sampling Methods: 2" Dual-Tube 1" Core Barrel

Total Depth (ft. below grade): 16'
Depth to Water.: 6.14 (feet below TOC)
Screened Interval: 10'-15'
TOC Stick Up: 3"

Project: Gelman Sciences
Location: Ann Arbor/Scio Twp, MI
Project No.: 806500
Logged By: JWB, Geologist

Notes: Temporary Well Removed and Boring Plugged with Bentonite Chips

SUBSURFACE PROFILE

Depth (ft.)	Sample Invl. (ft.)/ Recovery (ft.)	Graphic Log	Description	PID Reading/ Sample Location	Monitoring Well Construction Detail	Depth (ft.)
0			Ground Surface			0
0	0' - 4'/ 3' Recovery		TOPSOIL: Dark Brown, Clayey Sand-Gravel, Moist			0
1			SILTY SAND: Brown, Trace Gravel, Moist			1
2						2
3						3
4						4
5	4' - 8' / 3' Recovery		SILTY SAND: Very Fine to Very Coarse Grained, Trace Gravel, Saturated		1" PVC Casing; Static Water Level	5
6						6
7						7
8	8' - 12' / 3' Recovery		MARL/PEAT: Sandy, Organic, Some Gravel, Some Sand near Bottom of Core, Saturated			8
9						9
10						10
11						11
12	12' - 16' 4' Recovery		SANDY GRAVEL: Coarse Grained, Grading to Fine Silty Sand, Saturated		1" PVC Screen Set at 6'-11'	12
13						13
14						14
15						15
16						16
17						17
18						18
19						19
20						20

LOG OF BORING / WELL: RL-16

Start Date: 08/15/2016
End Date: 08/15/2016
Drilling Co.: Terra Probe Environmental
Drilling Method: Geoprobe
Sampling Methods: 2" Dual-Tube 1" Core Barrel

Total Depth (ft. below grade): 16'
Depth to Water.: NA
Screened Interval: NA
TOC Stick Up: NA

Project: Gelman Sciences
Location: Ann Arbor/Scio Twp, MI
Project No.: 806500
Logged By: JWB, Geologist

Notes: No Well Set

SUBSURFACE PROFILE

Depth (ft.)	LITHOLOGY: Sample Invl. (ft.)/ Recovery (ft.)	LITHOLOGY: Graphic Log	LITHOLOGY: Description	PID Reading/ Sample Location	Monitoring Well Construction Detail	Depth (ft.)
0			Ground Surface			0
0–4	0' - 4'/ 4' Recovery		CLAY: Brown/Gray, Mottled, Trace Sand & Pebbles, Stiff, Slightly Moist			0–4
4–8	4' - 8' / 4' Recovery					4–8
8–12	8' - 12' / 4' Recovery					8–12
12–16	12' - 16' 1' Recovery					12–16
16–20						16–20

LOG OF BORING / WELL: RL-17

Project: Gelman Sciences

Location: Ann Arbor/Scio Twp, MI

Project No.: 806500

Logged By: AJP, Geologist

Start Date: 08/15/2016

End Date: 08/15/2016

Drilling Co.: Terra Probe Environmental

Drilling Method: Geoprobe

Sampling Methods: 2" Dual-Tube 1" Core Barrel

Total Depth (ft. below grade): 12'

Depth to Water.: 9.81 (feet below TOC)

Screened Interval: 6-11'

TOC Stick Up: 3' 10"

Notes: Temporary Well Removed and Boring Plugged with Bentonite Chips

SUBSURFACE PROFILE

Depth (ft.)	Sample Invl. (ft.)/ Recovery (ft.)	Graphic Log	Description	PID Reading/ Sample Location	Monitoring Well Construction Detail	Depth (ft.)
0			Ground Surface			0
1	0' - 4'/ 4' Recovery		TOPSOIL: Sandy Gravel, Fine to Coarse Grained, Subrounded to Subangular Pebbles, Brown, Roots Present		1" PVC Casing	1
2			SANDY GRAVEL: Fine to Coarse Grained, Subrounded to Subangular Pebbles, Brown			2
3						3
4						4
5	4' - 8' / 0' Recovery		SANDY GRAVEL: Fine to Coarse Grained, Rocks/Fill/Roots Present, Brown, Dry, Saturated at 7'			5
6						6
7						7
8					1" PVC Screen Set at 6'-11'	8
9	8' - 12' / 1' Recovery		SANDY GRAVEL: Fine to Coarse Grained, Some Silt Present, Subrounded Granules, Light Brown-Dark Brown, Saturated			9
10					Static Water Level	10
11						11
12						12
13						13
14						14
15						15
16						16
17						17
18						18
19						19
20						20

LOG OF BORING / WELL: RL-18

Project: Gelman Sciences

Location: Ann Arbor/Scio Twp, MI

Project No.: 806500

Logged By: JWB, Geologist

Start Date: 08/16/2016

End Date: 08/16/2016

Drilling Co.: Terra Probe Environmental

Drilling Method: Geoprobe

Sampling Methods: 2" Dual-Tube 1" Core Barrel

Total Depth (ft. below grade): 20'

Depth to Water.: NA

Screened Interval: NA

TOC Stick Up: NA

Notes: No Well Set

SUBSURFACE PROFILE

Depth (ft.)	LITHOLOGY: Sample Invl. (ft.)/ Recovery (ft.)	LITHOLOGY: Graphic Log	LITHOLOGY: Description	PID Reading/ Sample Location	Monitoring Well Construction Detail	Depth (ft.)
0			Ground Surface			0
0	0' - 4'/ 2' Recovery		TOPSOIL: Black, Cohesive, Silty, Moist			0
1			SAND W/ SILT: Mottled, Some Gravel, Dry			1
2						2
3						3
4	4' - 8' / 3' Recovery		SAND W/ SILT: Mottled, Trace Granules/Pebbles, Dark Brown-Gray, Some Gravel			4
5						5
6						6
7						7
8	8' - 12' / 3' Recovery					8
9						9
10						10
11						11
12	12' - 16' / 3 Recovery		SAND W/ SILT: Clay Present at Base, Dry			12
13						13
14						14
15						15
16	16' - 20' / 2' Recovery					16
17						17
18						18
19						19
20			SAND: Well Sorted, Brown, Pebbles			20

LOG OF BORING / WELL: RL-19

Project: Gelman Sciences

Location: Ann Arbor/Scio Twp, MI

Project No.: 806500

Logged By: JWB, Geologist

Start Date: 08/15/2016

End Date: 08/15/2016

Drilling Co.: Terra Probe Environmental

Drilling Method: Geoprobe

Sampling Methods: 2" Dual-Tube 1" Core Barrel

Total Depth (ft. below grade): 20'

Depth to Water.: 16.45 (feet below TOC)

Screened Interval: 14'-19'

TOC Stick Up: 8"

Notes:

SUBSURFACE PROFILE

Depth (ft.)	LITHOLOGY: Sample Invl. (ft.)/ Recovery (ft.)	LITHOLOGY: Graphic Log	LITHOLOGY: Description	PID Reading/ Sample Location	Monitoring Well Construction Detail	Depth (ft.)
0			Ground Surface			0
0	0' - 4'/ 3' Recovery		No Log: Hand Drilled			0
4	4' - 8' / 2.5' Recovery		SAND: Silty, Brown-Gray. Increasing Clay Content w/ Depth,			4
7			CLAYEY SILT: Firm, Moist, Trace Gravel			7
8	8' - 12' / 2.5' Recovery		CLAYEY SILT: FIrm/Stiff, Trace Granules/Pebbles, Slightly Mois		2" PVC Casing	8
12	12' - 16' / 3' Recovery		CLAYEY SILT: Firm/Stiff, Trace Pebbles, Moist-Saturated at Base			12
16	16' - 20' 0' Recovery		No Return		Static Water Level; 2" PVC Screen Set at 14'-19'	16
20						20

LOG OF BORING / WELL: RL-21

Project: Gelman Sciences

Location: Ann Arbor/Scio Twp, MI

Project No.: 806500

Logged By: JWB, Geologist

Start Date: 08/15/2016

End Date: 08/15/2016

Drilling Co.: Terra Probe Environmental

Drilling Method: Geoprobe

Sampling Methods: 2" Dual-Tube 1" Core Barrel

Total Depth (ft. below grade): 20'

Depth to Water.: 16.40 (feet below TOC)

Screened Interval: 12.5'-17.5'

TOC Stick Up: 3'

Notes: Temporary Well Removed and Boring Plugged with Bentonite Chips

SUBSURFACE PROFILE

Depth (ft.)	Sample Invl. (ft.)/ Recovery (ft.)	Graphic Log	Description	PID Reading/ Sample Location	Monitoring Well Construction Detail	Depth (ft.)
0			Ground Surface			0
0	0' - 4'/ 3' Recovery		TOPSOIL: Dark Brown-Black, Trace Pebbles and Granules, Moist			0
1			SILTY SAND: Dark Brown-Black, Trace Pebbles and Granules, Moist			1
2						2
3						3
4	4' - 8' / 3' Recovery		CLAYEY SILT: Sand Present, Cohesive, Dark Brown-Black, Some Gravel w/ Sand, Slightly Moist			4
5						5
6						6
7						7
8	8' - 12' / 3' Recovery		SILTY SAND: Some Gravel, Trace Clay, Moist to Dry, Mottled			8
9					1" PVC Casing	9
10						10
11						11
12	12' - 16' / 2.5' Recovery		SILTY SAND: Some Gravel, Trace Clay, Mottled, Pebbles and Granules Present, Moist to Saturated			12
13						13
14						14
15					1" PVC Screen Set at 12.5'-17.5'	15
16	16' - 20' 2.5' Recovery		GRAVEL: Brown, Pebble Size, Saturated		Static Water Level	16
17						17
18						18
19						19
20						20

LOG OF BORING / WELL: RL-22

Start Date: 08/17/2016
End Date: 08/17/2016
Drilling Co.: Terra Probe Environmental
Drilling Method: Geoprobe
Sampling Methods: 2" Dual-Tube 1" Core Barrel

Total Depth (ft. below grade): 20'
Depth to Water.: 16.35 (feet below TOC)
Screened Interval: 14'-19'
TOC Stick Up: 1.25'

Project: Gelman Sciences
Location: Ann Arbor/Scio Twp, MI
Project No.: 806500
Logged By: JWB, Geologist

Notes: Temporary Well Removed and Boring Plugged with Bentonite Chips

SUBSURFACE PROFILE

Depth (ft.)	Sample Invl. (ft.)/ Recovery (ft.)	Graphic Log	Description	PID Reading/ Sample Location	Monitoring Well Construction Detail	Depth (ft.)
0			Ground Surface			0
0	0' - 4'/ 3' Recovery		TOPSOIL: Sandy, Moist, Fine to Medium Grained			0
1			SAND: Fine to Medium Grained, Well Sorted, Reddish Brown, Moist			1
2						2
3						3
4	4' - 8' / 3' Recovery					4
5						5
6						6
7						7
8	8' - 12' / 3' Recovery		SAND: Fine to Coarse Grained, Well Sorted, Reddish Brown, Moist			8
9					1" PVC Casing	9
10						10
11						11
12	12' - 16' / 3.5' Recovery					12
13						13
14						14
15			SAND: Fine to Coarse Grained, Well Sorted, Reddish Brown, Saturated		1" PVC Screen Set at 12.5'-17.5'	15
16						16
17					Static Water Level	17
18	16' - 20' 4' Recovery					18
19			SILTY CLAY: Brown, Cohesive			19
20						20

LOG OF BORING / WELL: RL-23

Project: Gelman Sciences

Location: Ann Arbor/Scio Twp, MI

Project No.: 806500

Logged By: JWB, Geologist

Start Date: 08/15/2016

End Date: 08/15/2016

Drilling Co.: Terra Probe Environmental

Drilling Method: Geoprobe

Sampling Methods: 2" Dual-Tube 1" Core Barrel

Total Depth (ft. below grade): 20'

Depth to Water.: NA

Screened Interval: NA

TOC Stick Up: NA

Notes: No Well Set

SUBSURFACE PROFILE

Depth (ft.)	Sample Invl. (ft.)/ Recovery (ft.)	Graphic Log	Description	PID Reading/ Sample Location	Monitoring Well Construction Detail	Depth (ft.)
0			Ground Surface			0
0	0' - 4'/ 2.5' Recovery		TOPSOIL: Sandy, Black			0
1			SAND: Poorly Sorted, Some Pebbles, Brown, Moist			1
2						2
3						3
4	4' - 8' / 2.5' Recovery		SAND: Poorly Sorted, Some Pebbles, Mottled, Brown, Moist			4
5						5
6						6
7						7
8	8' - 12' / 2.5' Recovery		SILT: Gray, Some Rock Fragments			8
9			FILL: Sandy, Rock Fragments, Dark Brown			9
10						10
11						11
12	12' - 16' / 1.5' Recovery					12
13						13
14						14
15						15
16	16' - 20' 2' Recovery		SAND: Dark Brown, Moist			16
17			CLAYEY SILT: Dark Brown, Moist			17
18						18
19						19
20						20

LOG OF BORING / WELL: RL-24

Project: Gelman Sciences

Location: Ann Arbor/Scio Twp, MI

Project No.: 806500

Logged By: JWB, Geologist

Start Date: 08/15/2016

End Date: 08/15/2016

Drilling Co.: Terra Probe Environmental

Drilling Method: Geoprobe

Sampling Methods: 2" Dual-Tube 1" Core Barrel

Total Depth (ft. below grade): 20'

Depth to Water.: NA

Screened Interval: NA

TOC Stick Up: NA

Notes: No Well Set

SUBSURFACE PROFILE

Depth (ft.)	LITHOLOGY: Sample Invl. (ft.)/ Recovery (ft.)	LITHOLOGY: Graphic Log	LITHOLOGY: Description	PID Reading/ Sample Location	Monitoring Well Construction Detail	Depth (ft.)
0			Ground Surface			0
0	0' - 4'/ 3.5' Recovery		CLAYEY SILT: Mottled, Brown-Gray, Moist			0
4	4' - 8' / 4' Recovery					4
8	8' - 12' / 4' Recovery					8
12	12' - 16' / 4' Recovery					12
16	16' - 20' 2' Recovery		SAND: FIne to Medium Grained, Well Sorted, Brown, Dry			16
20						20

LOG OF BORING / WELL: RL-25

Start Date: 08/17/2016
End Date: 08/17/2016
Drilling Co.: Terra Probe Environmental
Drilling Method: Geoprobe
Sampling Methods: 2" Dual-Tube 1" Core Barrel

Total Depth (ft. below grade): 20'
Depth to Water.: NA
Screened Interval: NA
TOC Stick Up: NA

Project: Gelman Sciences
Location: Ann Arbor/Scio Twp, MI
Project No.: 806500
Logged By: JWB, Geologist

Notes: No Well Set, Cutting Not Logged

SUBSURFACE PROFILE

Depth (ft.)	LITHOLOGY: Sample Invl. (ft.)/ Recovery (ft.)	LITHOLOGY: Graphic Log	LITHOLOGY: Description	PID Reading/ Sample Location	Monitoring Well Construction Detail	Depth (ft.)
0			Ground Surface			0
0	0' - 4'/ 3' Recovery		SAND: Dry			0
4	4' - 8' / 3' Recovery					4
8	8' - 12' / 3' Recovery					8
12	12' - 16' / 3' Recovery					12
16	16' - 20' 3' Recovery					16
20						20

LOG OF BORING / WELL: RL-26

Project: Gelman Sciences

Location: Ann Arbor/Scio Twp, MI

Project No.: 806500

Logged By: JWB, Geologist

Start Date: 08/17/2016

End Date: 08/17/2016

Drilling Co.: Terra Probe Environmental

Drilling Method: Geoprobe

Sampling Methods: 2" Dual-Tube 1" Core Barrel

Total Depth (ft. below grade): 20'

Depth to Water.: NA

Screened Interval: NA

TOC Stick Up: NA

Notes: No Well Set

SUBSURFACE PROFILE

Depth (ft.)	LITHOLOGY: Sample Invl. (ft.)/ Recovery (ft.)	LITHOLOGY: Graphic Log	LITHOLOGY: Description	PID Reading/ Sample Location	Monitoring Well Construction Detail	Depth (ft.)
0			Ground Surface			0
0	0' - 4'/ 3' Recovery		TOPSOIL: Sandy, Moist			0
1			CLAYEY SAND: Sandy, Moist			1
2						2
3						3
4	4' - 8' / 3' Recovery		SAND: Very Fine to Very Coarse Grained, Poorly Sorted, Brown, Dry			4
5						5
6						6
7						7
8	8' - 12' / 3' Recovery		SILTY CLAY: Diamicton, Gray, Stiff, Trace Pebbles and Sand, Moist			8
9						9
10						10
11						11
12	12' - 16' / 3' Recovery					12
13						13
14						14
15						15
16	16' - 20' 3' Recovery					16
17						17
18						18
19						19
20						20

LOG OF BORING / WELL: RL-27

Start Date: 08/17/2016
End Date: 08/17/2016
Drilling Co.: Terra Probe Environmental
Drilling Method: Geoprobe
Sampling Methods: 2" Dual-Tube 1" Core Barrel

Total Depth (ft. below grade): 16'
Depth to Water.: NA
Screened Interval: NA
TOC Stick Up: NA

Project: Gelman Sciences
Location: Ann Arbor/Scio Twp, MI
Project No.: 806500
Logged By: JWB, Geologist

Notes: No Well Set

SUBSURFACE PROFILE

Depth (ft.)	Sample Invl. (ft.)/ Recovery (ft.)	Graphic Log	Description	PID Reading/ Sample Location	Monitoring Well Construction Detail	Depth (ft.)
0			Ground Surface			0
0	0' - 4'/ 3' Recovery		TOPSOIL: Sandy, Moist			0
1			CLAYEY SAND: Some Pebbles, Reddish Brown, Moist			1
2						2
3						3
4						4
5	4' - 8' / 3' Recovery					5
6			CLAYEY SILT:Cohesive,Trace Sand, Stiff, Mottled Brown/Gray, Moist			6
7						7
8	8' - 12' / 3.5' Recovery		CLAYEY SILT: Trace Sand and Pebbles, Moist, Very Hard			8
9						9
10						10
11						11
12						12
13	12' - 16' / 4' Recovery					13
14						14
15						15
16						16
17						17
18						18
19						19
20						20

LOG OF BORING / WELL: RL-28

Project: Gelman Sciences

Location: Ann Arbor/Scio Twp, MI

Project No.: 806500

Logged By: JWB, Geologist

Start Date: 08/17/2016

End Date: 08/17/2016

Drilling Co.: Terra Probe Environmental

Drilling Method: Geoprobe

Sampling Methods: 2" Dual-Tube 1" Core Barrel

Total Depth (ft. below grade): 16'

Depth to Water.: NA

Screened Interval: NA

TOC Stick Up: NA

Notes: No Well Set

SUBSURFACE PROFILE

Depth (ft.)	LITHOLOGY: Sample Invl. (ft.)/ Recovery (ft.)	LITHOLOGY: Graphic Log	LITHOLOGY: Description	PID Reading/ Sample Location	Monitoring Well Construction Detail	Depth (ft.)
0			Ground Surface			0
0	0' - 4'/ 2.5' Recovery		TOPSOIL: Roots, Dark Brown, Moist			0
1			SILTY SAND: Clay Present, Dark Brown, Moist			1
2						2
3						3
4	4' - 8' / 3' Recovery		SAND: Fine to Medium Grained, Well Sorted, Brown, Moist			4
5						5
6						6
7						7
8	8' - 12' / 3' Recovery					8
9						9
10						10
11						11
12	12' - 16' / 3' Recovery					12
13						13
14						14
15						15
16						16
17						17
18						18
19						19
20						20

LOG OF BORING / WELL: RL-29

Start Date: 08/17/2016
End Date: 08/17/2016
Drilling Co.: Terra Probe Environmental
Drilling Method: Geoprobe
Sampling Methods: 2" Dual-Tube 1" Core Barrel

Total Depth (ft. below grade): 20'
Depth to Water.: NA
Screened Interval: NA
TOC Stick Up: NA

Project: Gelman Sciences
Location: Ann Arbor/Scio Twp, MI
Project No.: 806500
Logged By: JWB, Geologist

Notes: No Well Set

SUBSURFACE PROFILE

Depth (ft.)	LITHOLOGY: Sample Invl. (ft.)/ Recovery (ft.)	LITHOLOGY: Graphic Log	LITHOLOGY: Description	PID Reading/ Sample Location	Monitoring Well Construction Detail	Depth (ft.)
0			Ground Surface			0
0	0' - 4'/ 3' Recovery		TOPSOIL: Roots, Reddish Brown, Moist			0
1			SILTY/CLAYEY SAND: Red Brown, Moist			1
2						2
3						3
4	4' - 8' / 3.5' Recovery		SAND: Fine to Medium Grained, Well Sorted, Brown, Moist			4
5						5
6						6
7						7
8	8' - 12' / 3.5' Recovery					8
9						9
10						10
11						11
12	12' - 16' / 3.5' Recovery					12
13						13
14						14
15						15
16	16' - 20' / 3.5' Recovery					16
17						17
18						18
19						19
20						20

APPENDIX C

Appendix B
Survey Information

NAME	NAME_2	GROUP	DISTANCE_FT	LABEL_1	LABEL_2	NORTHING	EASTING	ELEVATION_FT
12308 - RL-17 MHR	RL-17 MHR	RL-17	33.974865	MHR	STORM MANHOLE	284067.4084	13286071.13	849.2973
12307 - RL-17 MHS	RL-17 MHS	RL-17	33.187229	MHS	SANITARY MANHOLE	284084.7627	13286096.87	848.2795
12306 - RL-17 HSE	RL-17 HSE	RL-17	68.030576	HSE	HOUSE	284010.4616	13286155.32	850.4675
12305 - RL-17	RL-17	RL-17	0	SB	SOIL BORING	284051.8782	13286101.35	849.1446
12302 - RL-21 MHR	RL-21 MHR	RL-21	44.777503	MHR	STORM MANHOLE	284047.8296	13285829.56	857.4315
12301 - RL-21 MHS	RL-21 MHS	RL-21	34.960118	MHS	SANITARY MANHOLE	284060.8688	13285820.22	858.1259
12300 - RL-21	RL-21	RL-21	0	SB	SOIL BORING	284056.2023	13285785.58	860.8298
12299 - RL-21 HSE 522	RL-21 HSE 522	RL-21	34.852874	HSE	HOUSE	284022.429	13285776.97	863.7009
12294 - RL-16 HSE 400	RL-16 HSE 400	RL-16	25.776837	HSE	HOUSE	284470.8144	13285440.91	888.391
12293 - RL-16 MHS	RL-16 MHS	RL-16	42.196792	MHS	SANITARY MANHOLE	284516.4151	13285485.93	884.0839
12292 - RL-16 MHR	RL-16 MHR	RL-16	21.160228	MHR	STORM MANHOLE	284508.5291	13285465.87	884.2937
12291 - RL-16 MHR	RL-16 MHR	RL-16	31.007818	MHR	STORM MANHOLE	284494.768	13285480.51	884.4524
12290 - RL-16	RL-16	RL-16	0	SB	SOIL BORING	284495.1138	13285449.51	884.6417
12289 - RL-19 CB1	RL-19 CB1	RL-19	150.353827	CB1	SQUARE CATCH BASIN	284125.7699	13286367.84	841.2808
12288 - RL-19 HSE 411	RL-19 HSE 411	RL-19	58.049953	HSE	HOUSE	284293.5368	13286424.58	846.0794
12287 - RL-19 MHS	RL-19 MHS	RL-19	64.961875	MHS	SANITARY MANHOLE	284338.4787	13286351.01	849.4453
12286 - RL-19	RL-19	RL-19	0	SB	SOIL BORING	284276.1176	13286369.2	844.9056
12285 - RL-12	RL12	RL-12	0	SB	SOIL BORING	284833.0003	13287613.53	822.1873
12284 - RL-12 HSE 227	RL12 HSE 227	RL-12	41.664244	HSE	HOUSE	284860.8024	13287644.59	823.8185
12283 - RL-12 MHS	RL12 MHS	RL-12	69.597763	MHS	SANITARY MANHOLE	284894.7418	13287581.16	826.3326
12282 - RL-10 HSE 234	RL-10 HSE 234	RL-10	117.624048	HSE	HOUSE	284744.2739	13287531.44	821.5164
12281 - RL-10 MHR	RL-10 MHR	RL-10	51.996552	MHR	STORM MANHOLE	284707.2263	13287588.78	820.5189
12280 - RL-10 MHS	RL-10 MHS	RL-10	40.974805	MHS	SANITARY MANHOLE	284689.0588	13287584.93	821.1954
12279 - RL-10	RL-10	RL-10	0	SB	SOIL BORING	284663.5405	13287616.98	823.6891
12278 - RL-11 MHS	RL-11 MHS	RL-11	47.149972	MHS	SANITARY MANHOLE	284625.7151	13287587.02	825.5526
12277 - RL-11 HSE 315	RL-11 HSE 315	RL-11	51.907375	HSE	HOUSE	284549.0991	13287649.28	831.922
12276 - RL-11	RL-11	RL-11	0	SB	SOIL BORING	284591.8221	13287619.8	828.8993
12272 - RL-12	RL-12	RL-12	0	SB	SOIL BORING	284833.1003	13287613.47	822.2089
12271 - RL-3 HSE 512	RL-3 HSE 512	RL-3	45.754645	HSE	HOUSE	286760.0394	13287872.75	835.3885
12270 - RL-3	RL-3	RL-3	0	SB	SOIL BORING	286735.6838	13287834.02	829.3467
12267 - RL-3 MHS	RL-3 MHS	RL-3	59.45131	MHS	SANITARY MANHOLE	286684.98	13287865.06	826.7571
12265 - RL-3 MHS	RL-3 MHS	RL-3	50.941309	MHS	SANITARY MANHOLE	286694.0781	13287804.62	826.4889

Appendix B
Survey Information

NAME	NAME_2	GROUP	DISTANCE_FT	LABEL_1	LABEL_2	NORTHING	EASTING	ELEVATION_FT
12264 - RL-3 MHR	RL-3 MHR	RL-3	39.906381	MHR	STORM MANHOLE	286749.5987	13287796.62	829.1215
12263 - RL-2 MHS	RL-2 MHS	RL-2	102.348479	MHS	SANITARY MANHOLE	286859.3602	13287801.37	836.7821
12262 - RL-2 HSE 518	RL-2 HSE 518	RL-2	47.036463	HSE	HOUSE	286929.4192	13287868.53	846.9306
12261 - RL-2	RL-2	RL-2	0	SB	SOIL BORING	286957.4071	13287830.73	844.5883
12259 - RL-6 HSE 228	RL-6 HSE 228	RL-6	47.248772	HSE	HOUSE	286306.8447	13287873.81	830.5872
12258 - RL-6 MHS	RL-6 MHS	RL-6	33.544157	MHS	SANITARY MANHOLE	286366.4038	13287820.1	829.4964
12257 - RL-6 MHS	RL-6 MHS	RL-6	32.760994	MHS	SANITARY MANHOLE	286333.0389	13287815.38	830.1126
12256 - RL-6	RL-6	RL-6	0	SB	SOIL BORING	286344.9639	13287845.9	829.6032
12255 - RL-7 HSE 135	RL-7 HSE 135	RL-7	34.31987	HSE	HOUSE	285902.1163	13287777.59	831.7159
12254 - RL-7 MHS	RL-7 MHS	RL-7	44.415771	MHS	SANITARY MANHOLE	285959.417	13287825.73	830.8666
12253 - RL-7 MHS	RL-7 MHS	RL-7	38.378647	MHS	SANITARY MANHOLE	285947.7291	13287824.99	830.4102
12252 - RL-7	RL-7	RL-7	0	SB	SOIL BORING	285934.4989	13287788.96	831.7355
12251 - RL-8 CB1	RL-8 CB1	RL-8	30.93517	CB1	SQUARE CATCH BASIN	285735.3388	13287853.69	824.4304
12250 - RL-8 MHS	RL-8 MHS	RL-8	65.070461	MHS	SANITARY MANHOLE	285770.6164	13287856.45	825.449
12249 - RL-8 MHR	RL-8 MHR	RL-8	39.191867	MHR	STORM MANHOLE	285727.6765	13287830.6	824.998
12248 - RL-8 HSE 116	RL-8 HSE 116	RL-8	29.331592	HSE	HOUSE	285695.9291	13287890.76	826.3544
12247 - RL-8	RL-8	RL-8	0	SB	SOIL BORING	285705.8943	13287863.18	826.1642
12246 - RL-13 MHS	RL-13 MHS	RL-13	98.190765	MHS	SANITARY MANHOLE	284704.9312	13287958.01	818.6785
12245 - RL-13 MHR	RL-13 MHR	RL-13	66.124188	MHR	STORM MANHOLE	284717.1215	13287916.88	818.4138
12244 - RL-13 HSE 226	RL-13 HSE 226	RL-13	33.439742	HSE	HOUSE	284803.2851	13287870.56	818.2734
12243 - RL-13	RL-13	RL-13	0	SB	SOIL BORING	284778.9866	13287893.53	817.5959
12242 - RL-5 HSE 910	RL-5 HSE 910	RL-5	30.866018	HSE	HOUSE	286396.5688	13287554.18	843.5539
12241 - RL-5 MHS	RL-5 MHS	RL-5	64.880513	MHS	SANITARY MANHOLE	286341.7521	13287487.88	843.6399
12240 - RL-5 MHR	RL-5 MHR	RL-5	22.325517	MHR	STORM MANHOLE	286385.222	13287503.82	842.7123
12239 - RL-5	RL-5	RL-5	0	SB	SOIL BORING	286396.102	13287523.32	843.5044
12238 - RL-4 HSE 400	RL-4 HSE 400	RL-4	41.247486	HSE	HOUSE	286734.4645	13287551.65	843.3482
12237 - RL-4 MHR	RL-4 MHR	RL-4	33.662877	MHR	STORM MANHOLE	286738.005	13287496.44	841.6282
12236 - RL-4 MHS	RL-4 MHS	RL-4	24.895196	MHS	SANITARY MANHOLE	286731.6371	13287502.54	841.7334
12235 - RL-4	RL-4	RL-4	0	SB	SOIL BORING	286711.6016	13287517.32	842.9988
12234 - RL-1 HSE 500	RL-1 HSE 500	RL-1	53.692777	HSE	HOUSE	286883.3281	13287552.98	833.6944
12233 - RL-1 MHR	RL-1 MHR	RL-1	85.266165	MHR	STORM MANHOLE	286928.8176	13287492.52	833.1827
12232 - RL-1 MHS	RL-1 MHS	RL-1	29.205484	MHS	SANITARY MANHOLE	286819.4151	13287502.72	837.0526
12230 - RL-1	RL-1	RL-1	0	SB	SOIL BORING	286846.3209	13287514.08	835.9055
12229 - RL-9 MHS	RL-9 MHS	RL-9	112.625608	MHS	SANITARY MANHOLE	285755.1496	13286948.97	846.7335
12228 - RL-9 MHR	RL-9 MHR	RL-9	99.53279	MHR	STORM MANHOLE	285743.8346	13286942.15	846.8996
12227 - RL-9 HSE	RL-9 HSE	RL-9	42.664557	HSE	HOUSE	285664.5685	13286862.4	850.221
12226 - RL-9	RL-9	RL-9	0	SB	SOIL BORING	285652.2236	13286903.24	849.8044
12222 - RL-18 MHR	RL-18 MHR	RL-18	100.937526	MHR	STORM MANHOLE	285995.3036	13287246.01	849.4542
12221 - RL-18 MHS	RL-18 MHS	RL-18	104.972376	MHS	SANITARY MANHOLE	285990.641	13287250.09	849.7132
12220 - RL-18 HSE 12220	RL-18 HSE 12220	RL-18	38.502169	HSE	HOUSE	286098.1854	13287301.02	851.1744
12219 - RL-18	RL-18	RL-18	0	SB	SOIL BORING	286094.8584	13287262.66	850.4524

Appendix B
Survey Information

NAME	NAME_2	GROUP	DISTANCE_FT	LABEL_1	LABEL_2	NORTHING	EASTING	ELEVATION_FT
12218 - RL-22 HSE 417	RL-22 HSE 417	RL-22	42.500329	HSE	HOUSE	286892.5418	13286883.63	854.2
12217 - RL-22 GAR HSE 1201	RL-22 GAR HSE 1201	RL-22	29.460863	GAR HSE	GARAGE CORNER	286923.2214	13286883.6	846.5987
12216 - RL-22 MHR	RL-22 MHR	RL-22	51.182638	MHR	STORM MANHOLE	286973.8705	13286920.3	843.2919
12215 - RL-22 MHS	RL-22 MHS	RL-22	140.749322	MHS	SANITARY MANHOLE	287063.4698	13286924.71	839.9741
12214 - RL-22	RL-22	RL-22	0	SB	SOIL BORING	286923.2032	13286913.06	846.9571
12213 - RL-23 HSE116	RL-23 HSE116	RL-23	88.886827	HSE	HOUSE	285943.2044	13286060.28	865.2844
12212 - RL-23 MHR	RL-23 MHR	RL-23	34.662416	MHR	STORM MANHOLE	285982.9989	13286023.1	865.2759
12211 - RL-23 MHS	RL-23 MHS	RL-23	29.874315	MHS	SANITARY MANHOLE	285975.9774	13286004.75	865.8271
12210 - RL-23 CB1	RL-23 CB1	RL-23	3.148199	CB1	SQUARE CATCH BASIN	286001.6281	13285997.17	864.717
12209 - RL-23	RL-23	RL-23	0	SB	SOIL BORING	286004.5181	13285995.92	865.4144
12205 - RL-24 HSE 1500	RL-24 HSE 1500	RL-24	44.85822	HSE	HOUSE	285671.4134	13285949.02	872.7324
12204 - RL-24 MHS	RL-24 MHS	RL-24	32.682292	MHS	SANITARY MANHOLE	285728.912	13285997.38	870.6967
12203 - RL-24 MHW	RL-24 MHW	RL-24	20.271884	MHW	WATER MAIN MANHOLE	285689.7635	13286002.59	870.8646
12202 - RL-24	RL-24	RL-24	0	SB	SOIL BORING	285698.8826	13285984.48	871.0243
12200 - RL-25 BLC 483	RL-25 BLC 483	RL-25	164.581792	BLC	BUILDING CORNER	284952.7538	13272327.79	904.9146
12199 - RL-25 MHS	RL-25 MHS	RL-25	33.801802	MHS	SANITARY MANHOLE	284875.0872	13272157.66	901.3586
12198 - RL-25	RL-25	RL-25	0	SB	SOIL BORING	284906.633	13272169.8	901.7437
12197 - RL-26 BLC 4765	RL-26 BLC 4765	RL-26	97.109067	BLC	BUILDING CORNER	287042.1686	13270074.57	876.3584
12196 - RL-26 MHR	RL-26 MHR	RL-26	30.666487	MHR	STORM MANHOLE	287078.1793	13270193.6	878.6371
12195 - RL-26	RL-26	RL-26	0	SB	SOIL BORING	287081.9397	13270163.16	877.3643
12194 - RL-27 HSE 5015	RL-27 HSE 5015	RL-27	70.972596	HSE	HOUSE	287169.4251	13269382.87	873.4805
12193 - RL-27	RL-27	RL-27	0	SB	SOIL BORING	287238.9036	13269368.39	869.5163
12192 - RL-27 MHS	RL-27 MHS	RL-27	40.66909	MHS	SANITARY MANHOLE	287255.9355	13269331.46	868.6817
12191 - RL-27 CB1	RL-27 CB1	RL-27	61.450079	CB1	SQUARE CATCH BASIN	287259.8526	13269310.62	868.6263
12190 - RL-28 HSE 5085	RL-28 HSE 5085	RL-28	82.461592	HSE	HOUSE	287251.0541	13268887.67	871.4594
12189 - RL-28 MHS	RL-28 MHS	RL-28	48.467428	MHS	SANITARY MANHOLE	287312.6282	13268995.41	871.1308
12188 - RL-28 CB1	RL-28 CB1	RL-28	17.634075	CB1	SQUARE CATCH BASIN	287325.4694	13268943.76	871.246
12187 - RL-28	RL-28	RL-28	0	SB	SOIL BORING	287308.1645	13268947.15	872.0272
12186 - RL-29 HSE 5115	RL-29 HSE 5115	RL-29	106.14235	HSE	HOUSE	287261.4805	13268572.27	878.5585
12185 - RL-29 HSE 5103	RL-29 HSE 5103	RL-29	113.789292	HSE	HOUSE	287298.2266	13268676.92	876.9553
12184 - RL-29 MHS	RL-29 MHS	RL-29	67.182078	MHS	SANITARY MANHOLE	287366.8243	13268653.24	873.8913
12183 - RL-29 MHR	RL-29 MHR	RL-29	20.409672	MHR	STORM MANHOLE	287379.2266	13268602.19	874.2239
12182 - RL-29	RL-29	RL-29	0	SB	SOIL BORING	287366.7238	13268586.06	876.3676

APPENDIX D

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

Aqua TROLL 600 **Low-Flow System**
8/16/2016 **ISI Low-Flow Log**

Project Information:		**Pump Information:**	
Operator Name	Amber Jane Pontius	Pump Model/Type	Peristaltic
Company Name	Fleis & VandenBrink	Tubing Type	TLPE
Project Name	Shallow GW Asssessment	Tubing Diameter	0.19 in
Site Name	Gelman Sciences	Tubing Length	15 ft
		Pump placement from TOC	12.5 ft

Well Information:		**Pumping information:**	
Well ID	RL-1	Final pumping rate	180 ml/min
Well diameter	1 in	Flowcell volume	130 ml
Well total depth	15 ft	Calculated Sample Rate	1:11
Depth to top of screen	10 ft	Sample rate	1:11
Screen length	5 ft	Stabilized drawdown	0.00 ft
Depth to Water	10.31 ft		

Date Time	Elapsed Time	Temperature (°C)	Specific Conductivity (µS/cm)	Salinity (PSU)	Turbidity (NTU)	pH (pH)	ORP (mV)	RDO Concentration (mg/L)
8/16/2016 10:01	0:00	23.00934	1107.265	0.5554082	1155.345	7.211999	151.1974	4.736734
8/16/2016 10:02	1:11	21.43695	1123.179	0.5636122	750.3932	7.19574	89.11798	1.033803
8/16/2016 10:03	2:21	20.87491	1128.509	0.566321	1711.458	7.168954	53.0667	0.3617754
8/16/2016 10:05	3:33	20.51791	1134.636	0.5694658	1237.756	7.150177	23.33829	0.2803937
8/16/2016 10:06	4:43	20.34137	1118.366	0.560922	2124.365	7.143739	10.03453	0.2525015
8/16/2016 10:07	5:55	20.19089	1102.306	0.5525004	2426.554	7.13065	5.46405	0.2187324
8/16/2016 10:08	7:06	20.19333	1103.751	0.5532555	346.4386	7.118559	1.71611	0.210801
8/16/2016 10:09	8:17	20.0618	1103.058	0.5528668	1533.484	7.11252	-4.256275	0.2191382
8/16/2016 10:11	9:28	19.96625	1097.598	0.549996	1490.63	7.111533	-7.219818	0.2086283

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

Aqua TROLL 600 **Low-Flow System**
8/16/2016 **ISI Low-Flow Log**

Project Information:		**Pump Information:**	
Operator Name	Amber Jane Pontius	Pump Model/Type	Peristaltic
Company Name	Fleis & VandenBrink	Tubing Type	TLPE
Project Name	Shallow GW Investigation	Tubing Diameter	0.19 in
Site Name	Gelman Sciences	Tubing Length	22 ft
		Pump placement from TOC	17.5 ft

Well Information:		**Pumping information:**	
Well ID	RL-2	Final pumping rate	180 ml/min
Well diameter	1 in	Flowcell volume	130 ml
Well total depth	20 ft	Calculated Sample Rate	1:23
Depth to top of screen	15 ft	Sample rate	1:23
Screen length	5 ft	Stabilized drawdown	0.01 ft
Depth to Water	12.82 ft		

Date Time	Elapsed Time	Temperature (°C)	Specific Conductivity (µS/cm)	Salinity (PSU)	Turbidity (NTU)	pH (pH)	ORP (mV)	RDO Concentration (mg/L)
8/16/2016 16:05	0:00	17.73749	2237.6	1.158034	42.14772	6.946567	138.9117	4.832839
8/16/2016 16:06	1:23	17.31116	2249.563	1.168529	23.76482	6.945013	134.9039	5.64329
8/16/2016 16:08	2:48	16.8425	2272.435	1.176092	68.20174	6.825955	132.441	3.61944
8/16/2016 16:09	4:12	16.76764	2258.736	1.168561	274.7543	6.801527	128.6716	3.44441
8/16/2016 16:11	5:36	16.85782	2265.706	1.17245	637.6862	6.794066	125.4458	3.459778
8/16/2016 16:12	7:00	16.97556	2270.396	1.175135	1358.539	6.793027	122.5157	3.439389
8/16/2016 16:13	8:24	16.80585	2278.609	1.179421	246.7867	6.798718	117.1369	3.455945

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

Aqua TROLL 600 **Low-Flow System**
8/16/2016 **ISI Low-Flow Log**

Project Information:		**Pump Information:**	
Operator Name	Amber Jane Pontius	Pump Model/Type	Peristaltic
Company Name	Fleis & VandenBrink	Tubing Type	TLPE
Project Name	Shallow GW Investigation	Tubing Diameter	0.19 in
Site Name	Gelman Sciences	Tubing Length	15 ft
		Pump placement from TOC	12.5 ft

Well Information:		**Pumping information:**	
Well ID	RL-3	Final pumping rate	180 ml/min
Well diameter	1 in	Flowcell volume	130 ml
Well total depth	15 ft	Calculated Sample Rate	1:43
Depth to top of screen	10 ft	Sample rate	1:43
Screen length	5 ft	Stabilized drawdown	0.00 ft
Depth to Water	artesian above grade		

Date Time	Elapsed Time	Temperature (°C)	Specific Conductivity (µS/cm)	Salinity (PSU)	Turbidity (NTU)	pH (pH)	ORP (mV)	RDO Concentration (mg/L)
8/16/2016 15:15	0:00	17.10089	12.27516	0.0043766	4.325365	7.138973	-44.15801	6.822143
8/16/2016 15:17	1:43	16.31116	772.0583	0.3807341	1.094045	6.937241	-57.14228	1.074004
8/16/2016 15:18	2:52	16.29565	775.1793	0.382324	1.004618	6.906155	-58.79453	0.3899732
8/16/2016 15:19	4:03	16.22113	773.4266	0.3814024	1.180275	6.897357	-59.7625	0.2884877
8/16/2016 15:20	5:13	16.22333	779.1348	0.3843214	6.1595	6.890801	-61.1501	0.273133

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

Aqua TROLL 600 **Low-Flow System**
8/16/2016 **ISI Low-Flow Log**

Project Information:		**Pump Information:**	
Operator Name	Amber Jane Pontius	Pump Model/Type	Peristaltic
Company Name	Fleis & VandenBrink	Tubing Type	TLPE
Project Name	Shallow GW Asssessment	Tubing Diameter	0.19 in
Site Name	Gelman Sciences	Tubing Length	22 ft
		Pump placement from TOC	17.5 ft

Well Information:		**Pumping information:**	
Well ID	RL-4	Final pumping rate	180 ml/min
Well diameter	1 in	Flowcell volume	130 ml
Well total depth	20 ft	Calculated Sample Rate	1:23
Depth to top of screen	15 ft	Sample rate	1:23
Screen length	5 ft	Stabilized drawdown	0.01 ft
Depth to Water	15.17 ft		

Date Time	Elapsed Time	Temperature (°C)	Specific Conductivity (µS/cm)	Salinity (PSU)	Turbidity (NTU)	pH (pH)	ORP (mV)	RDO Concentration (mg/L)
8/16/2016 10:47	0:00	21.30634	1400.571	0.7096864	477.7918	7.110073	126.1897	3.949098
8/16/2016 10:49	1:23	19.50418	1380.485	0.6985894	271.774	7.146363	79.17116	0.9972881
8/16/2016 10:50	2:47	18.96124	1344.779	0.6795319	238.2188	7.040096	51.96998	0.3838388
8/16/2016 10:52	4:12	18.40366	1299.512	0.6554431	128.7088	6.905551	38.05349	0.3038316
8/16/2016 10:53	5:35	18.31363	1169.316	0.5870348	86.18467	6.841706	29.02696	0.2803232
8/16/2016 10:54	6:59	18.11307	1087.945	0.5444522	62.06004	6.816024	18.17176	0.2664727
8/16/2016 10:56	8:23	18.09583	1301.317	0.6562684	42.27695	6.796761	11.12411	0.2439606
8/16/2016 10:57	9:47	17.90106	1203.704	0.6048915	33.55048	6.788566	1.143906	0.2566374
8/16/2016 10:59	11:11	17.67319	1388.574	0.702107	283.2754	6.786444	-7.62513	0.2441629
8/16/2016 11:00	12:35	17.47162	1257.719	0.6330561	1549.035	6.782002	-18.168	0.1903376
8/16/2016 11:01	13:59	17.44431	1247.305	0.6275719	1620.95	6.773559	-26.58179	0.1791994
8/16/2016 11:03	15:23	17.4007	1216.912	0.6116041	3515.823	6.774533	-32.4302	0.1857185
8/16/2016 11:04	16:47	17.37079	1335.881	0.6741408	3612.615	6.775892	-37.1342	0.1900523
8/16/2016 11:06	18:12	17.24518	1187.741	0.596248	5139.229	6.778043	-43.74316	0.1669943
8/16/2016 11:07	19:35	17.10535	1289.145	0.6493911	4844.38	6.778494	-48.47815	0.1705334
8/16/2016 11:08	20:31	17.03922	1244.731	0.6260254	4987.917	6.779305	-51.00777	0.1758708
8/16/2016 11:09	21:55	17.0755	1018.936	0.5081798	409.4973	6.777592	-53.27752	0.1986641
8/16/2016 11:11	23:19	17.05737	1012.862	0.5050202	489.4492	6.780922	-46.35623	0.2060945
8/16/2016 11:12	######	17.26736	990.8521	0.4936868	598.4795	6.786261	-40.37907	0.204384

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

Aqua TROLL 600 **Low-Flow System**
8/16/2016 **ISI Low-Flow Log**

Project Information:		**Pump Information:**	
Operator Name	Amber Jane Pontius	Pump Model/Type	Peristaltic
Company Name	Fleis & VandenBrink	Tubing Type	TLPE
Project Name	Shallow GW Asssessment	Tubing Diameter	0.19 in
Site Name	Gelman Sciences	Tubing Length	22 ft
		Pump placement from TOC	17.5 ft

Well Information:		**Pumping information:**	
Well ID	RL-5	Final pumping rate	180 ml/min
Well diameter	1 in	Flowcell volume	130 ml
Well total depth	20 ft	Calculated Sample Rate	1:24
Depth to top of screen	15 ft	Sample rate	1:24
Screen length	5 ft	Stabilized drawdown	0.02 ft
Depth to Water	16.65 ft		

Date Time	Elapsed Time	Temperature (°C)	Specific Conductivity (µS/cm)	Salinity (PSU)	Turbidity (NTU)	pH (pH)	ORP (mV)	RDO Concentration (mg/L)
8/16/2016 12:04	0:00	19.44604	937.2031	0.4664912	284.8887	-3.907681	140.8	4.479103
8/16/2016 12:08	4:12	17.3847	981.7551	0.4890085	174.0473	17.90285	111.062	4.119986
8/16/2016 12:10	5:36	16.63348	986.4916	0.4911791	243.0495	18.64672	95.07845	3.337514
8/16/2016 12:11	7:00	16.13037	982.1522	0.4887232	408.2856	21.07382	86.57643	3.324094
8/16/2016 12:12	8:24	15.83514	975.839	0.4853156	351.3415	22.86911	78.51788	3.427479
8/16/2016 12:14	9:48	15.64175	971.6191	0.4830461	940.7674	24.2281	72.13065	3.459873
8/16/2016 12:15	11:13	15.53845	965.9948	0.4800932	827.6995	24.85752	69.90144	3.630994
8/16/2016 12:17	12:36	15.46384	966.7889	0.4804669	6608.441	25.05541	66.17734	3.730046
8/16/2016 12:18	14:00	15.42871	964.5891	0.4793138	73.00793	25.41542	63.12558	3.757437
8/16/2016 12:19	15:24	15.36713	958.3664	0.4760702	211.3776	25.46787	61.04896	3.7645
8/16/2016 12:21	16:48	15.46716	960.397	0.4771676	5527.712	25.78974	60.37185	3.710838
8/16/2016 12:22	18:12	15.302	951.0015	0.4722366	7753.243	25.42734	60.52205	3.780331
8/16/2016 12:24	19:36	15.24658	946.8209	0.4700505	6511.452	25.75874	60.88683	3.83657

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

Aqua TROLL 600 **Low-Flow System**
8/16/2016 **ISI Low-Flow Log**

Project Information:		**Pump Information:**	
Operator Name	Amber Jane Pontius	Pump Model/Type	Peristaltic
Company Name	Fleis & VandenBrink	Tubing Type	TLPE
Project Name	Shallow GW Investigation	Tubing Diameter	0.19 in
Site Name	Gelman Sciences	Tubing Length	18 ft
		Pump placement from TOC	12.5 ft

Well Information:		**Pumping information:**	
Well ID	RL-6	Final pumping rate	180 ml/min
Well diameter	1 in	Flowcell volume	130 ml
Well total depth	15 ft	Calculated Sample Rate	1:15
Depth to top of screen	10 ft	Sample rate	1:15
Screen length	5 ft	Stabilized drawdown	0.01 ft
Depth to Water	5.53 ft		

Date Time	Elapsed Time	Temperature (°C)	Specific Conductivity (µS/cm)	Salinity (PSU)	Turbidity (NTU)	pH (pH)	ORP (mV)	RDO Concentration (mg/L)
8/16/2016 14:24	0:00	20.51089	1237.502	0.6234317	616.0759	7.014109	154.9597	0.6216787
8/16/2016 14:26	1:15	19.94324	1252.892	0.6313941	428.4796	6.695148	151.8554	0.1874848
8/16/2016 14:27	2:32	19.61179	1263.89	0.6370967	351.8305	6.647123	137.9509	0.1454986
8/16/2016 14:28	3:47	19.44931	1273.753	0.6422422	243.9684	6.617457	125.8964	0.1323429
8/16/2016 14:30	5:03	19.46869	1276.73	0.6438162	199.087	6.603577	115.2677	0.1376677
8/16/2016 14:31	6:20	19.27866	1274.384	0.6425231	180.5308	6.599151	106.2078	0.1368316
8/16/2016 14:32	7:36	19.27667	1273.527	0.6420679	163.7894	6.595605	98.13735	0.1317995
8/16/2016 14:33	8:52	19.17908	1279.312	0.6450869	138.2661	6.592979	91.92178	0.1275354
8/16/2016 14:35	10:07	19.07672	1277.083	0.6438786	109.8836	6.592384	86.72187	0.127445
8/16/2016 14:36	11:24	19.12314	1279.773	0.6453101	102.5335	6.59065	81.99641	0.1327648
8/16/2016 14:37	12:40	19.10269	1276.357	0.6435027	101.2652	6.591568	78.8779	0.1490499

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Aqua TROLL 600 **Low-Flow System**
8/16/2016 **ISI Low-Flow Log**

Project Information:		**Pump Information:**	
Operator Name	Amber Jane Pontius	Pump Model/Type	Peristaltic
Company Name	Fleis & VandenBrink	Tubing Type	TLPE
Project Name	Shallow GW Investigation	Tubing Diameter	0.19 in
Site Name	Gelman Sciences	Tubing Length	18 ft
		Pump placement from TOC	13 ft

Well Information:		**Pumping information:**	
Well ID	RL-7	Final pumping rate	180 ml/min
Well diameter	1 in	Flowcell volume	130 ml
Well total depth	15 ft	Calculated Sample Rate	1:16
Depth to top of screen	10 ft	Sample rate	1:16
Screen length	5 ft	Stabilized drawdown	0.00 ft
Depth to Water	11.52 ft		

Date Time	Elapsed Time	Temperature (°C)	Specific Conductivity (µS/cm)	Salinity (PSU)	Turbidity (NTU)	pH (pH)	ORP (mV)	RDO Concentration (mg/L)
8/16/2016 17:36	0:00	21.53043	1214.698	0.6116104	41.09227	7.090118	154.8238	5.876076
8/16/2016 17:38	1:16	20.61163	1220.587	0.6145608	35.32299	6.970745	142.7478	5.693317
8/16/2016 17:39	2:31	20.15741	1227.403	0.6180444	29.05015	6.910921	131.5183	5.725868
8/16/2016 17:40	3:48	19.90414	1205.493	0.6064765	17.18647	6.884722	123.1642	5.777064
8/16/2016 17:41	5:03	19.7298	1192.408	0.5995664	9.405082	6.874738	116.1833	5.767231
8/16/2016 17:43	6:20	19.57877	1184.673	0.5954708	9.271995	6.865626	110.9261	5.729673
8/16/2016 17:44	7:36	19.52429	1179.276	0.5926254	6.552802	6.861224	106.4033	5.823815
8/16/2016 17:45	8:51	19.37341	1141.408	0.5727548	3.922042	6.85918	102.9105	5.80726
8/16/2016 17:47	10:07	19.28583	1108.66	0.5556126	4.2447	6.864272	99.85158	5.742238
8/16/2016 17:48	11:23	19.23862	1085.243	0.543377	2.870143	6.860939	98.87407	5.695088
8/16/2016 17:49	12:40	19.13397	1062.746	0.5316222	4.137041	6.862744	98.58081	5.857288
8/16/2016 17:50	13:56	19.16046	1082.455	0.5419033	3.752723	6.855516	99.07434	5.856205

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Aqua TROLL 600 **Low-Flow System**
8/17/2016 **ISI Low-Flow Log**

Project Information:		**Pump Information:**	
Operator Name	Amber Jane Pontius	Pump Model/Type	Peristaltic
Company Name	Fleis & VandenBrink	Tubing Type	TLPE
Project Name	Shallow GW Investigation	Tubing Diameter	0.19 in
Site Name	Gelman Sciences	Tubing Length	15 ft
		Pump placement from TOC	9 ft

Well Information:		**Pumping information:**	
Well ID	RL-10	Final pumping rate	180 ml/min
Well diameter	1 in	Flowcell volume	130 ml
Well total depth	10 ft	Calculated Sample Rate	1:11
Depth to top of screen	5 ft	Sample rate	1:11
Screen length	5 ft	Stabilized drawdown	0.00 ft
Depth to Water	5.36 ft		

Date Time	Elapsed Time	Temperature (°C)	Specific Conductivity (µS/cm)	Salinity (PSU)	Turbidity (NTU)	pH (pH)	ORP (mV)	RDO Concentration (mg/L)
8/17/2016 10:44	0:00	23.72766	909.0231	0.4522816	434.3664	7.505939	100.8982	4.655018
8/17/2016 10:45	1:11	21.63321	922.0521	0.4589527	359.4958	7.410008	67.79858	3.912641
8/17/2016 10:46	2:22	21.07324	1.527298	0	8.935794	7.346384	72.52643	7.358253
8/17/2016 10:47	3:32	20.93042	987.7864	0.4929645	495.3984	6.962179	70.30914	5.053389
8/17/2016 10:49	4:44	20.52979	988.2308	0.4931384	470.5378	6.910454	53.54593	3.570474
8/17/2016 10:50	5:55	20.62274	984.2517	0.4910874	328.5137	6.899981	45.75679	3.565011
8/17/2016 10:51	7:06	20.38501	990.4315	0.4942619	213.7404	6.891127	37.91759	3.285971
8/17/2016 10:52	8:16	20.23996	984.3843	0.4910941	323.9932	6.890511	31.9762	3.099903
8/17/2016 10:53	9:27	20.12088	992.8953	0.4954964	290.23	6.89003	29.01027	3.118037
8/17/2016 10:54	10:38	20.27112	980.3632	0.4890163	589.9031	6.887795	28.07567	3.015768
8/17/2016 10:56	11:50	20.17493	978.5978	0.4880843	437.5774	6.887091	26.26846	2.921059
8/17/2016 10:57	13:01	20.41229	973.1897	0.4853157	384.3155	6.884239	23.96772	2.758963
8/17/2016 10:58	14:12	20.46997	973.2764	0.48537	997.9229	6.885126	22.418	2.738441

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Aqua TROLL 600 **Low-Flow System**
8/17/2016 **ISI Low-Flow Log**

Project Information:		**Pump Information:**	
Operator Name	Amber Jane Pontius	Pump Model/Type	Peristaltic
Company Name	Fleis & VandenBrink	Tubing Type	TLPE
Project Name	Shallow GW Investigation	Tubing Diameter	0.19 in
Site Name	Gelman Sciences	Tubing Length	15 ft
		Pump placement from TOC	9 ft

Well Information:		**Pumping information:**	
Well ID	RL-11	Final pumping rate	180 ml/min
Well diameter	1 in	Flowcell volume	130 ml
Well total depth	10 ft	Calculated Sample Rate	1:35
Depth to top of screen	5 ft	Sample rate	1:35
Screen length	5 ft	Stabilized drawdown	0.01 ft
Depth to Water	7.15 ft		

Date Time	Elapsed Time	Temperature (°C)	Specific Conductivity (µS/cm)	Salinity (PSU)	Turbidity (NTU)	pH (pH)	ORP (mV)	RDO Concentration (mg/L)
8/17/2016 11:32	0:00	19.11279	948.0341	0.4720343	14.70209	7.321017	109.6053	0.3571161
8/17/2016 11:37	4:41	17.27621	985.9705	0.4911588	6.292549	6.834167	83.24335	0.117787
8/17/2016 11:38	5:20	17.13599	985.2808	0.4907506	4.947741	6.825155	82.39219	0.1118012
8/17/2016 11:39	6:55	16.90268	991.295	0.4937797	4.622174	6.818547	83.43884	0.1052756
8/17/2016 11:41	8:30	16.8765	990.6279	0.4934178	3.735858	6.814256	80.72803	0.09322742

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Aqua TROLL 600 **Low-Flow System**
8/17/2016 **ISI Low-Flow Log**

Project Information:		**Pump Information:**	
Operator Name	Amber Jane Pontius	Pump Model/Type	Peristaltic
Company Name	Fleis & VandenBrink	Tubing Type	TLPE
Project Name	Shallow GW Investigation	Tubing Diameter	0.19 in
Site Name	Gelman Sciences	Tubing Length	15 ft
		Pump placement from TOC	9 ft

Well Information:		**Pumping information:**	
Well ID	RL-12	Final pumping rate	180 ml/min
Well diameter	1 in	Flowcell volume	130 ml
Well total depth	10 ft	Calculated Sample Rate	1:11
Depth to top of screen	5 ft	Sample rate	1:11
Screen length	5 ft	Stabilized drawdown	0.02 ft
Depth to Water	5.46 ft		

Date Time	Elapsed Time	Temperature (°C)	Specific Conductivity (µS/cm)	Salinity (PSU)	Turbidity (NTU)	pH (pH)	ORP (mV)	RDO Concentration (mg/L)
8/17/2016 9:58	0:00	18.948	1142.132	0.5730029	748.7975	7.325807	-3.643539	4.113268
8/17/2016 9:59	1:11	17.71634	1163.165	0.5835759	543.5189	7.046572	-15.01611	0.5359954
8/17/2016 10:01	2:22	17.01123	1162.663	0.58302	426.2873	6.913994	-19.66527	0.1940529
8/17/2016 10:02	3:32	16.70355	1172.729	0.5881338	356.3127	6.882973	-25.84031	0.1540545
8/17/2016 10:03	4:43	16.52856	1169.89	0.5865621	231.5457	6.854669	-29.51434	0.140263
8/17/2016 10:04	5:54	16.67212	1181.141	0.5925173	229.2323	6.836935	-33.73196	0.1422729
8/17/2016 10:05	7:06	16.539	1178.867	0.5912641	286.1348	6.831797	-36.28781	0.1426668

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Aqua TROLL 600 **Low-Flow System**
8/17/2016 **ISI Low-Flow Log**

Project Information:		**Pump Information:**	
Operator Name	Amber Jane Pontius	Pump Model/Type	Peristaltic
Company Name	Fleis & VandenBrink	Tubing Type	TLPE
Project Name	Shallow GW Asssessment	Tubing Diameter	0.19 in
Site Name	Gelman Sciences	Tubing Length	18 ft
		Pump placement from TOC	13 ft

Well Information:		**Pumping information:**	
Well ID	RL-13	Final pumping rate	180 ml/min
Well diameter	1 in	Flowcell volume	130 ml
Well total depth	15 ft	Calculated Sample Rate	1:15
Depth to top of screen	10 ft	Sample rate	1:15
Screen length	5 ft	Stabilized drawdown	0.06 ft
Depth to Water	6.14 ft		

Date Time	Elapsed Time	Temperature (°C)	Specific Conductivity (µS/cm)	Salinity (PSU)	Turbidity (NTU)	pH (pH)	ORP (mV)	RDO Concentration (mg/L)
8/17/2016 12:28	0:00	20.00632	1010.173	0.5044504	1209.271	7.35404	-71.18752	0.6453019
8/17/2016 12:29	1:15	19.16037	1026.884	0.5129597	1168.528	7.084443	-67.49442	0.3031605
8/17/2016 12:31	2:31	18.63718	1029.161	0.5140059	1185.034	6.978215	-67.71615	0.197198
8/17/2016 12:32	3:47	18.23282	1037.212	0.5180754	1245.347	6.950062	-71.72158	0.1676016
8/17/2016 12:33	5:03	18.00723	1042.651	0.5208328	1073.701	6.922432	-75.11189	0.1676527
8/17/2016 12:35	6:19	17.97049	1045.876	0.5224977	1021.241	6.905043	-77.07646	0.1393401
8/17/2016 12:36	7:35	17.79913	1043.258	0.5210747	811.5417	6.895085	-79.03149	0.1274577
8/17/2016 12:37	8:51	17.63284	1043.836	0.5213208	779.8893	6.8851	-81.01991	0.1289088

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Aqua TROLL 600 **Low-Flow System**
8/15/2016 **ISI Low-Flow Log**

Project Information:		**Pump Information:**	
Operator Name	Amber Jane Pontius	Pump Model/Type	Peristaltic
Company Name	Fleis & VandenBrink	Tubing Type	TLPE
Project Name	Shallow GW Investigation	Tubing Diameter	0.19 in
Site Name	Gelman Sciences	Tubing Length	16 ft
		Pump placement from TOC	12.5 ft

Well Information:		**Pumping information:**	
Well ID	RL-17	Final pumping rate	180 ml/min
Well diameter	1 in	Flowcell volume	130 ml
Well total depth	15 ft	Calculated Sample Rate	1:13
Depth to top of screen	7 ft	Sample rate	1:13
Screen length	5 ft	Stabilized drawdown	0.01 ft
Depth to Water	9.81 ft		

Date Time	Elapsed Time	Temperature (°C)	Specific Conductivity (µS/cm)	Salinity (PSU)	Turbidity (NTU)	pH (pH)	ORP (mV)	RDO Concentration (mg/L)
8/15/2016 10:38	0:00	22.22079	1209.887	0.6091657	594.1382	7.37241	221.7526	3.755113
8/15/2016 10:40	1:13	20.87411	1194.052	0.6006678	456.3783	7.299599	222.2438	2.011584
8/15/2016 10:41	2:26	20.18948	1198.435	0.6028362	246.4253	7.244916	224.2179	1.009504
8/15/2016 10:42	3:39	19.81995	1206.891	0.6071874	229.0122	7.201522	226.2659	0.7187036
8/15/2016 10:43	4:52	19.66171	1213.546	0.6106451	195.7922	7.15363	227.6082	0.5389374
8/15/2016 10:45	6:05	19.44159	1216.621	0.6121985	185.1961	7.11507	228.0445	0.4645273
8/15/2016 10:46	7:17	19.35516	1214.779	0.6112065	207.4373	7.090417	227.4913	0.4098094
8/15/2016 10:47	8:30	19.17905	1217.536	0.6126019	184.7374	7.072459	226.7737	0.3768917
8/15/2016 10:48	9:44	19.11508	1219.561	0.6136457	132.7771	7.062225	224.6232	0.3387126
8/15/2016 10:49	10:56	19.06183	1222.15	0.6149877	148.2921	7.047794	222.9781	0.3284416
8/15/2016 10:51	12:09	19.06299	1223.911	0.6159133	137.9478	7.035612	220.799	0.3226179
8/15/2016 10:52	13:22	19.12079	1221.646	0.6147372	136.6912	7.028694	217.9474	0.3209476

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Aqua TROLL 600 **Low-Flow System**
8/15/2016 **ISI Low-Flow Log**

Project Information:		**Pump Information:**	
Operator Name	Amber Jane Pontius	Pump Model/Type	Peristaltic
Company Name	Fleis & VandenBrink	Tubing Type	TLPE
Project Name	Shallow GW Asssessment	Tubing Diameter	0.19 in
Site Name	Gelman Sciences	Tubing Length	22 ft
		Pump placement from TOC	18 ft

Well Information:		**Pumping information:**	
Well ID	RL-19	Final pumping rate	180 ml/min
Well diameter	1 in	Flowcell volume	130 ml
Well total depth	20 ft	Calculated Sample Rate	1:24
Depth to top of screen	15 ft	Sample rate	1:24
Screen length	5 ft	Stabilized drawdown	0.00 ft
Depth to Water	16.45 ft		

Date Time	Elapsed Time	Temperature (°C)	Specific Conductivity (µS/cm)	Salinity (PSU)	Turbidity (NTU)	pH (pH)	ORP (mV)	RDO Concentration (mg/L)
8/15/2016 12:35	0:00	23.05704	995.5954	0.4971754	1164.414	7.152782	53.92739	5.933353
8/15/2016 12:37	1:24	19.88229	1053.501	0.5269678	918.9163	7.215028	-22.49291	0.885626
8/15/2016 12:38	2:48	18.99094	1073.522	0.537201	851.1379	7.077899	-32.29668	0.2531761
8/15/2016 12:39	4:11	18.65097	1079.535	0.5402383	1175.305	6.912307	-32.01535	0.1851331
8/15/2016 12:41	5:36	18.63062	1090.399	0.5458986	1363.592	6.855844	-36.77895	0.1668721
8/15/2016 12:42	7:00	18.46085	1109.83	0.5559844	1371.842	6.820701	-39.81164	0.2321516
8/15/2016 12:44	8:30	18.3201	1090.81	0.5460152	1785.88	6.815972	-43.13996	0.2743451
8/15/2016 12:45	9:54	18.33936	1091.314	0.5462846	2379.33	6.822381	-52.70531	0.2050773
8/15/2016 12:47	11:18	18.12061	1094.24	0.5477368	2604	6.812186	-57.55713	0.1914786
8/15/2016 12:48	12:42	18.19299	1137.607	0.570406	2107.463	6.779991	-64.04211	0.1717176
8/15/2016 12:49	14:06	18.27811	1117.75	0.5600591	1523.366	6.770117	-69.04652	0.1684924
8/15/2016 12:51	15:30	18.10226	1107.568	0.5546834	1201.513	6.770598	-74.18445	0.1960735

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Aqua TROLL 600 **Low-Flow System**
8/15/2016 **ISI Low-Flow Log**

Project Information:		**Pump Information:**	
Operator Name	Amber Jane Pontius	Pump Model/Type	Peristaltic
Company Name	Fleis & VandenBrink	Tubing Type	TLPE
Project Name	Shallow GW Investigation	Tubing Diameter	0.19 in
Site Name	Gelman Sciences	Tubing Length	22 ft
		Pump placement from TOC	17.5 ft

Well Information:		**Pumping information:**	
Well ID	RL-21	Final pumping rate	180 ml/min
Well diameter	1 in	Flowcell volume	130 ml
Well total depth	20 ft	Calculated Sample Rate	2:23
Depth to top of screen	15 ft	Sample rate	2:23
Screen length	5 ft	Stabilized drawdown	0.00 ft
Depth to Water	16.40 ft		

Date Time	Elapsed Time	Temperature (°C)	Specific Conductivity (µS/cm)	Salinity (PSU)	Turbidity (NTU)	pH (pH)	ORP (mV)	RDO Concentration (mg/L)
8/15/2016 11:34	0:00	20.7164	1668.26	0.8521711	567.4953	7.088032	235.8813	5.681488
8/15/2016 11:37	2:23	17.95245	1747.745	0.8934823	316.5632	7.064149	227.3507	3.780961
8/15/2016 11:39	4:48	17.63089	1773.354	0.9069951	125.2433	6.938916	227.458	3.837051
8/15/2016 11:42	7:11	17.30338	1784.458	0.9127192	70.1143	6.872839	225.9822	3.916692
8/15/2016 11:44	9:36	17.17407	1781.998	0.911302	33.76033	6.844649	223.9604	3.947613
8/15/2016 11:46	12:00	16.9086	1792.284	0.9166121	21.08802	6.827874	221.6239	4.050814

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Aqua TROLL 600 **Low-Flow System**
8/17/2016 **ISI Low-Flow Log**

Project Information:		**Pump Information:**	
Operator Name	Amber Jane Pontius	Pump Model/Type	Peristaltic
Company Name	Fleis & VandenBrink	Tubing Type	TLPE
Project Name	Shallow GW Asssessment	Tubing Diameter	0.19 in
Site Name	Gelman Sciences	Tubing Length	22 ft
		Pump placement from TOC	18 ft

Well Information:		**Pumping information:**	
Well ID	RL-22	Final pumping rate	180 ml/min
Well diameter	1 in	Flowcell volume	130 ml
Well total depth	20 ft	Calculated Sample Rate	1:23
Depth to top of screen	15 ft	Sample rate	1:23
Screen length	5 ft	Stabilized drawdown	0.3 ft
Depth to Water	16.35 ft		

Date Time	Elapsed Time	Temperature (°C)	Specific Conductivity (µS/cm)	Salinity (PSU)	Turbidity (NTU)	pH (pH)	ORP (mV)	RDO Concentration (mg/L)
8/17/2016 14:36	0:00	20.30206	1372.86	0.6947765	151.2272	7.336066	25.87268	3.965196
8/17/2016 14:38	1:23	18.79834	1419.526	0.7189881	157.3643	7.002874	-9.634998	3.442341
8/17/2016 14:39	2:48	18.16336	1432.158	0.725411	161.5026	6.951851	-25.57328	3.16246
8/17/2016 14:41	4:11	17.89667	1417.189	0.7173545	144.2146	6.913793	-34.46868	2.981731
8/17/2016 14:42	5:35	17.69632	1412.692	0.7148725	159.2248	6.90268	-41.64508	2.845736
8/17/2016 14:43	7:00	17.26724	1427.298	0.7223676	339.593	6.897085	-44.7016	2.849508
8/17/2016 14:45	8:23	16.99265	1418.653	0.7176329	356.0761	6.89516	-46.77584	2.83865
8/17/2016 14:46	9:47	17.039	1427.389	0.7222835	322.5694	6.88895	-49.37222	2.833823
8/17/2016 14:48	11:12	17.0155	1414.464	0.7154308	307.2022	6.889005	-51.66581	2.79458
8/17/2016 14:49	12:35	16.93433	1395.843	0.7055414	563.3749	6.888407	-53.32759	2.772189
8/17/2016 14:50	13:59	16.7702	1403.428	0.7094507	559.3334	6.886566	-53.85688	2.786127

APPENDIX E

Gelman Sciences, Inc. d/b/a
Pall Life Sciences
642 South Wagner Road
Ann Arbor, MI 48103
734.436.4025 phone
734.436.4040 fax

CASE NARRATIVE

GEOPROBE Data Pall Life Sciences
Project: 1,4-Dioxane Vapor Intrusion
Date: August 2016

1,4-Dioxane

Gelman Sciences, Inc. d/b/a Pall Life Sciences (PLS) attests to the validity of the laboratory data generated by PLS's Ann Arbor, Michigan Environmental Laboratory facilities reported herein. All analyses performed by PLS's Environmental Laboratory facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. PLS's Environmental group has reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

All samples were analyzed by PLS Environmental Laboratory for 1,4-dioxane. The test results in this report meet all NELAP requirements for parameters for which accreditation are required or available. Any exceptions to NELAP requirements are noted in this report. All exceptions are noted per laboratory standard operating procedure based on EPA Method 1624c. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations at PLS are performed before rounding to avoid round-off errors in calculated results. The odd even rule is used for rounding. Holding times were met for all samples analyzed. Proper preservation was observed on all samples unless otherwise detailed in the individual sections below.

EPA 8260 Analysis

Samples were also analyzed for the balance of the EPA8260 analytes, see ATS report attached, by Ann Arbor Technical Service (ATS) a DEQ Certified Drinking water laboratory. The reporting limits for the 8260 analytes can be found in their report attached.

RECEIPT/ STORAGE

The samples were received on the days noted in this report; the samples arrived in good condition, properly preserved and on ice when necessary. Samples that require 1,4-dioxane analysis are collected in hydrochloric HCl acid-preserved vials to a pH of ≤2.

Samples that are delivered to the laboratory the same day as they are collected are likely not to have reached a fully chilled temperature. This is acceptable as long as there is evidence that chilling has begun. All samples are iced or refrigerated at 4°C (±2°C) from the time of collection until sample preparation or analysis.

PLS: EPA 1624c for 1,4-dioxane (GC-MS)

All ground water samples were analyzed for 1,4-Dioxane (GC-MS) in accordance with EPA 1624C, which has been modified to enhance detection limits. Reporting limit for undiluted samples is 1ppb (part per billion, micrograms per liter, µg/L). All quality control parameters were within the acceptance limits.

ATS EPA: 8260 Analytes (GC-MS)

All ground water samples were analyzed for the list of 8260 Analytes found in Table 1 by GC-MS in accordance with EPA EPA8260B. The samples were prepared by EPA5030B for analysis of Volatile Organic Analytes. Reporting limit for undiluted samples (part per billion, micrograms per liter, µg/L). All quality control parameters applicable to this type of analysis were within the acceptance limits.

TABLE 1 EPA 8260B with EPA 5030B Sample Preparation

Parameter	***Reporting Limit***	***Parameter***	***Reporting Limit***
Acetone	25ppb	1,3-Dichloropropane	1ppb
Benzene	1ppb	2,2-Dichloropropane	1ppb
Bromobenzene	1ppb	1,1-Dichloropropene	1ppb
Bromochloromethane	1ppb	cis-1,3-Dichloropropene	1ppb
Bromodichloromethane	1ppb	trans-1,2-Dichloroethene	1ppb
Bromoform	1ppb	Ethylbenzene	1ppb
Bromomethane	1ppb	Hexachlorobutadiene	1ppb
2-Butanone	5ppb	2-Hexanone	5ppb
n-Butylbenzene	1ppb	Iododmethane	1ppb
sec-Butylbenzene	1ppb	Isopropylbenzene	1ppb
tert-Butylbenzene	1ppb	4-Isopropyltoluene	1ppb
Carbon Disulfide	5ppb	Methylene Chloride	1ppb
Carbon Tetrachloride	1ppb	4-Methyl-2-Pentanone	5ppb
Chlorobenzene	1ppb	Methyl tert-Butyl Ether	1ppb
Chloroethane	1ppb	Naphthalene	1ppb
Chloroform	1ppb	Propylbenzene	1ppb
Chloromethane	1ppb	Styrene	1ppb
2-Chlorotoluene	1ppb	1,1,1,2-Tetrachloroethane	1ppb
4-Chlorotoluent	1ppb	1,1,2,2,-Tetrachloroethane	1ppb
Dibromochloromethane	1ppb	Tetrachloroethene	1ppb
1,2-Dibromo-3-chloropropane	1ppb	Toluene	1ppb
1,2-Dibromomethane	1ppb	1,1,1-Trichloroethane	1ppb
Dibromomethane	1ppb	1,1,2-Trichloroethane	1ppb
Dichlorodifluoromethane	1ppb	Trichloroethene	1ppb
1,2-Dichlorobenzene	1ppb	Trichlorofluoromethane	1ppb
1,3-Dichlorobenzene	1ppb	1,2,3-Trichlorobenzene	1ppb
1,4-Dichlorobenzene	1ppb	1,2,4-Trichlorobenzene	1ppb
1,1-Dichlorethane	1ppb	1,2,3-Trichlorpropane	1ppb
1,2-Dichloroethane	1ppb	1,2,4-Trimethylbenzene	1ppb
1,1-Dichloroethene	1ppb	1,3,5-Trimethylbenzene	1ppb
cis-1,2-Dichloroethene	1ppb	Vinyl Acetate	1ppb
trans-1,2-Dichloroethene	1ppb	Vinyl Chloride	1ppb
1,2-Dichloropropane	1ppb	Total Xylenes	3ppb

Conclusion:

The data found in Table I summarizes the data from PLS. Both EPA 8260B, used by ATS, and EPA 1624C, used by PLS, utilize purge and trap technology for introduction of the sample into the GC/MS. The primary difference is that in order to remove the 1,4-dioxane the purged sample is heated to a temperature normally greater than 65 °C. The net result of this is that a laboratory using EPA 1624C can often see tentatively identified compounds (TIC) at a lower concentration than the EPA 8260B reporting limits. The heat aides in the expulsion of some analytes from the water thereby decreasing the detection limit.

Some of the compounds that were seen as TIC by PLS were not detected by ATS. The most logical reasons for this are as follows: due to heating PLS was able to see the TIC at lower limits or that EPA 8260B does not analyze for the compound found by PLS.

The data can be found summarized in Table II of this report. Data listed as “Measurable peaks were found by the software and tend to be larger peaks. Those listed as trace compounds were found by manually searching each peak in the chromatogram and tend to be lower in concentration.

Analyst: *Susan E.O. Peters* _____ Date: _____

TABLE II DATA SUMMARY PLS

Sample ID	Date & Time Sampled	1,4-dioxane	Tentatively Identified Compounds (TIC)
RL-1	08/16/2016, 10:15	<1ppb	trace compounds: Benzene; methyl ester butanoic acid; substituted cyclic compounds; 1,2,3-trimethyl benzene; other sub benzenes; and naphthalene
RL-2	08/16/2016, 16:15	<1ppb	Measurable peak: trichloromethane peak and 1,1,1-trichloroethane trace compounds: methyl propionate; 1,1,1-trichloro ethane; cyclic compounds; benzene; acetic acid ester; substituted cyclic; methyl ester butanoic acid; substititued alkenes; substituted benzene; substituted alkanes; octanal
RL-3	08/16/2016, 15:25	<1ppb	Measurable peak: 2,4--dimethyl-hexane (not part of 8260) trace compounds: methyl propionate; methyl ester butanoic acid; substituted alkenes; substituted alkanes; substititued benzene; acetic acid ester; oxalic acid ester; unsubstituted alkenes; and naphthalene
RL-4	08/16/2016, 11:15	<1ppb	Measurable peak: 2,4--dimethyl-hexane (not part of 8260) trace compounds: methyl propionate; cyclohexane; benzene; methyl ester butanoic acid; hexanal; substituted alkane; 1,2,3-trimethyl benzene; substituted benzenes; nonanal; and naphthalene
RL-5	08/16/2016, 12:25	<1ppb	trace compounds: cyclohexane; benzene; substituted cyclic; substituted alkanes; substituted alkenes; substituted benzene; and naphthalene
DUP	08/16/2016, 12:25	<1ppb	trace compounds: methyl propionate; substituted alkenes; benzene; substituted cyclics; substituted alkanes; substituted benzene; and naphthalene
RL-6	08/16/2016, 14:40	<1ppb	trace compounds: methyl propionate; 3-ethylcyclobutanol acetate; substituted alkenes; octanal; 1,2,3-trimethyl benzene; benzene; naphthalene
RL-7	08/16/2016, 17:55	<1ppb	Measurable peak: 1,1,1-trichloroethane (LARGEST PEAK ON CHROMATOGRAM) trace compounds: 1,1-dichloro ethane;trichloromethane; cyclohexane; benzene; thiophene; 2-pentanone; substituted alkanes; octanal; 1,2,3-trimethyl benzene; substituted benzene; cyclic compounds
RL-8	08/17/2016, 09:05	<1ppb	Measurable peak: 2,4--dimethyl-hexane (not part of 8260) trace compounds: methyl propionate; substituted alkenes; benzene; methylcyclohexane; substituted cyclics; 1,2,3-trimethyl benzene; ketones; and naphthalene
RL-10	08/17/2016, 11:00	<1ppb	trace compounds: methyl propionate; cyclohexane; benzene; 3-methyl-2-pentanone(ketone); 2-hexanone(ketone); 1,2,3-trimethyl benzene and naphthalene
RL-11	08/17/2016, 11:45	<1ppb	trace compounds: 3-methyl-2-pentanone(ketone); 3-hexanone(ketone); methyl propionate; 2-ethyl hexanol; benzene
RL-12	08/17/2016, 10:10	3.3ppb	trace compounds: methyl propionate; cyclohexane; benzene; octanal; 1,2,3-trimethyl bnzene and naphthalene
RL-13	08/17/2016, 12:40	1.9ppb	trace compounds: methyl propionate; cyclohexane; benzene; methylcyclohexane; methyl isobutyl ketone; octanal; 1,2,3-trimethyl benzene and naphthalene
RL-17	08/15/2016, 10:55	<1ppb	trace compounds: methyl propionate; benzene; 1,2,3-trimethyl benzene; and naphthalene
R-19	08/15/2016, 12:55	<1ppb	trace compounds: benzene; sulfuric acid dibutyl ether; cyclohexene; methyl cyclopentane; substituted cyclo pentanes; methyl propionate; methyl cyclohexane; substituted alchols; 1,3-dimethyl cyclohexane; 1-ethyl-3-methyl cyclopentane; 1,4-dimethyl cyclohexane and naphthalene
R-21	08/15/2016, 11:50	<1ppb	Measurable peak: tetrachloroethylene (8260 method detection limit trace compounds: methyl propionate;benzene; cyclohexane; methyl cyclohexane; 2,4-dimethyl-1-heptene; 3-ethyl hexane; 1,2,3-trimethyl benzene and naphthalene
RL-22	08/17/2016, 16:50	<1ppb	trace compounds: methyl propionate; cyclohexane; benzene; methyl cyclohexane; octanal; 2-ethyl hexanol; 1,2,3-trimethyl benzene and naphthalene
DUP2	08/17/2016, 16:50	<1ppb	trace compounds: methyl propionate; cyclohexane; benzene; methyl cyclohexane; octanal; 2-ethyl hexanol; 1,2,3-trimethyl benzene and naphthalene. Note this sample showed MIBK at higher concentration than the blank and sample RL-22.

Pall Data and Chain of Custodies

PALL Pall Corporation

Environmental Laboratory Services
600 South Wagner Rd. Ann Arbor, MI 48103-9019
Phone: (734)-913-6531 * Fax: (734)-913-6103

In-House Chain of Custody Record

Page 1 of 1

	Sample Identification or Location (Name-Date Collected-Time Collected)	Static Time	Static Result	Water Matrix: Drinking	Ground	Surface	Treated	Grab or Composite	Number of Containers: 1624	317	send out 8260		Comments
1	RL-17 8-15-16 10:55	:	.		✓			G / C	3		2		Forced brought to LAB
2	RL-21 8-15-16 11:50	:	.		✓			G / C	3		2		Sampled by AJP
3	RL-19 8-15-16 12:55	:	.		✓			G / C	3		2		
4		:	.					G / C					
5		:	.					G / C					
6		:	.					G / C					
7		:	.					G / C					
8		:	.					G / C					
9		:	.					G / C					
10		:	.					G / C					
11		:	.					G / C					
12		:	.					G / C					
13		:	.					G / C					
14		:	.					G / C					
15		:	.					G / C					

Relinquished By	Date	Time	Received By	Date	Time
Amberjane Fontanez	08-15-16	13:27	Susan Peters	08-15-16	13:27

Within holding times ☑	Containers are intact ☑	(VOA pH checked after analysis)
Samples arrived cold ☑	Labels & COC agree ☑	Correct containers and volumes ☑

PALL Pall Corporation

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In-House Chain of Custody Record

Page 1 of 1

	Sample Identification or Location (Name-Date Collected-Time Collected)	Static Time	Static Result	Water Matrix: Drinking	Ground	Surface	Treated	Grab or Composite	# of Bottles: 1624	317	send out VOC's	Sampler Initials	Comments
1	RL-1 8-16-16 10:15	:	.		X			G / C	3		2	AJP	Farsad brought
2	RL-4 8-16-16 11:15	:	.		X			G / C	3		2	AJP	
3	RL-5 8-16-16 12:25	:	.		X			G / C	2		2	AJP	
4	DUPL 8-16-16 12:25	:	.		X			G / C	2		2	AJP	
5		:	.					G / C					
6		:	.					G / C					
7		:	.					G / C					
8		:	.					G / C					
9		:	.					G / C					
10		:	.					G / C					

Received By	Date	Time			
Susan E O Peters	08-17-16	06:10	Within holding times ☐	Containers are intact ☐	Samples and COC agree ☐
			Samples arrived cold ☐	Samples are preserved ☐	Correct containers and volumes ☐

signed next morning awaiting potential afternoon stds samples were checked as they came to the lab

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In-House Chain of Custody Record

	Sample Identification or Location (Name-Date Collected-Time Collected)	Static Time	Static Result	Water Matrix: Drinking	Ground	Surface	Treated	Grab or Composite	# of Bottles: 1624	317		Sampler Initials	Comments
1	RL-6 8-16-16 @14:40	:	.		X			G/C	3		2	AJP	
2	RL-3 8-16-16 @ 15:25	:	.		X			G/C	5		2	AJP	Duplicate (Artesia 1,4-D
3	RL-2 8-16-16 @ 16:15	:	.		X			G/C	3		2	AJP	
4	RL-7 8-16-16 @ 17:55	:	.		X			G/C	3		2	AJP	
5	RL-8 ~~8-16-16~~ 8-17-16 @ 09:05	:	.		X			G/C	2		2	AJP	
6	RL-12 8-17-16 @ 10:10	:	.		X			G/C	3		2	AJP	
7	RL-10 8-17-16 @ 11:00	:	.		X			G/C	3		2	AJP	
8	RL-11 8-17-16 @ 11:45	:	.		X			G/C	3		2	AJP	
9	RL-13 8-17-16 @ 12:40	:	.		X			G/C	3		2	AJP	
10	RL-22 8-17-16 @ 16:50	:	.		X			G/C	2		2	AJP	(Duplicate)

Received By	Date	Time			
Susan E. Peters	8-18-16	06:30	Within holding times ☑	Containers are intact ☑	Samples and COC agree ☑
			Samples arrived cold ☐*	Samples are preserved ☑	Correct containers and volumes ☑

Was not in laboratory when late samples delivered. Cooler was placed by samplers

Susan E. Peters

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In-House Chain of Custody Record

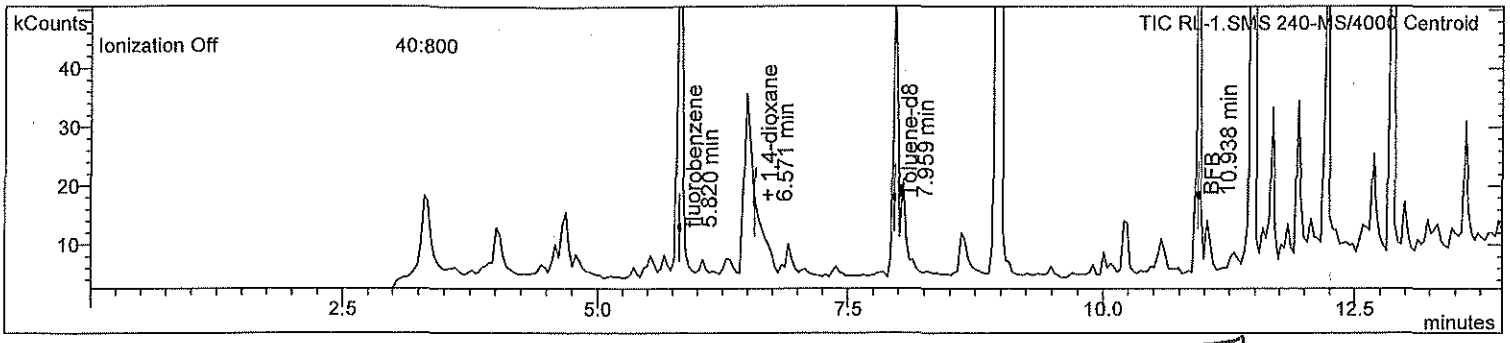
	Sample Identification or Location (Name-Date Collected-Time Collected)	Static Time	Static Result	Water Matrix: Drinking	Ground	Surface	Treated	Grab or Composite	# of Bottles: 1624	317		Sampler Initials	Comments
1	DUPE-2 8-11-16 @ 16:50	:	.		X			G / C	2		2	AJP	
2		:	.					G / C					
3		:	.					G / C					
4		:	.					G / C					
5		:	.					G / C					
6		:	.					G / C					
7		:	.					G / C					
8		:	.					G / C					
9		:	.					G / C					
10		:	.					G / C					

Received By	Date	Time			
Susan E O'Peter	8-18-16	06:30	Within holding times ☑	Containers are intact ☑	Samples and COC agree ☑
			Samples arrived cold * ☐	Samples are preserved ☑	Correct containers and volumes ☑

Was not in laboratory when later samples arrived. Cooler was used by sampler

Susan E O'Peter

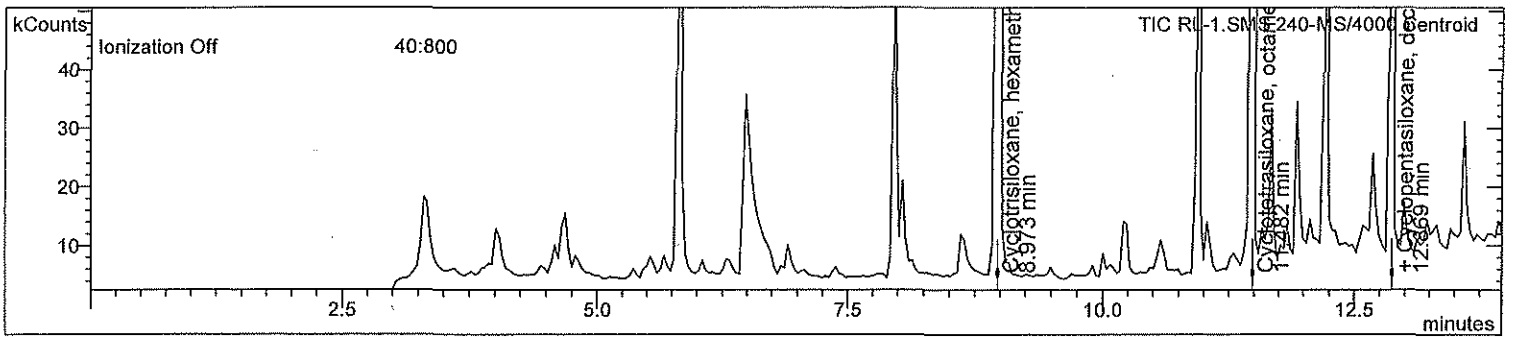
Sample ID:	RL-1	Operator:	seop
Instrument ID:	MS Instrument #1	Last Calibration:	8/17/2016 7:00 AM
Acquisition Date:	8/17/2016 10:34 AM	Data File:	...ta\08172016\rl-1.sms
Calculation Date:	8/17/2016 10:59 AM	Method:	...ds\1624_08162016.mth
Inj. Sample Notes:	RL-1 08/16/16 10:15, neat sample unknown concentration.		



Target Compounds

n.d.

#	RT	Peak Name	Res Type	Quan Ions	Area	Amount/RF
1	5.820	fluorobenzene	Id.	96.0	94214	10.0000 ppb
2	6.503	1,4-dioxane-d8	Fail	64.0	49170	133.0000 ppb
3	7.959	Toluene-d8	Id.	98.1	62787	10.3484 ppb
4	6.571	1,4-dioxane	Fail	88.0	117	N/A ppb
5	10.938	BFB	Id.	95.0	48735	9.3118



Unidentified Peaks

Quan Ions: RIC
RF Used: 1.000
Spectrum Match Type: Normal-Forward
Match Thresh: 700

#	RT	Peak Name	Res Type	Area	Amount	R.Match
6	8.973	Cyclotrisiloxane, hexamethyl	TIC	1.070e+6	1069939	884
7	11.482	Cyclotetrasiloxane, octameth	TIC	880471	880471	898
8	12.218	1,4-Dichlorobenzene-D4	TIC	113832	113832	901
9	12.869	Cyclopentasiloxane, decameth	TIC	501030	501030	893

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Revision Log
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Injection Sample Notes
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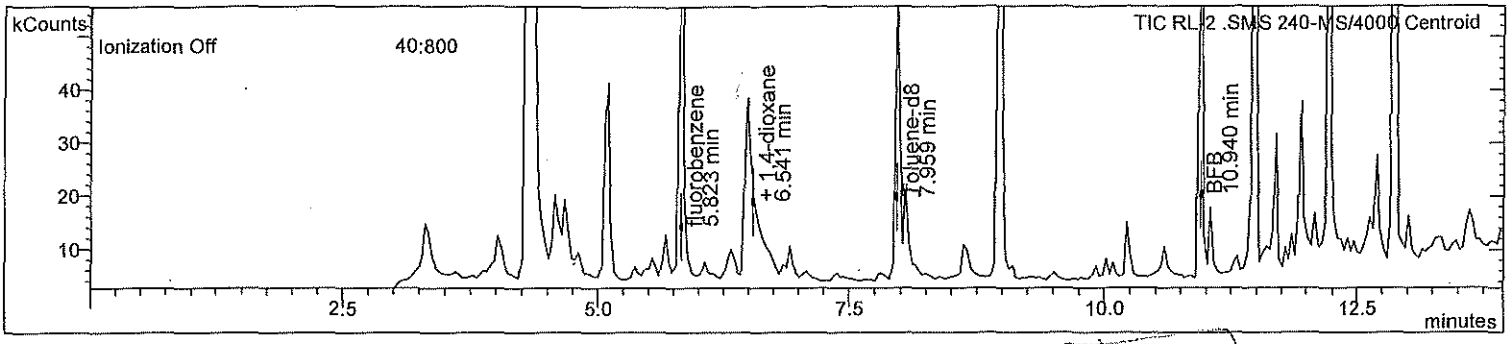
RL-1 08/16/16 10:15, neat sample unknown concentration

MANUAL RE-INTEGRATION
[N] missed peak assignment
[ ] assigned incorrect name to peak
[ ] over-integrated peak's area
[ ] under-integrated peak's area
[ ] other _____
initials SEOP *date* 08.17.16

Benzene - trace
methyl Ester Butanoic Acid
Substituted cyclopentane
2,6-dimethyl 3heptene (9.493 min) inBIK
3Ethyl Hexane (9.900 min) - inBIK
Ethyl benzene (10.002 min) inBIK
o Xylene (10.234 min) lg peak inBIK
p xylene (10.374 min) inBIK
1,2,3 Trimethyl Benzene (11.837 min) OK
2-Ethyl Hexanol (11.935 min) inBIK
cyclic compound (12.663 min) - inBIK
sub Benzene (13.227) (OK)

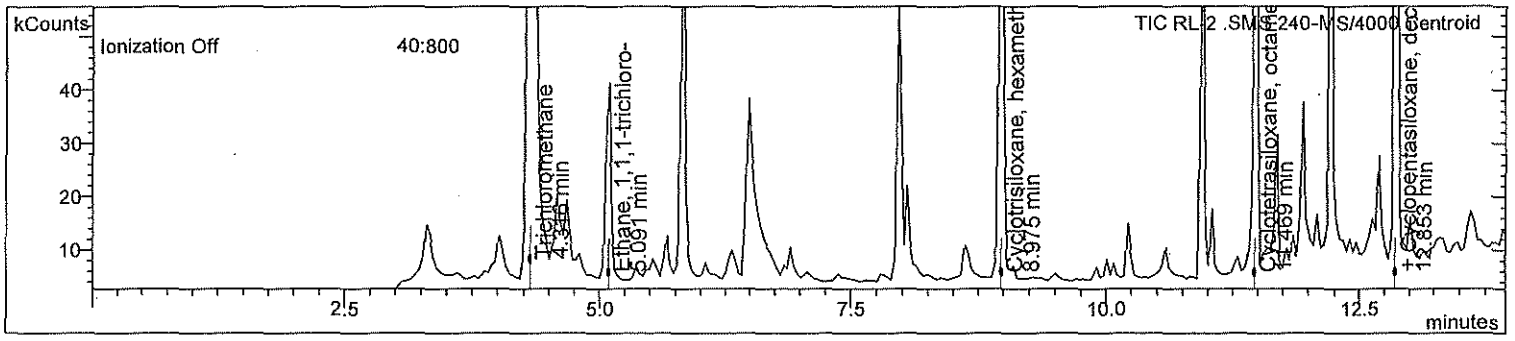
Sample ID:	RL-2	Operator:	seop
Instrument ID:	MS Instrument #1	Last Calibration:	8/17/2016 7:00 AM
Acquisition Date:	8/18/2016 3:53 AM	Data File:	...a\08172016\rl-2 .sms
Calculation Date:	8/18/2016 6:38 AM	Method:	...ds\1624_08162016.mth
Inj. Sample Notes:	RL-2 03/16/16 16:15, neat sample conc. unknown		



ND

Target Compounds

#	RT	Peak Name	Res Type	Quan Ions	Area	Amount/RF
1	5.823	fluorobenzene	Id.	96.0	93364	10.0000 ppb
2	6.499	1,4-dioxane-d8	Fail	64.0	48792	133.0000 ppb
3	7.959	Toluene-d8	Id.	98.1	64221	10.6811 ppb
4	6.541	1,4-dioxane	Fail	88.0	153	N/A ppb
5	10.940	BFB	Id.	95.0	37512	7.2328



Unidentified Peaks

Quan Ions:	RIC	Spectrum Match Type:	Normal-Forward
RF Used:	1.000	Match Thresh:	700

#	RT	Peak Name	Res Type	Area	Amount	R.Match
6	4.316	Trichloromethane Big Peak	TIC	1.919e+6	1919423	947
7	5.091	Ethane, 1,1,1-trichloro-	TIC	135896	135896	920
8	8.975	Cyclotrisiloxane, hexamethyl	TIC	454332	454332	886
9	11.469	Cyclotetrasiloxane, octameth	TIC	858866	858866	912
10	12.205	1,4-Dichlorobenzene-D4	TIC	385820	385820	936
11	12.853	Cyclopentasiloxane, decameth	TIC	828279	828279	903

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Revision Log

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Injection Sample Notes

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RL-2 03/16/16 16:15, neat sample conc. unknown

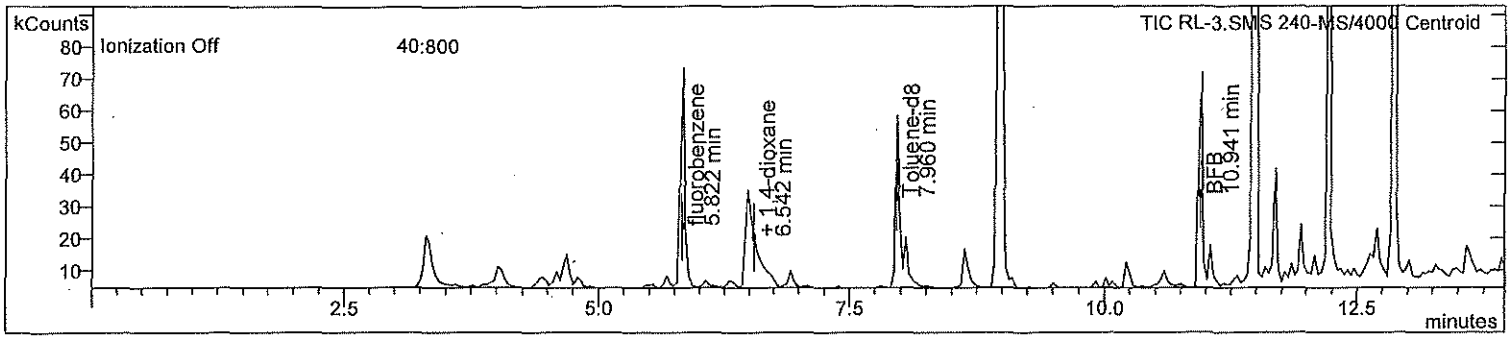
Subbenzene

Trichloromethane (8770)
Hexylene Glycol (51%)
methylpropanoate (5%)
1,1,1-trichloro Ethane (93%)
Cyclohexane
Benzene
Acetic Acid Ester
Bromochloromethane (6.350min)
methylcyclohexane
methyl Ester Butanoic Acid
3-Ethylhexane

MANUAL RE-INTEGRATION
[ ] missed peak assignment
[ ] assigned incorrect name to peak
[ ] over-integrated peak's area
[ ] under-integrated peak's area
[ ] other
initials EC *date* 9-16-16

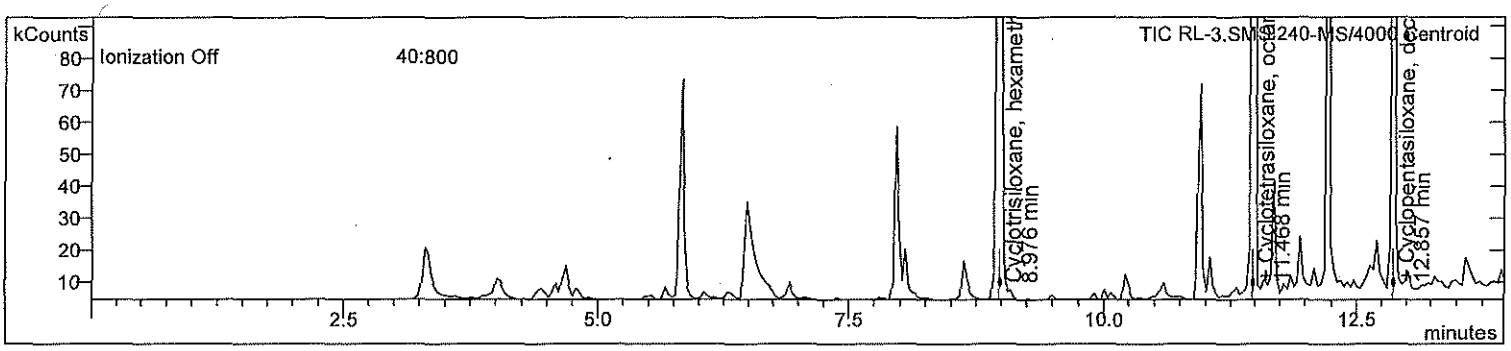
Sub alkene
Styrene -trace
Sub alkanes
octanal

Sample ID:	RL-3	Operator:	seop
Instrument ID:	MS Instrument #1	Last Calibration:	8/17/2016 7:00 AM
Acquisition Date:	8/18/2016 4:58 AM	Data File:	...ta\08172016\rl-3.sms
Calculation Date:	8/18/2016 6:39 AM	Method:	...ds\1624_08162016.mth
Inj. Sample Notes:	RL-3 08/16/16 15:25, neat sample conc. unknown		



Target Compounds

#	RT	Peak Name	Res Type	Quan Ions	Area	Amount/RF
1	5.822	fluorobenzene	Id.	96.0	87158	10.0000 ppb
2	6.501	1,4-dioxane-d8	Fail	64.0	45702	133.0000 ppb
3	7.960	Toluene-d8	Id.	98.1	61167	10.8976 ppb
4	6.542	1,4-dioxane	Id.	88.0	144	N/A ppb
5	10.941	BFB	Id.	95.0	37106	7.6639



Unidentified Peaks

Quan Ions: RIC
RF Used: 1.000
Spectrum Match Type: Normal-Forward
Match Thresh: 700

#	RT	Peak Name	Res Type	Area	Amount	R.Match
6	8.976	Cyclotrisiloxane, hexamethyl	TIC	1.099e+6	1099323	887
7	11.468	Cyclotetrasiloxane, octameth	TIC	1.448e+6	1448423	894
8	11.680	Hexane, 2,4-dimethyl-	TIC	62682	62682	853
9	12.207	1,4-Dichlorobenzene-D4	TIC	439650	439650	926
10	12.857	Cyclopentasiloxane, decameth	TIC	1.505e+6	1505041	902

Revision Log

Injection Sample Notes

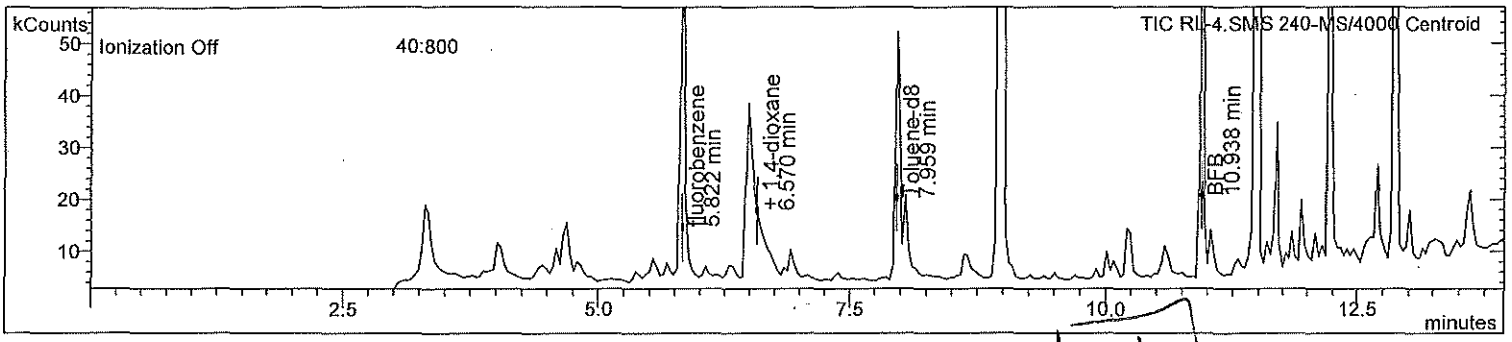
RL-3 08/16/16 15:25, neat sample conc. unknown

hexylene Glycol
methyl propionate
Butanoic Acid, Methyl ester
Sub Alkenes
Sub Alkanes
octanal
Sub Benzene
Acetic Acid Ester
Alkenes
Napthalene

MANUAL RE-INTEGRATION
[X] missed peak assignment
[ ] assigned incorrect name to peak
[ ] over-integrated peak's area
[ ] under-integrated peak's area
[ ] other
initials SEOP *date* 08-18-16

Oxalic Acid ester

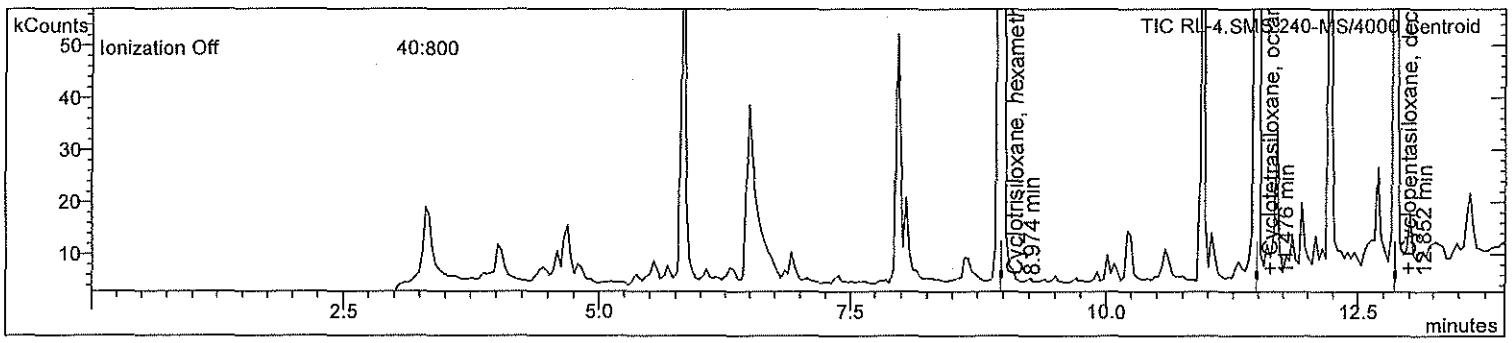
Sample ID:	RL-4	Operator:	seop
Instrument ID:	MS Instrument #1	Last Calibration:	8/17/2016 7:00 AM
Acquisition Date:	8/17/2016 11:39 AM	Data File:	...ta\08172016\rl-4.sms
Calculation Date:	8/17/2016 2:17 PM	Method:	...ds\1624_08162016.mth
Inj. Sample Notes:	RL-4 08/16/16 11:15, neat sample unknown concentration		



nd.

Target Compounds

#	RT	Peak Name	Res Type	Quan Ions	Area	Amount/RF
1	5.822	fluorobenzene	Id.	96.0	87610	10.0000 ppb
2	6.500	1,4-dioxane-d8	Fail	64.0	49482	133.0000 ppb
3	7.959	Toluene-d8	Id.	98.1	58307	10.3346 ppb
4	6.570	1,4-dioxane	Fail	88.0	172	N/A ppb
5	10.938	BFB	Id.	95.0	45784	9.4074



Unidentified Peaks

Quan Ions: RIC
RF Used: 1.000
Spectrum Match Type: Normal-Forward
Match Thresh: 700

#	RT	Peak Name	Res Type	Area	Amount	R.Match
6	8.974	Cyclotrisiloxane, hexamethyl	TIC	1.232e+6	1232135	882
7	11.476	Cyclotetrasiloxane, octameth	TIC	954156	954156	902
8	11.673	Hexane, 2,4-dimethyl-	TIC	50213	50213	838
9	12.203	1,4-Dichlorobenzene-D4	TIC	228329	228329	917
10	12.852	Cyclopentasiloxane, decameth	TIC	666869	666869	910

****

Revision Log

****

Methyl propionate (4.782 min)
cyclohexane (5.397 min)
Benzene (large peak)
Methyl Ester Butanoic Acid (6.940 min)
Hexanal (8.082 min)
2,4-dimethyl heptane
1,2,3-Trimethyl Benzene (11.539)
Sub-Benzene (12.593 min)
Nonanal (12.694 min)
Sub Benzene (13.277 min)
Naphthalene (13.600 min)

****

Injection Sample Notes

****

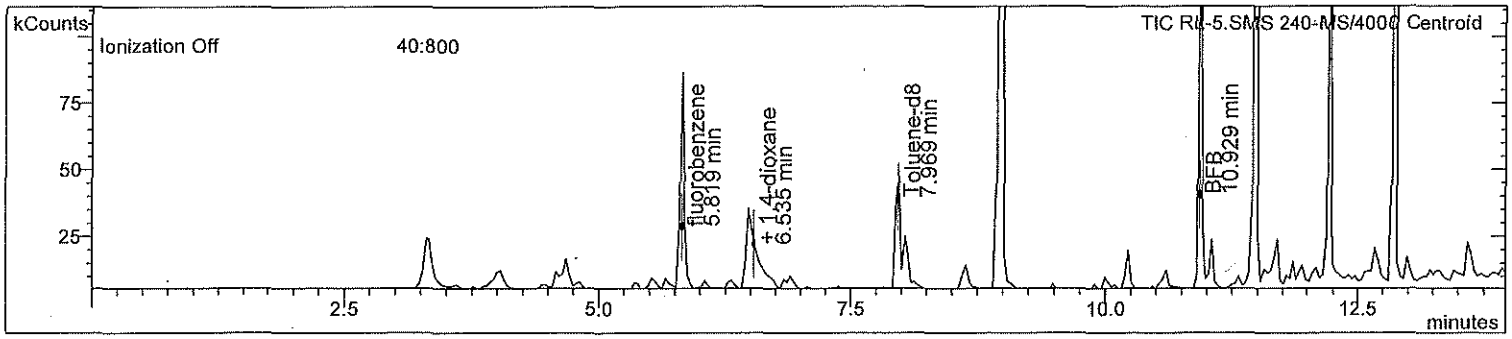
RL-4 08/16/16 11:15, neat sample unknown concentration

MANUAL RE-INTEGRATION

- [x] missed peak assignment
- [ ] assigned incorrect name to peak
- [ ] over-integrated peak's area
- [ ] under-integrated peak's area
- [ ] other

initials SF UP date 08-17-16

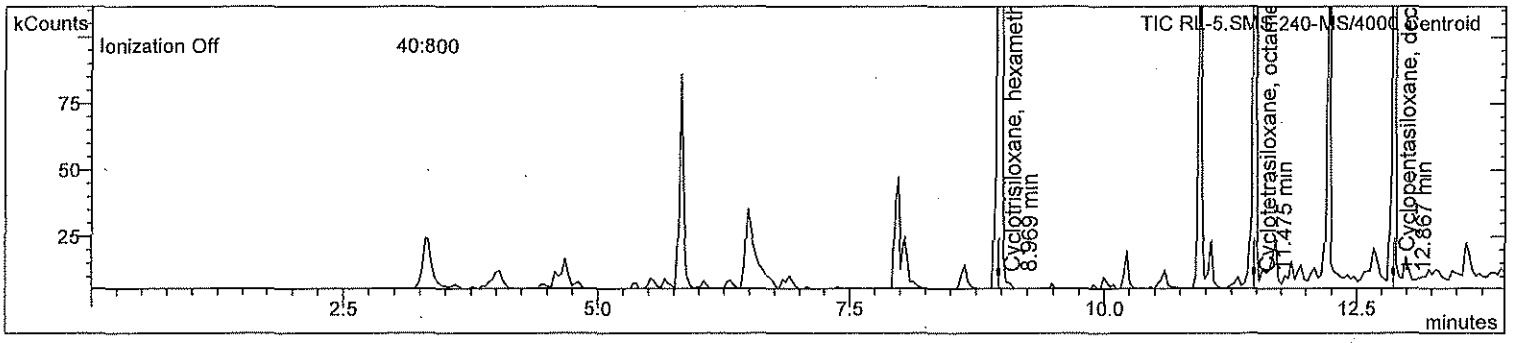
Sample ID:	RL-5	Operator:	seop
Instrument ID:	MS Instrument #1	Last Calibration:	8/17/2016 7:00 AM
Acquisition Date:	8/17/2016 12:44 PM	Data File:	...ta\08172016\rl-5.sms
Calculation Date:	8/17/2016 2:18 PM	Method:	...ds\1624_08162016.mth
Inj. Sample Notes:	RL-5 08/16/16, 12:25, neat sample unknown concentration		



Target Compounds

n.d.

#	RT	Peak Name	Res Type	Quan Ions	Area	Amount/RF
1	5.819	fluorobenzene	Id.	96.0	94842	10.0000 ppb
2	6.502	1,4-dioxane-d8	Fail	64.0	47300	133.0000 ppb
3	7.969	Toluene-d8	Id.	98.1	58661	9.6044 ppb
4	6.535	1,4-dioxane	Fail	88.0	179	N/A ppb
5	10.929	BFB	Id.	95.0	61117	11.6004



Unidentified Peaks

Quan Ions:	RIC	Spectrum Match Type:	Normal-Forward
RF Used:	1.000	Match Thresh:	700

#	RT	Peak Name	Res Type	Area	Amount	R.Match
6	8.969	Cyclotrisiloxane, hexamethyl	TIC	1.071e+6	1071493	881
7	11.475	Cyclotetrasiloxane, octameth	TIC	1.745e+6	1745481	898
8	12.214	1,4-Dichlorobenzene-D4	TIC	282184	282184	943
9	12.867	Cyclopentasiloxane, decameth	TIC	867596	867596	907

****

Revision Log

****

****

Injection Sample Notes

****

RL-5 08/16/16, 12:25, neat sample unknown concentration

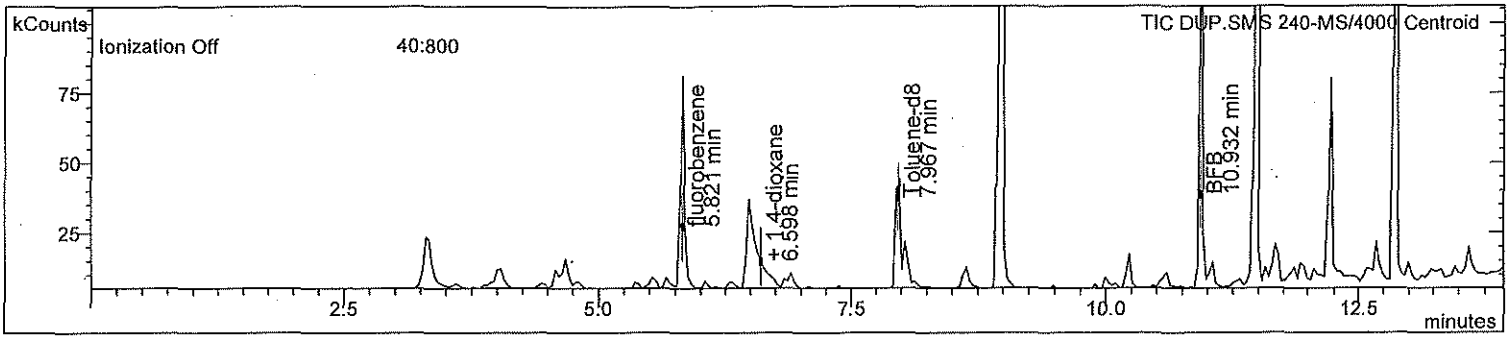
cyclohexane (5.352min)
Benzene (5.556min)
methylcyclohexane (6.832)
Sub alkenes
Sub Benzens
Sub alcanes
octanal (11.787min)
Sub cyclics
Napthalene (13.594)

MANUAL RE-INTEGRATION

- [ ] missed peak assignment
- [ ] assigned incorrect name to peak
- [ ] over-integrated peak's area
- [ ] under-integrated peak's area
- [ ] other

initials SEOP *date* 8-17-16

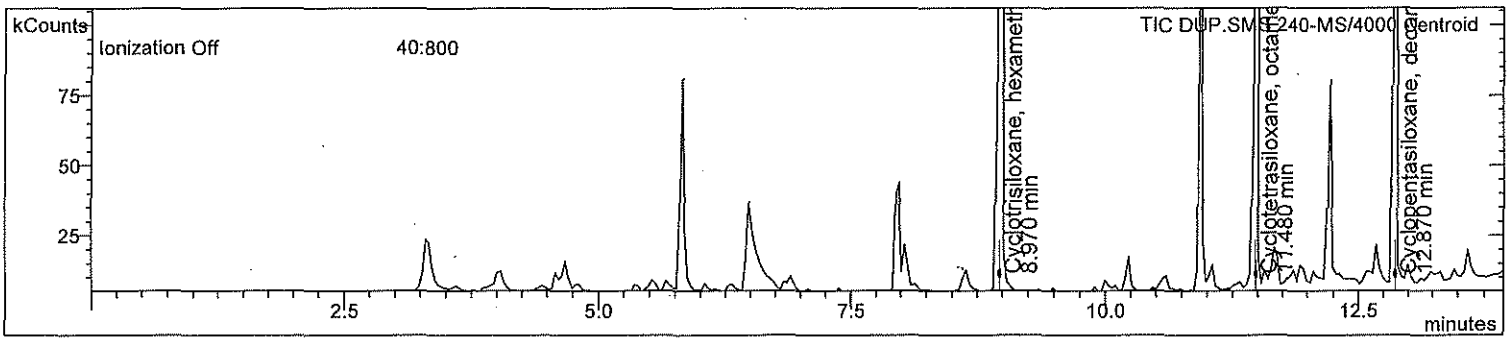
Sample ID:	DUP	Operator:	seop
Instrument ID:	MS Instrument #1	Last Calibration:	8/17/2016 7:00 AM
Acquisition Date:	8/17/2016 1:49 PM	Data File:	...ata\08172016\dup.sms
Calculation Date:	8/17/2016 2:19 PM	Method:	...ds\1624_08162016.mth
Inj. Sample Notes:	DUPLICATE 08/16/16 12:25, neat sample unknown concentration		



nd.

Target Compounds

#	RT	Peak Name	Res Type	Quan Ions	Area	Amount/RF
1	5.821	fluorobenzene	Id.	96.0	89206	10.0000 ppb
2	6.504	1,4-dioxane-d8	Fail	64.0	47634	133.0000 ppb
3	7.967	Toluene-d8	Id.	98.1	55829	9.7183 ppb
4	6.598	1,4-dioxane	Fail	88.0	90	N/A ppb
5	10.932	BFB	Id.	95.0	62129	12.5376



Unidentified Peaks

Quan Ions:	RIC	Spectrum Match Type:	Normal-Forward
RF Used:	1.000	Match Thresh:	700

#	RT	Peak Name	Res Type	Area	Amount	R.Match
6	8.970	Cyclotrisiloxane, hexamethyl	TIC	1.233e+6	1232916	883
7	11.480	Cyclotetrasiloxane, octameth	TIC	1.645e+6	1645070	904
8	12.870	Cyclopentasiloxane, decameth	TIC	504196	504196	910

****
Revision Log
****

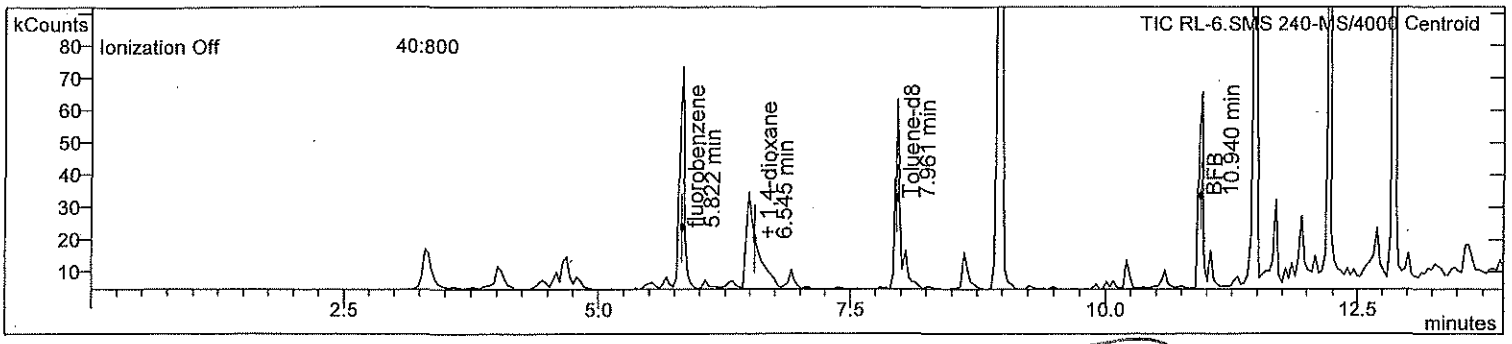
methylPiperonate (4.778)
sub alkenes
Benzene (5.558 min)
Sub cyclic
possible Trace Styrene
Sub benzenes
Alkanes
Naphthalene

MANUAL RE-INTEGRATION
[ ] missed peak assignment
[ ] assigned incorrect name to peak
[ ] over-integrated peak's area
[ ] under-integrated peak's area
[ ] other _____
initials SEal date 8-18-16

****
Injection Sample Notes
****

DUPLICATE 08/16/16 12:25, neat sample unknown concentration

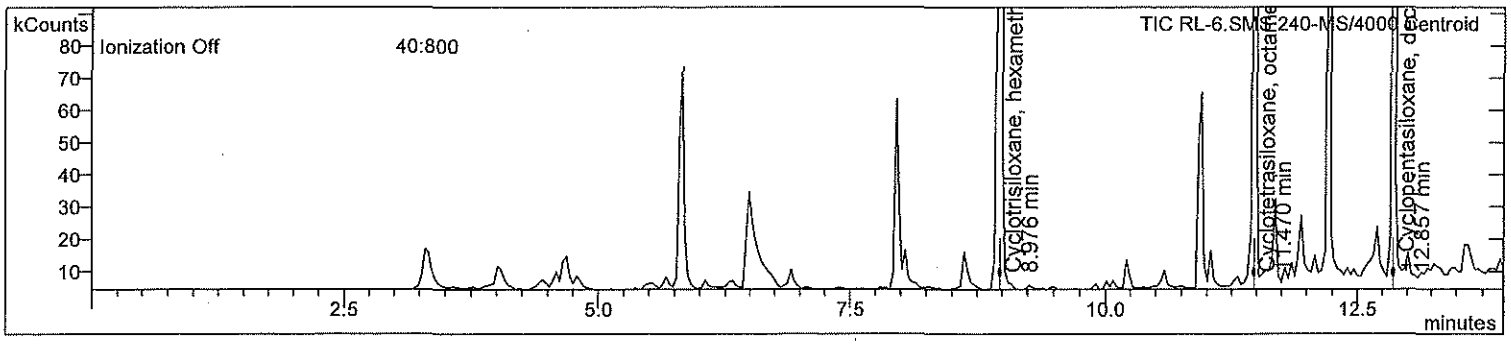
Sample ID:	RL-6	Operator:	seop
Instrument ID:	MS Instrument #1	Last Calibration:	8/17/2016 7:00 AM
Acquisition Date:	8/18/2016 6:03 AM	Data File:	...ta\08172016\rl-6.sms
Calculation Date:	8/18/2016 8:20 AM	Method:	...ds\1624_08162016.mth
Inj. Sample Notes:	RL-6 08/16/16 14:40, neat sample conc. unknown.		



n.d.

Target Compounds

#	RT	Peak Name	Res Type	Quan Ions	Area	Amount/RF
1	5.822	fluorobenzene	Id.	96.0	95156	10.0000 ppb
2	6.502	1,4-dioxane-d8	Fail	64.0	46478	133.0000 ppb
3	7.961	Toluene-d8	Id.	98.1	65794	10.7368 ppb
4	6.545	1,4-dioxane	Fail	88.0	102	N/A ppb
5	10.940	BFB	Id.	95.0	38210	7.2287



Unidentified Peaks

Quan Ions:	RIC	Spectrum Match Type:	Normal-Forward
RF Used:	1.000	Match Thresh:	700

#	RT	Peak Name	Res Type	Area	Amount	R.Match
6	8.976	Cyclotrisiloxane, hexamethyl	TIC	996992	996992	888
7	11.470	Cyclotetrasiloxane, octameth	TIC	1.361e+6	1361410	902
8	12.207	1,4-Dichlorobenzene-D4	TIC	442902	442902	934
9	12.857	Cyclopentasiloxane, decameth	TIC	1.523e+6	1522507	906

Revision Log

methy propionate
3-ethylcyclobutanol acetate
substituted Alkenes
octanal (Aldehyde)
1,2,3-trimethyl Benzene
Naphthalene
trace Benzene

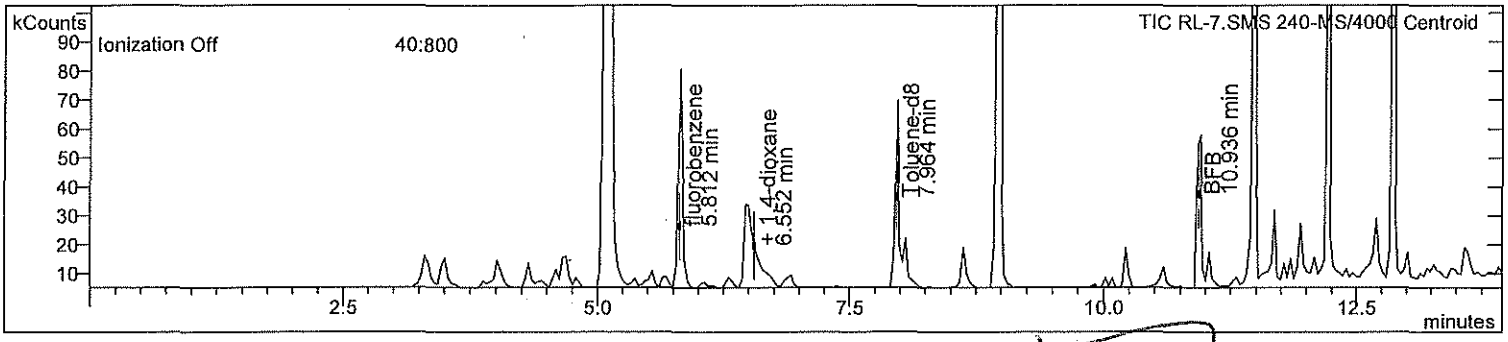
Injection Sample Notes

RL-6 08/16/16 14:40, neat sample conc. unknown.

MANUAL RE-INTEGRATION
- [ ] missed peak assignment
- [ ] assigned incorrect name to pe
- [ ] over-integrated peak's area
- [ ] under-integrated peak's area
- [ ] other

initials SEOP *date* 09-16-16

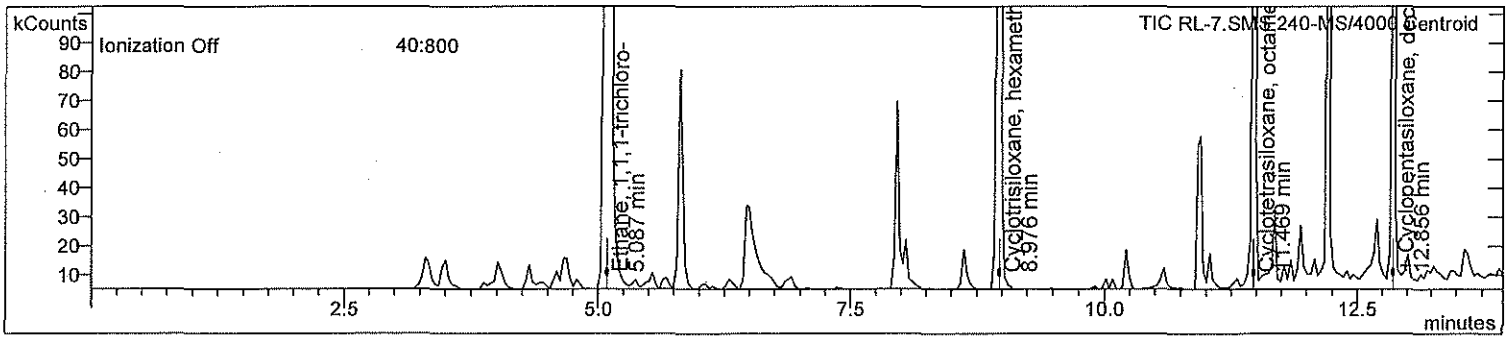
Sample ID:	RL-7	Operator:	seop
Instrument ID:	MS Instrument #1	Last Calibration:	8/17/2016 7:00 AM
Acquisition Date:	8/18/2016 7:08 AM	Data File:	...ta\08172016\rl-7.sms
Calculation Date:	8/18/2016 8:21 AM	Method:	...ds\1624_08162016.mth
Inj. Sample Notes:	RL-7 08/16/16 17:55, neat sample conc. unknown		



nd.

Target Compounds

#	RT	Peak Name	Res Type	Quan Ions	Area	Amount/RF
1	5.812	fluorobenzene	Id.	96.0	97686	10.0000 ppb
2	6.498	1,4-dioxane-d8	Fail	64.0	49207	133.0000 ppb
3	7.964	Toluene-d8	Id.	98.1	64918	10.3194 ppb
4	6.552	1,4-dioxane	Fail	88.0	189	N/A ppb
5	10.936	BFB	Id.	95.0	36160	6.6637



Unidentified Peaks

Quan Ions: RIC
RF Used: 1.000

largest peak in Big Peak window

Spectrum Match Type: Normal-Forward
Match Thresh: 700

#	RT	Peak Name	Res Type	Area	Amount	R.Match
6	5.087	Ethane, 1,1,1-trichloro-	TIC	3.233e+6	3233406	926
7	8.976	Cyclotrisiloxane, hexamethyl	TIC	946819	946819	890
8	11.469	Cyclotetrasiloxane, octameth	TIC	1.264e+6	1264161	898
9	12.206	1,4-Dichlorobenzene-D4	TIC	423160	423160	935
10	12.856	Cyclopentasiloxane, decameth	TIC	976771	976771	893

Revision Log

1,1-Dichloro Ethane (96% match)

(4.317min) Trichloromethane

5.080 1,1,1-Trichloroethane (84%)

MANUAL RE-INTEGRATION
- [x] missed peak assignment
- [ ] assigned incorrect name to peak
- [ ] over-integrated peak's area
- [ ] under-integrated peak's area
- [ ] other

initials SEOP date 08-17-16

Injection Sample Notes

RL-7 08/16/16 17:55, neat sample conc. unknown

cyclohexane

(68%) Benzene (5.541min)

Thiophene (6.043mm) 53%

2-Pentanone

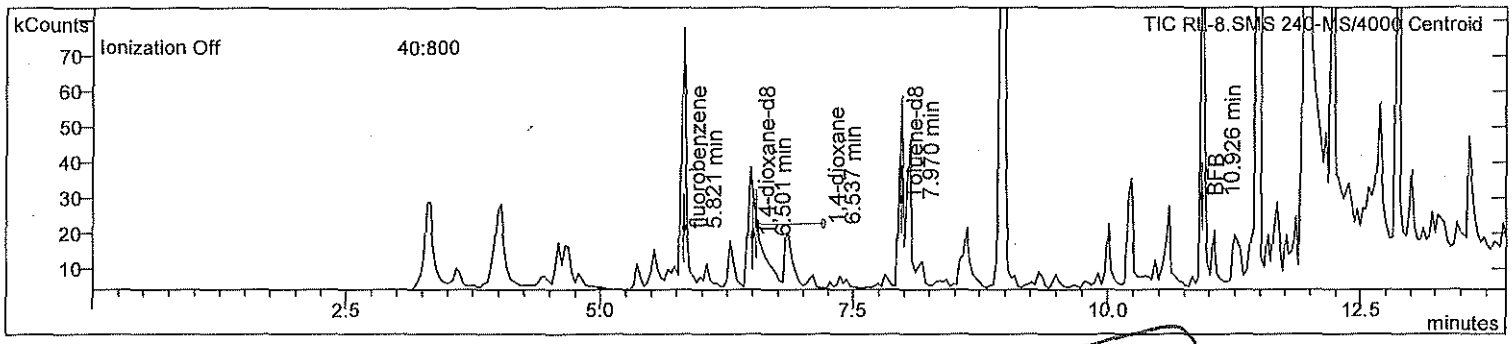
Subalkanes

octanal

1,2,3-trimethylBenzene

Sub benzene cyclic

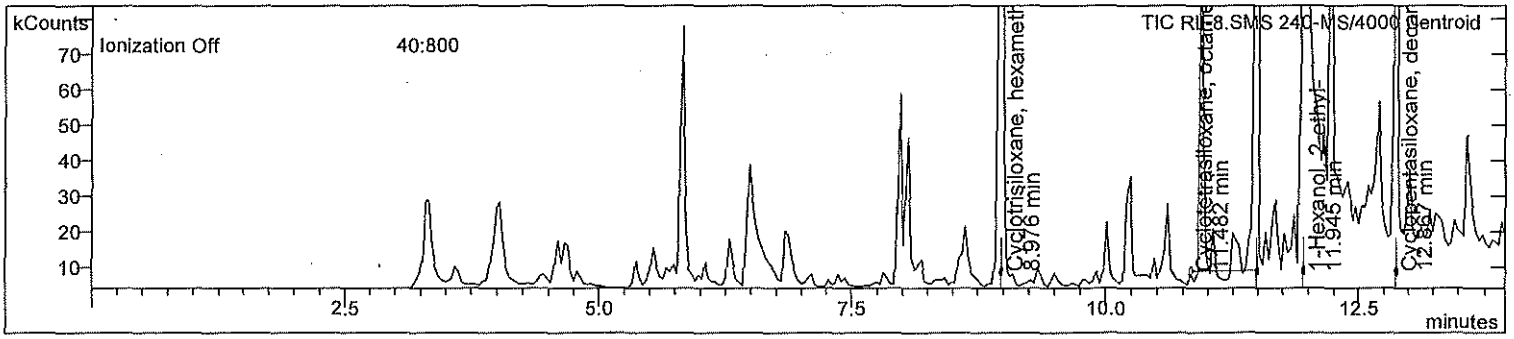
Sample ID:	RL-8	Operator:	seop
Instrument ID:	MS Instrument #1	Last Calibration:	8/17/2016 7:00 AM
Acquisition Date:	8/18/2016 8:13 AM	Data File:	...ta\08172016\rl-8.sms
Calculation Date:	8/18/2016 9:44 AM	Method:	...ds\1624_08162016.mth
Inj. Sample Notes:	RL-8 08/17/16 09:05, neat sample unknown conc.		



n.d.

Target Compounds

#	RT	Peak Name	Res Type	Quan Ions	Area	Amount/RF
1	5.821	fluorobenzene	Id.	96.0	95014	10.0000 ppb
2	6.501	1,4-dioxane-d8	Fail	64.0	51064	133.0000 ppb
3	7.970	Toluene-d8	Id.	98.1	57380	9.3777 ppb
4	6.537	1,4-dioxane	Fail	88.0	727	0.1738 ppb
5	10.926	BFB	Id.	95.0	52652	9.9755



Unidentified Peaks

Quan Ions:	RIC	Spectrum Match Type:	Normal-Forward
RF Used:	1.000	Match Thresh:	700

#	RT	Peak Name	Res Type	Area	Amount	R.Matcl
6	8.976	Cyclotrisiloxane, hexamethyl	TIC	799687	799687	876
7	11.482	Cyclotetrasiloxane, octameth	TIC	779697	779697	889
8	11.945	1-Hexanol, 2-ethyl-	TIC	1.597e+6	1597013	849
9	12.867	Cyclopentasiloxane, decameth	TIC	1.271e+6	1271143	909

****

Revision Log

****

Sub alkanes
methyl propionate
cyclohexane
& Benzene (5.531)
methylcyclohexane
Sub cyclics
1,2,3-trimethyl Benzene
Sub Ketone
Naphthalene

****

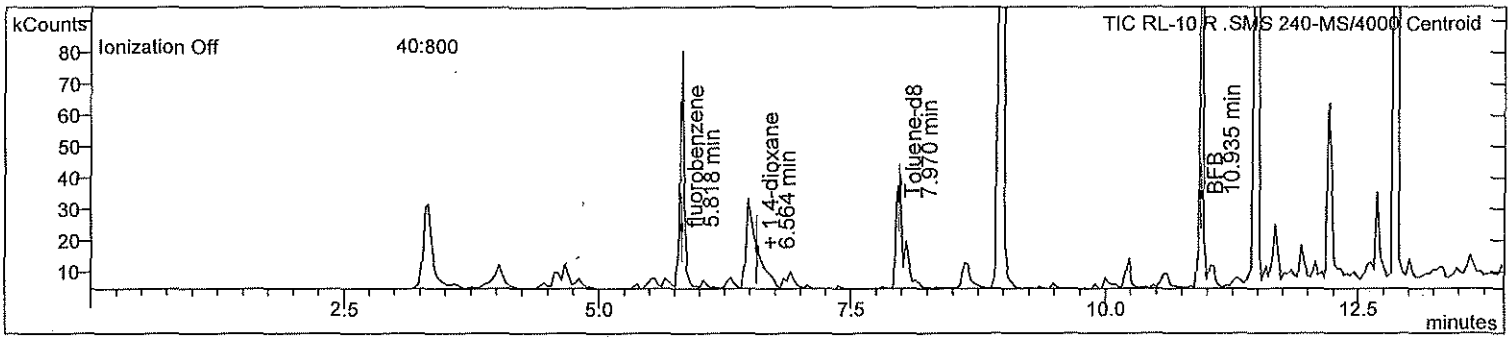
Injection Sample Notes

****

RL-8 08/17/16 09:05, neat sample unknown conc.

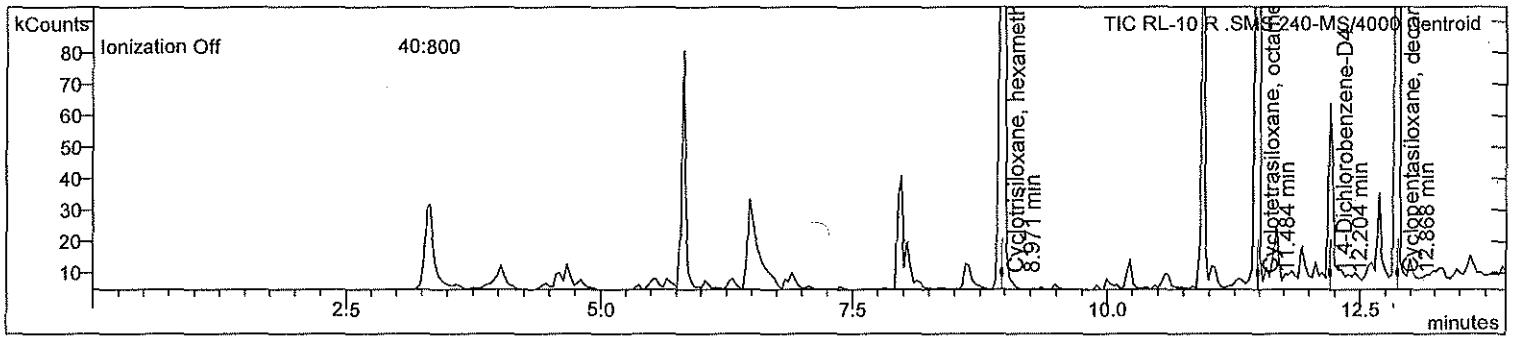
MANUAL RE-INTEGRATION
missed peak assignment
assigned incorrect name to peak
over-integrated peak's area
under-integrated peak's area
other
initials SEOP *date* 08-18-16

Sample ID:	RL-10 R	Operator:	seop
Instrument ID:	MS Instrument #1	Last Calibration:	8/17/2016 7:00 AM
Acquisition Date:	8/22/2016 1:13 PM	Data File:	...8222016\rl-10 r .sms
Calculation Date:	8/22/2016 2:30 PM	Method:	...ds\1624_08162016.mth
Inj. Sample Notes:	RL-10 R 08/17/16 11:00, neat sample		



Target Compounds

#	RT	Peak Name	Res Type	Quan Ions	Area	Amount/RF
1	5.818	fluorobenzene	Id.	96.0	85657	10.0000 ppb
2	6.504	1,4-dioxane-d8	Fail	64.0	44752	133.0000 ppb
3	7.970	Toluene-d8	Id.	98.1	51352	9.3094 ppb
4	6.564	1,4-dioxane	Id.	88.0	128	N/A ppb
5	10.935	BFB	Id.	95.0	55909	11.7497



Unidentified Peaks

Quan Ions:	RIC	Spectrum Match Type:	Normal-Forward
RF Used:	1.000	Match Thresh:	700

#	RT	Peak Name	Res Type	Area	Amount	R.Match
6	8.971	Cyclotrisiloxane, hexamethyl	TIC	1.434e+6	1434081	891
7	11.484	Cyclotetrasiloxane, octameth	TIC	1.584e+6	1583522	887
8	12.204	1,4-Dichlorobenzene-D4	TIC	154957	154957	923
9	12.868	Cyclopentasiloxane, decameth	TIC	648734	648734	911

****

Revision Log

****

****

Injection Sample Notes

****

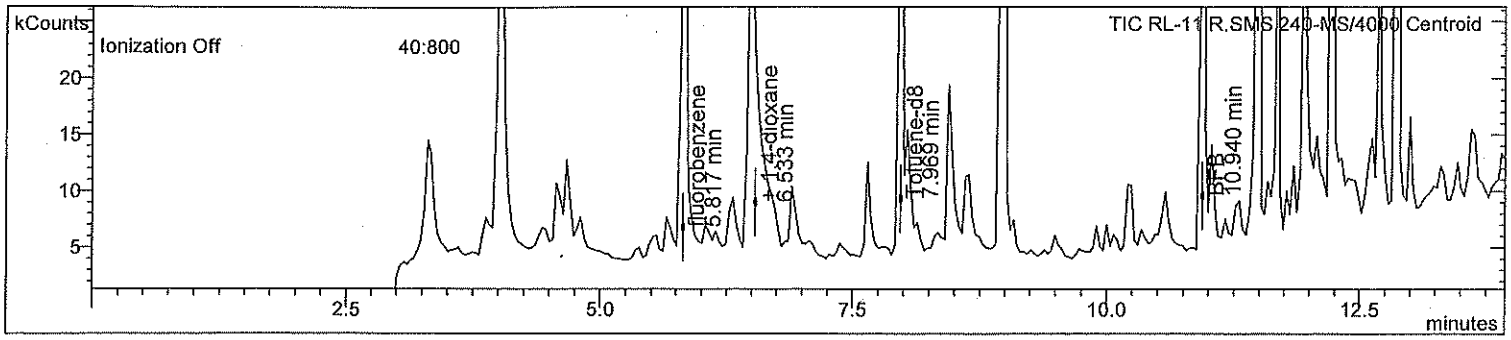
RL-10 R 08/17/16 11:00, neat sample

MANUAL RE-INTEGRATION

[✓] missed peak assignment
[ ] assigned incorrect name to peak
[ ] over-integrated peak's area
[ ] under-integrated peak's area
[ ] other _____

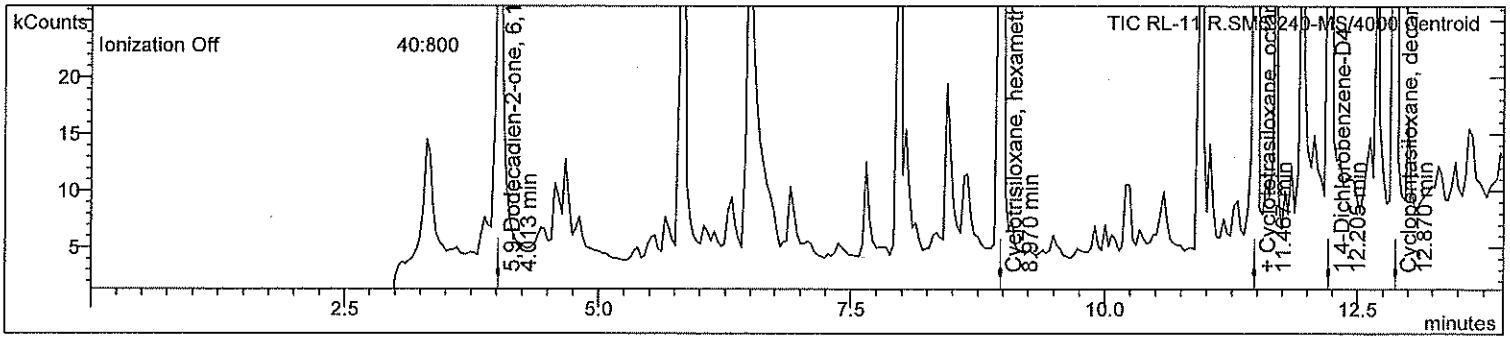
initials SEOP *date* 08-22-16

Sample ID:	RL-11 R	Operator:	seop
Instrument ID:	MS Instrument #1	Last Calibration:	8/17/2016 7:00 AM
Acquisition Date:	8/22/2016 1:46 PM	Data File:	...08222016\rl-11 r.sms
Calculation Date:	8/22/2016 2:31 PM	Method:	...ds\1624_08162016.mth
Inj. Sample Notes:	RL-11 R 08/17/16 11:45, neat sample		



Target Compounds

#	RT	Peak Name	Res Type	Quan Ions	Area	Amount/RF
1	5.817	fluorobenzene	Id.	96.0	84899	10.0000 ppb
2	6.501	1,4-dioxane-d8	Fail	64.0	47834	133.0000 ppb
3	7.969	Toluene-d8	Id.	98.1	53226	9.7352 ppb
4	6.533	1,4-dioxane	Fail	88.0	92	N/A ppb
5	10.940	BFB	Id.	95.0	40629	8.6148



Unidentified Peaks

Quan Ions:	RIC	Spectrum Match Type:	Normal-Forward
RF Used:	1.000	Match Thresh:	700

#	RT	Peak Name	Res Type	Area	Amount	R.Match
6	4.013	5,9-Dodecadien-2-one, 6,10-d	TIC	154716	154716	809
7	8.970	Cyclotrisiloxane, hexamethyl	TIC	497690	497690	883
8	11.467	Cyclotetrasiloxane, octameth	TIC	563008	563008	901
9	11.941	1-Hexanol, 2-ethyl-	TIC	107520	107520	858
10	12.205	1,4-Dichlorobenzene-D4	TIC	161881	161881	929
11	12.870	Cyclopentasiloxane, decameth	TIC	534684	534684	908

****

Revision Log

****

MANUAL RE-INTEGRATION
- [ ] missed peak assignment
- [ ] assigned incorrect name to peak
- [ ] over-integrated peak's area
- [ ] under-integrated peak's area
- [ ] other

initials SEOP *date* 08-22-16

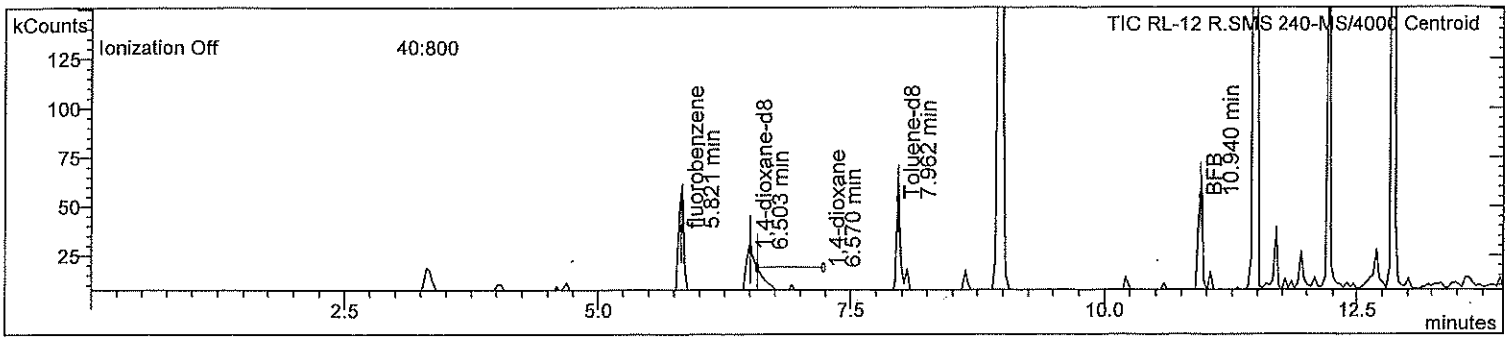
****

Injection Sample Notes

****

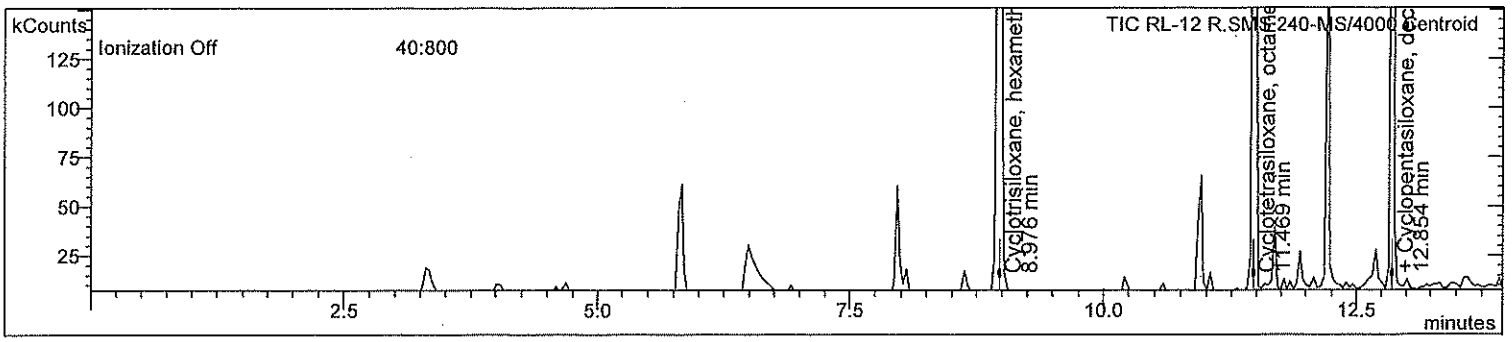
RL-11 R 08/17/16 11:45, neat sample

Sample ID:	RL-12 R	Operator:	seop
Instrument ID:	MS Instrument #1	Last Calibration:	8/17/2016 7:00 AM
Acquisition Date:	8/22/2016 12:09 PM	Data File:	...08222016\rl-12 r.sms
Calculation Date:	8/22/2016 12:23 PM	Method:	...ds\1624_08162016.mth
Inj. Sample Notes:	RL-12 R 08/17/1610:10, neat sample		



Target Compounds

#	RT	Peak Name	Res Type	Quan Ions	Area	Amount/RF
1	5.821	fluorobenzene	Id.	96.0	84301	10.0000 ppb
2	6.503	1,4-dioxane-d8	Fail	64.0	43802	133.0000 ppb
3	7.962	Toluene-d8	Id.	98.1	58326	10.7437 ppb
4	6.570	1,4-dioxane	Fail	88.0	8521	3.2950 ppb
5	10.940	BFB	Id.	95.0	35198	7.5161



Unidentified Peaks

Quan Ions:	RIC	Spectrum Match Type:	Normal-Forward
RF Used:	1.000	Match Thresh:	700

#	RT	Peak Name	Res Type	Area	Amount	R.Match
6	8.976	Cyclotrisiloxane, hexamethyl	TIC	2.107e+6	2107472	882
7	11.469	Cyclotetrasiloxane, octameth	TIC	2.617e+6	2617245	905
8	12.206	1,4-Dichlorobenzene-D4	TIC	383218	383218	913
9	12.854	Cyclopentasiloxane, decameth	TIC	1.583e+6	1582944	909

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Revision Log

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Injection Sample Notes

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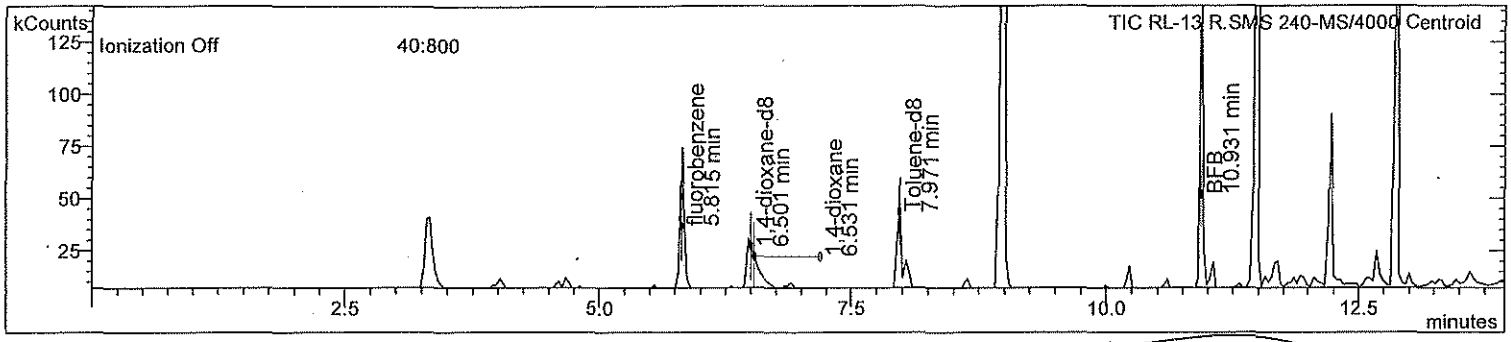
RL-12 R 08/17/1610:10, neat sample

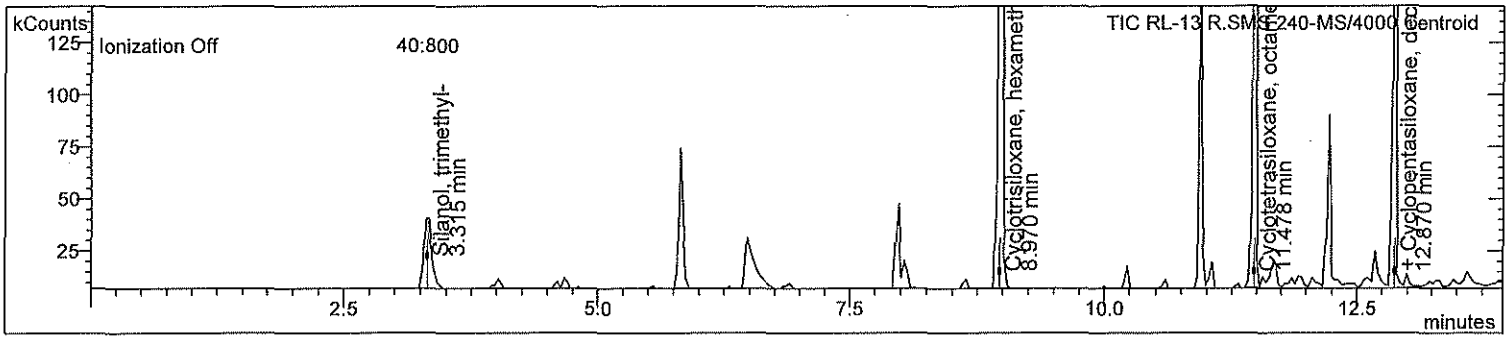
Sample ID:	RL-13 R	Operator:	seop
Instrument ID:	MS Instrument #1	Last Calibration:	8/17/2016 7:00 AM
Acquisition Date:	8/22/2016 11:04 AM	Data File:	...08222016\rl-13 r.sms
Calculation Date:	8/22/2016 11:30 AM	Method:	...ds\1624_08162016.mth
Inj. Sample Notes:	RL-13 R 08/17/16 12:40 neat sample		



1.9ppb

Target Compounds

#	RT	Peak Name	Res Type	Quan Ions	Area	Amount/RF
1	5.815	fluorobenzene	Id.	96.0	82480	10.0000 ppb
2	6.501	1,4-dioxane-d8	Fail	64.0	40818	133.0000 ppb
3	7.971	Toluene-d8	Id.	98.1	52081	9.8052 ppb
4	6.531	1,4-dioxane	Fail	88.0	4737	1.9366 ppb
5	10.931	BFB	Id.	95.0	63087	13.7690



Unidentified Peaks

Quan Ions: RIC
RF Used: 1.000

Spectrum Match Type: Normal-Forward
Match Thresh: 700

One Is and the rest All columnbleed Here

#	RT	Peak Name	Res Type	Area	Amount	R.Match
6	3.315	Silanol, trimethyl-	TIC	192700	192700	943
7	8.970	Cyclotrisiloxane, hexamethyl	TIC	1.367e+6	1367499	886
8	11.478	Cyclotetrasiloxane, octameth	TIC	2.181e+6	2181141	908
9	12.218	1,4-Dichlorobenzene-D4	TIC	101770	101770	929
10	12.870	Cyclopentasiloxane, decameth	TIC	555853	555853	915

TIC - Traces

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Revision Log

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methyl propionate
cyclohexane
Benzene
methyl cyclohexane
1,2,3-trimethyl benzene
Naphthalene

****

Injection Sample Notes

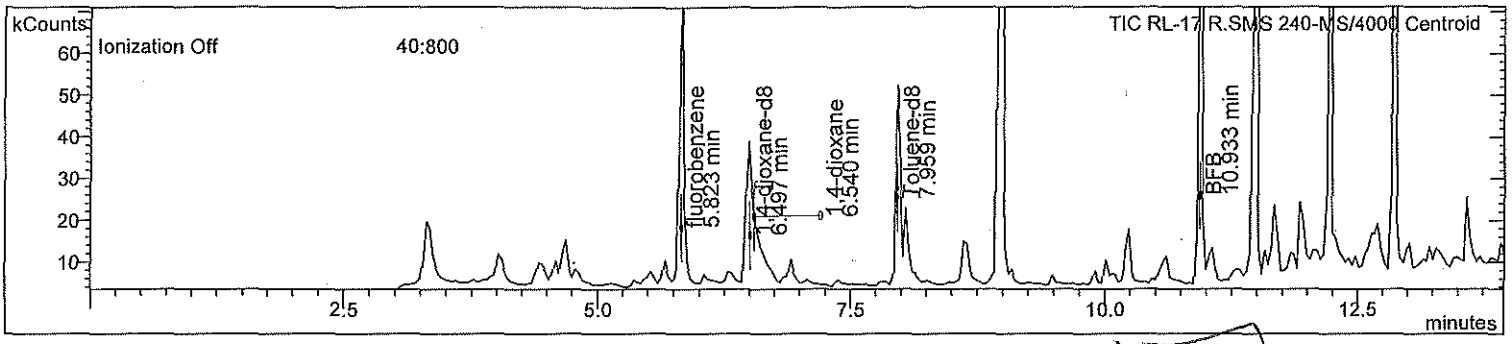
****

RL-13 R 08/17/16 12:40 neat sample

MANUAL RE-INTEGRATION
- [x] missed peak assignment
- [ ] assigned incorrect name to peak
- [ ] over-integrated peak's area
- [ ] under-integrated peak's area
- [ ] other _____

initials SEOP *date* 08-22-16

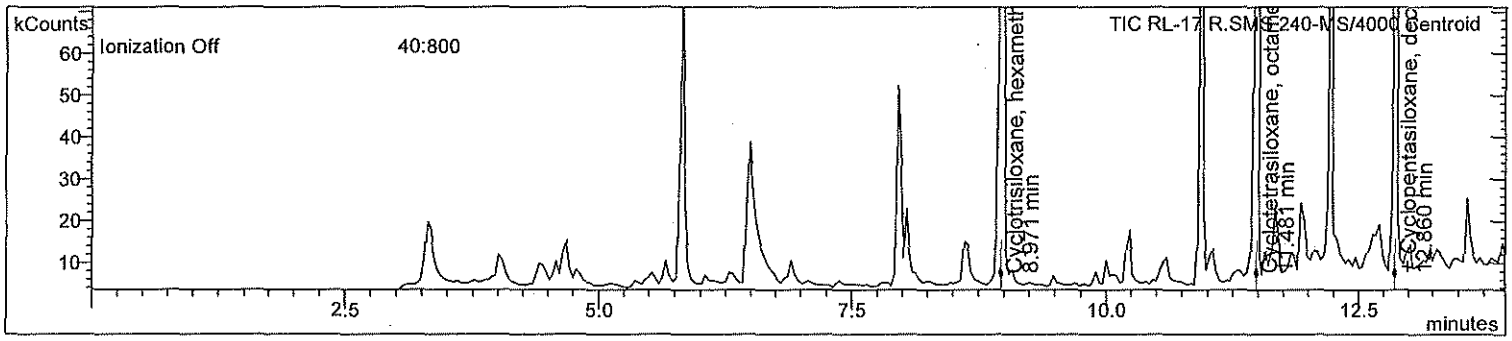
Sample ID:	RL-17 R	Operator:	seop
Instrument ID:	MS Instrument #1	Last Calibration:	8/17/2016 7:00 AM
Acquisition Date:	8/17/2016 5:36 PM	Data File:	...08172016\rl-17 r.sms
Calculation Date:	8/18/2016 6:30 AM	Method:	...ds\1624_08162016.mth
Inj. Sample Notes:	RL-17 R 08/15/16 10:55, neat sample, unknown concentration		



n.d.

Target Compounds

#	RT	Peak Name	Res Type	Quan Ions	Area	Amount/RF
1	5.823	fluorobenzene	Id.	96.0	89509	10.0000 ppb
2	6.497	1,4-dioxane-d8	Fail	64.0	48406	133.0000 ppb
3	7.959	Toluene-d8	Id.	98.1	62219	10.7938 ppb
4	6.540	1,4-dioxane	Fail	88.0	221	0.0063 ppb
5	10.933	BFB	Id.	95.0	64406	12.9531



Unidentified Peaks

Quan Ions:	RIC	Spectrum Match Type:	Normal-Forward
RF Used:	1.000	Match Thresh:	700

#	RT	Peak Name	Res Type	Area	Amount	R.Match
6	8.971	Cyclotrisiloxane, hexamethyl	TIC	825888	825888	886
7	11.481	Cyclotetrasiloxane, octameth	TIC	1.060e+6	1060220	893
8	12.214	1,4-Dichlorobenzene-D4	TIC	282059	282059	936
9	12.860	Cyclopentasiloxane, decameth	TIC	1.121e+6	1120569	914

****
Revision Log
****

Benzene (5508 mm)
Butanoic Acid, methyl ester
Sub alkanes
Sub alkenes
Sub Benzenes - lots

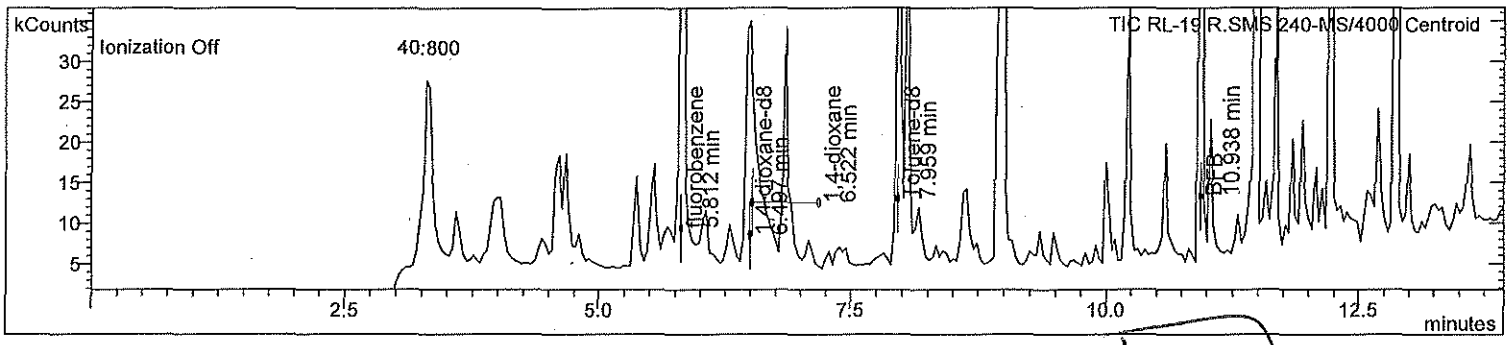
MANUAL RE-INTEGRATION
- [ ] missed peak assignment
- [ ] assigned incorrect name to peak
- [ ] over-integrated peak's area
- [ ] under-integrated peak's area
- [ ] other _____

initials SEOP *date* 08.18.16

****
Injection Sample Notes
****

RL-17 R 08/15/16 10:55, neat sample, unknown concentration Naphthalene

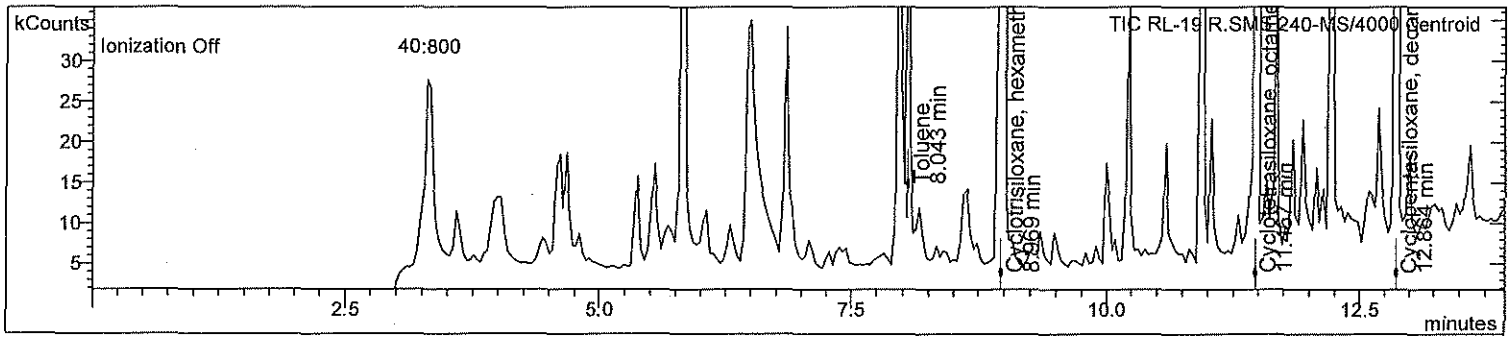
Sample ID:	RL-19 R	Operator:	seop
Instrument ID:	MS Instrument #1	Last Calibration:	8/17/2016 7:00 AM
Acquisition Date:	8/17/2016 6:09 PM	Data File:	...08172016\rl-19 r.sms
Calculation Date:	8/18/2016 6:31 AM	Method:	...ds\1624_08162016.mth
Inj. Sample Notes:	RL-19 R 08/15/16 12:55, neat sample, unknown concentration		



Id.

Target Compounds

#	RT	Peak Name	Res Type	Quan Ions	Area	Amount/RF
1	5.812	fluorobenzene	Id.	96.0	97685	10.0000 ppb
2	6.497	1,4-dioxane-d8	Fail	64.0	49979	133.0000 ppb
3	7.959	Toluene-d8	Id.	98.1	62931	10.0037 ppb
4	6.522	1,4-dioxane	Fail	88.0	259	0.0171 ppb
5	10.938	BFB	Id.	95.0	35495	6.5411



Unidentified Peaks

Quan Ions:	RIC	Spectrum Match Type:	Normal-Forward
RF Used:	1.000	Match Thresh:	700

#	RT	Peak Name	Res Type	Area	Amount	R.Match
6	8.043	Toluene	TIC	101897	101897	910
7	8.969	Cyclotrisiloxane, hexamethyl	TIC	833252	833252	898
8	11.467	Cyclotetrasiloxane, octameth	TIC	749965	749965	907
9	12.864	Cyclopentasiloxane, decameth	TIC	313968	313968	903

****

Revision Log

****

Benzene
Subcyclics
Sub alkane
Sub alkens
Sub Benzene
Naphthalene

****

Injection Sample Notes

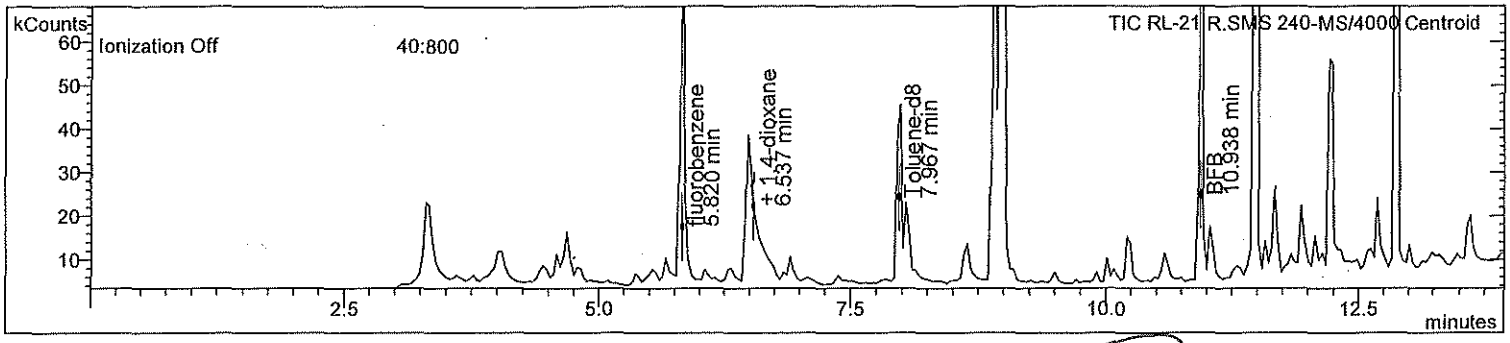
****

RL-19 R 08/15/16 12:55, neat sample, unknown concentration

MANUAL RE-INTEGRATION
- [ ] missed peak assignment
- [ ] assigned incorrect name to peak
- [ ] over-integrated peak's area
- [ ] under-integrated peak's area
- [ ] other

initials SEOP *date* 8-18-16

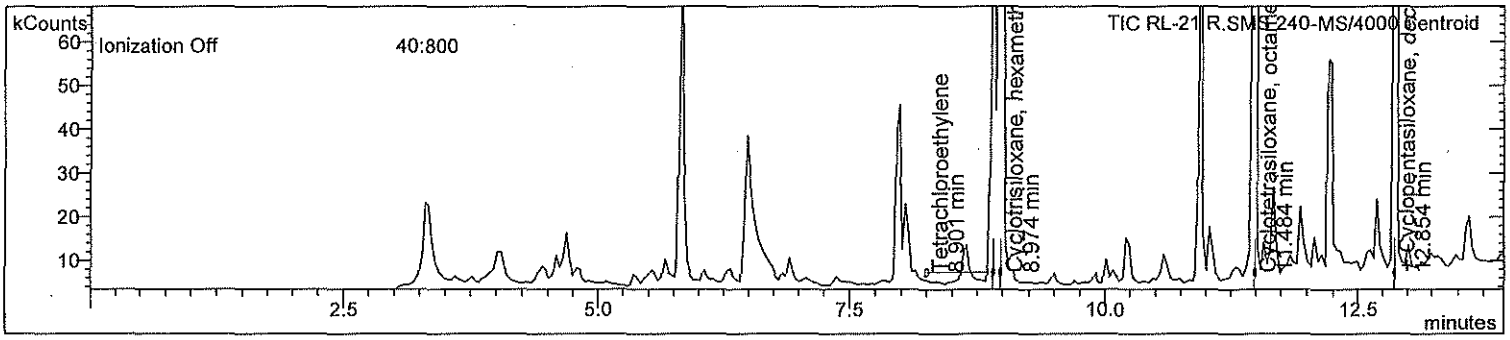
Sample ID:	RL-21 R	Operator:	seop
Instrument ID:	MS Instrument #1	Last Calibration:	8/17/2016 7:00 AM
Acquisition Date:	8/17/2016 6:41 PM	Data File:	...08172016\rl-21 r.sms
Calculation Date:	8/18/2016 6:32 AM	Method:	...ds\1624_08162016.mth
Inj. Sample Notes:	RL-21 R 08/15/16 11:50, neat sample unknown concentration		



nd.

Target Compounds

#	RT	Peak Name	Res Type	Quan Ions	Area	Amount/RF
1	5.820	fluorobenzene	Id.	96.0	95221	10.0000 ppb
2	6.502	1,4-dioxane-d8	Fail	64.0	49841	133.0000 ppb
3	7.967	Toluene-d8	Id.	98.1	58475	9.5358 ppb
4	6.537	1,4-dioxane	Fail	88.0	153	N/A ppb
5	10.938	BFB	Id.	95.0	45187	8.5427



Unidentified Peaks

Quan Ions:	RIC	Spectrum Match Type:	Normal-Forward
RF Used:	1.000	Match Thresh:	700

#	RT	Peak Name	Res Type	Area	Amount	R.Match
6	8.901	Tetrachloroethylene	TIC	315046	315046	941
7	8.974	Cyclotrisiloxane, hexamethyl	TIC	1.199e+6	1199148	896
8	11.484	Cyclotetrasiloxane, octameth	TIC	1.195e+6	1194688	894
9	12.211	1,4-Dichlorobenzene-D4	TIC	173199	173199	924
10	12.854	Cyclopentasiloxane, decameth	TIC	502106	502106	892

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Revision Log

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****

Injection Sample Notes

****

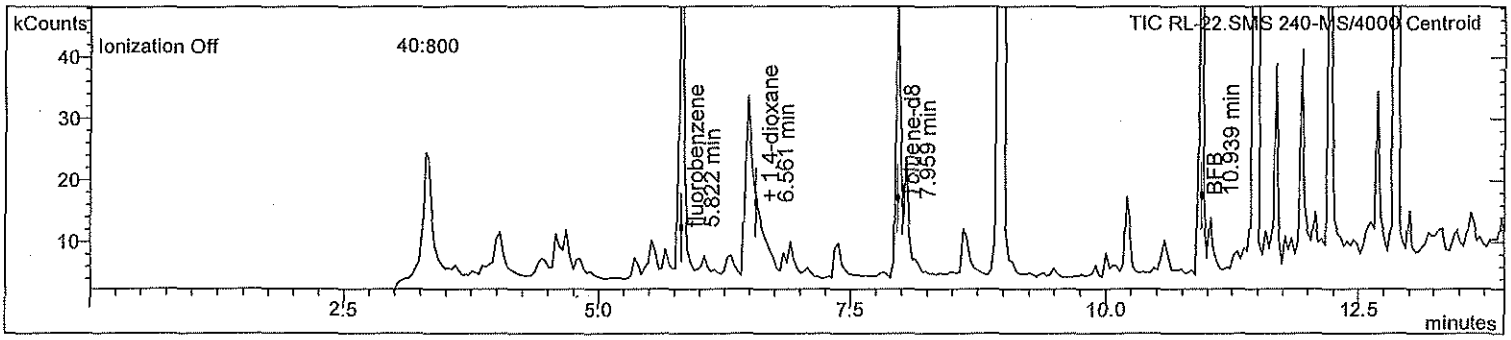
RL-21 R 08/15/16 11:50, neat sample unknown concentration

Benzene
methylpropronate
cyclohexane
methylcyclohexane
2,4-dimethyl-1-heptene
3-ethylhexane
1,2,3-trimethylbenzene
Naphthelene

MANUAL RE-INTEGRATION
- [ ] missed peak assignment
- [ ] assigned incorrect name to peak
- [ ] over-integrated peak's area
- [ ] under-integrated peak's area
- [ ] other

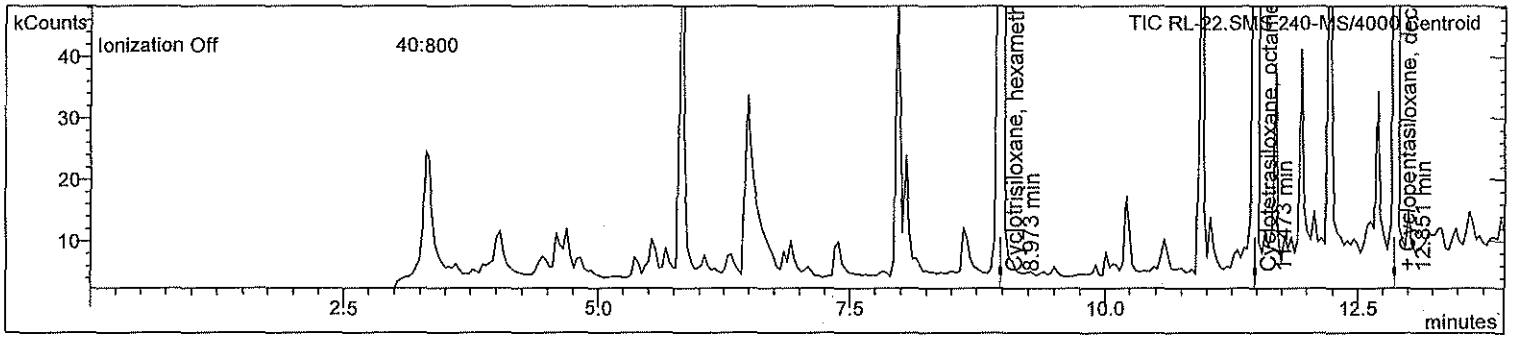
initials SEOP *date* 08-18-16

Sample ID:	RL-22	Operator:	seop
Instrument ID:	MS Instrument #1	Last Calibration:	8/17/2016 7:00 AM
Acquisition Date:	8/22/2016 2:18 PM	Data File:	...a\08222016\rl-22.sms
Calculation Date:	8/22/2016 2:32 PM	Method:	...ds\1624_08162016.mth
Inj. Sample Notes:	RL-22 R 08/17/16 16:50, neat sample		



Target Compounds

#	RT	Peak Name	Res Type	Quan Ions	Area	Amount/RF
1	5.822	fluorobenzene	Id.	96.0	82309	10.0000 ppb
2	6.501	1,4-dioxane-d8	Fail	64.0	44934	133.0000 ppb
3	7.959	Toluene-d8	Id.	98.1	56387	10.6378 ppb
4	6.561	1,4-dioxane	Id.	88.0	48	N/A ppb
5	10.939	BFB	Id.	95.0	47185	10.3196



Unidentified Peaks

Quan Ions:	RIC	Spectrum Match Type:	Normal-Forward
RF Used:	1.000	Match Thresh:	700

#	RT	Peak Name	Res Type	Area	Amount	R.Match
6	8.973	Cyclotrisiloxane, hexamethyl	TIC	1.034e+6	1034435	902
7	11.473	Cyclotetrasiloxane, octameth	TIC	937593	937593	901
8	12.202	1,4-Dichlorobenzene-D4	TIC	198398	198398	916
9	12.851	Cyclopentasiloxane, decameth	TIC	637141	637141	896

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Revision Log

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Injection Sample Notes

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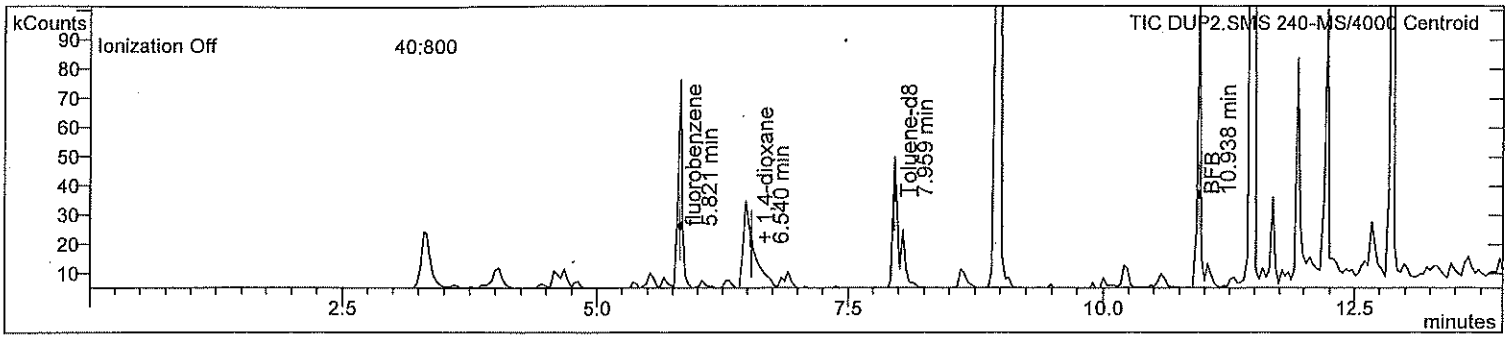
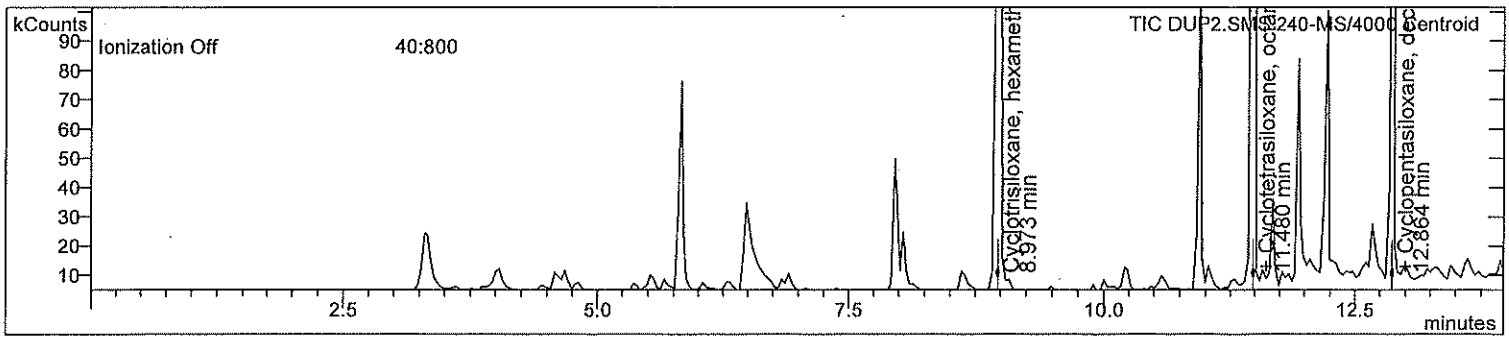
RL-22 R 08/17/16 16:50, neat sample

Sample ID:	DUP2	Operator:	seop
Instrument ID:	MS Instrument #1	Last Calibration:	8/17/2016 7:00 AM
Acquisition Date:	8/22/2016 2:50 PM	Data File:	...ta\08222016\dup2.sms
Calculation Date:	8/23/2016 6:42 AM	Method:	...ds\1624_08162016.mth
Inj. Sample Notes:	DUP2 R 08/17/16 16:50, neat sample		



Target Compounds

#	RT	Peak Name	Res Type	Quan Ions	Area	Amount/RF
1	5.821	fluorobenzene	Id.	96.0	83854	10.0000 ppb
2	6.504	1,4-dioxane-d8	Fail	64.0	44398	133.0000 ppb
3	7.959	Toluene-d8	Id.	98.1	55535	10.2840 ppb
4	6.540	1,4-dioxane	Fail	88.0	54	N/A ppb
5	10.938	BFB	Id.	95.0	47705	10.2412



Unidentified Peaks

Quan Ions:	RIC	Spectrum Match Type:	Normal-Forward
RF Used:	1.000	Match Thresh:	700

#	RT	Peak Name	Res Type	Area	Amount	R.Match
6	8.973	Cyclotrisiloxane, hexamethyl	TIC	1.447e+6	1447369	896
7	11.480	Cyclotetrasiloxane, octameth	TIC	1.202e+6	1201846	872
8	11.938	1-Hexanol, 2-ethyl-	TIC	155061	155061	854
9	12.217	1,4-Dichlorobenzene-D4	TIC	148045	148045	928
10	12.864	Cyclopentasiloxane, decameth	TIC	1.531e+6	1530965	908

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Revision Log

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****

Injection Sample Notes

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DUP2 R 08/17/16 16:50, neat sample

MANUAL RE-INTEGRATION
[ ] missed peak assignment
[ ] assigned incorrect name to pea
[ ] over-integrated peak's area
[ ] under-integrated peak's area
[ ] other
initials SEOP *date* 082316

ATS Data and Chain of Custodies

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731
Michigan Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Data Transmittal Cover Page

Project Name: Pall Corporation
ATS Project Number: G001-002
ATS Report Number(s): ORG_SRF_0815161

Project Description: This data report contains the results of three water samples, received by ATS on 8/15/16, to be analyzed for VOC's.

We certify that the sample analyses for this report have been conducted in accordance with guidelines provided in the referenced standard test method, and are consistent with detailed procedures described in a written Standard Operating Procedure specific to the ATS Laboratories, as required by USEPA. Laboratory data sheets, SOPs, and QA/QC information are available for inspection and audit at the laboratory upon request. Unless specifically noted on the data report, all applicable sample preservation and holding time requirements have been met.

Recipient: Ms. Sue Peters **Email:** Sue_Peters@Pall.com
FAX Number:

No. of Pages (including cover pg.): 8

From: Sarah Stubblefield, Senior Chemist / Lab Manager **Email:** Sarah.Stubblefield@AnnArborTechnicalServices.com
FAX Number: 734-995-3731

Additional Message: Email Copy: Ms. Laurel Beyer (Laurel_Beyer@Pall.com)

Date: 8/26/16 **Signed:**

IF YOU DO NOT RECEIVE ALL PAGES OF THIS TRANSMITTAL, PLEASE CALL 734-995-0995.

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731Michigan
Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Volatile Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/26/16
ATS SRF: 815161

Sample Identification: RL-17

Sample Date:	8/15/16	Preparation Method:	EPA 5030B
Sample Time:	10:55 AM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0818161-G
Laboratory Receipt Date:	8/15/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Acetone (67-64-1)	mg/L	<0.025	0.025	8/18/16	14:58	EBP
Benzene (71-43-2)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
Bromobenzene (108-86-1)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
Bromochloromethane (74-97-5)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
Bromodichloromethane (75-27-4)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
Bromoform (75-25-2)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
Bromomethane (74-83-9)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
2-Butanone (78-93-3) (MEK)	mg/L	<0.005	0.005	8/18/16	14:58	EBP
n-Butylbenzene (104-51-8)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
sec-Butylbenzene (135-98-8)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
tert-Butylbenzene (98-06-6)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
Carbon Disulfide (75-15-0)	mg/L	<0.005	0.005	8/18/16	14:58	EBP
Carbon Tetrachloride (56-23-5)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
Chlorobenzene (108-90-7)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
Chloroethane (75-00-3)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
Chloroform (67-66-3)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
Chloromethane (74-87-3)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
2-Chlorotoluene (95-49-8)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
4-Chlorotoluene (106-43-4)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
Dibromochloromethane (124-48-1)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
1,2-Dibromo-3-chloropropane (96-12-8)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
1,2-Dibromoethane (106-93-4)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
Dibromomethane (74-95-3)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
Dichlorodifluoromethane (75-71-8)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
1,2-Dichlorobenzene (95-50-1)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
1,3-Dichlorobenzene (541-73-1)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
1,4-Dichlorobenzene (106-46-7)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
1,1-Dichloroethane (75-34-3)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
1,2-Dichloroethane (107-06-2)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
1,1-Dichloroethene (75-35-4)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
cis-1,2-Dichloroethene (156-59-2)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
trans-1,2-Dichloroethene (156-60-5)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
1,2-Dichloropropane (78-87-5)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
1,3-Dichloropropane (142-28-9)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
2,2-Dichloropropane (594-20-7)	mg/L	<0.001	0.001	8/18/16	14:58	EBP

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731Michigan
Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Volatile Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/26/16
ATS SRF: 815161

Sample Identification: RL-17

Sample Date:	8/15/16	Preparation Method:	EPA 5030B
Sample Time:	10:55 AM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0818161-G
Laboratory Receipt Date:	8/15/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
1,1-Dichloropropene (563-58-6)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
cis-1,3-Dichloropropene (10061-01-5)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
trans-1,3-Dichloropropene (10061-02-6)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
Ethylbenzene (100-41-4)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
Hexachlorobutadiene (87-68-3)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
2-Hexanone (591-78-6)	mg/L	<0.005	0.005	8/18/16	14:58	EBP
Iodomethane (74-88-4)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
Isopropylbenzene (98-82-8)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
4-Isopropyltoluene (99-87-6)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
Methylene Chloride (75-09-2)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
4-Methyl-2-Pentanone (108-10-1)	mg/L	<0.005	0.005	8/18/16	14:58	EBP
Methyl tert-Butyl Ether (1634-04-4)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
Naphthalene (91-20-3)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
Propylbenzene (103-65-1)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
Styrene (100-42-5)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
1,1,1,2-Tetrachloroethane (630-20-6)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
1,1,2,2-Tetrachloroethane (79-34-5)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
Tetrachloroethene (127-18-4)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
Toluene (108-88-3)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
1,1,1-Trichloroethane (71-55-6)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
1,1,2-Trichloroethane (79-00-5)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
Trichloroethene (79-01-6)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
Trichlorofluoromethane (75-69-4)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
1,2,3-Trichlorobenzene (87-61-6)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
1,2,4-Trichlorobenzene (120-82-1)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
1,2,3-Trichloropropane (96-18-4)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
1,2,4-Trimethylbenzene (95-63-6)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
1,3,5-Trimethylbenzene (108-67-8)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
Vinyl Acetate (108-05-4)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
Vinyl Chloride (75-01-4)	mg/L	<0.001	0.001	8/18/16	14:58	EBP
Total Xylenes (1330-20-7)	mg/L	<0.003	0.003	8/18/16	14:58	EBP

Comments

All methods reference USEPA methods unless otherwise noted.
na - Indicates not applicable

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731Michigan
Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Volatile Organic Analysis Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/26/16
ATS SRF: 815161

Sample Identification: RL-21

Sample Date:	8/15/16	Preparation Method:	EPA 5030B
Sample Time:	11:50 AM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0818161-G
Laboratory Receipt Date:	8/15/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Acetone (67-64-1)	mg/L	<0.025	0.025	8/18/16	16:20	EBP
Benzene (71-43-2)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
Bromobenzene (108-86-1)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
Bromochloromethane (74-97-5)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
Bromodichloromethane (75-27-4)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
Bromoform (75-25-2)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
Bromomethane (74-83-9)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
2-Butanone (78-93-3) (MEK)	mg/L	<0.005	0.005	8/18/16	16:20	EBP
n-Butylbenzene (104-51-8)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
sec-Butylbenzene (135-98-8)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
tert-Butylbenzene (98-06-6)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
Carbon Disulfide (75-15-0)	mg/L	<0.005	0.005	8/18/16	16:20	EBP
Carbon Tetrachloride (56-23-5)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
Chlorobenzene (108-90-7)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
Chloroethane (75-00-3)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
Chloroform (67-66-3)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
Chloromethane (74-87-3)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
2-Chlorotoluene (95-49-8)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
4-Chlorotoluene (106-43-4)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
Dibromochloromethane (124-48-1)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
1,2-Dibromo-3-chloropropane (96-12-8)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
1,2-Dibromoethane (106-93-4)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
Dibromomethane (74-95-3)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
Dichlorodifluoromethane (75-71-8)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
1,2-Dichlorobenzene (95-50-1)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
1,3-Dichlorobenzene (541-73-1)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
1,4-Dichlorobenzene (106-46-7)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
1,1-Dichloroethane (75-34-3)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
1,2-Dichloroethane (107-06-2)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
1,1-Dichloroethene (75-35-4)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
cis-1,2-Dichloroethene (156-59-2)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
trans-1,2-Dichloroethene (156-60-5)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
1,2-Dichloropropane (78-87-5)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
1,3-Dichloropropane (142-28-9)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
2,2-Dichloropropane (594-20-7)	mg/L	<0.001	0.001	8/18/16	16:20	EBP

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731Michigan
Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Volatile Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/26/16
ATS SRF: 815161

Sample Identification: RL-21

Sample Date:	8/15/16	Preparation Method:	EPA 5030B
Sample Time:	11:50 AM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0818161-G
Laboratory Receipt Date:	8/15/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
1,1-Dichloropropene (563-58-6)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
cis-1,3-Dichloropropene (10061-01-5)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
trans-1,3-Dichloropropene (10061-02-6)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
Ethylbenzene (100-41-4)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
Hexachlorobutadiene (87-68-3)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
2-Hexanone (591-78-6)	mg/L	<0.005	0.005	8/18/16	16:20	EBP
Iodomethane (74-88-4)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
Isopropylbenzene (98-82-8)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
4-Isopropyltoluene (99-87-6)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
Methylene Chloride (75-09-2)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
4-Methyl-2-Pentanone (108-10-1)	mg/L	<0.005	0.005	8/18/16	16:20	EBP
Methyl tert-Butyl Ether (1634-04-4)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
Naphthalene (91-20-3)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
Propylbenzene (103-65-1)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
Styrene (100-42-5)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
1,1,1,2-Tetrachloroethane (630-20-6)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
1,1,2,2-Tetrachloroethane (79-34-5)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
Tetrachloroethene (127-18-4)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
Toluene (108-88-3)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
1,1,1-Trichloroethane (71-55-6)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
1,1,2-Trichloroethane (79-00-5)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
Trichloroethene (79-01-6)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
Trichlorofluoromethane (75-69-4)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
1,2,3-Trichlorobenzene (87-61-6)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
1,2,4-Trichlorobenzene (120-82-1)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
1,2,3-Trichloropropane (96-18-4)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
1,2,4-Trimethylbenzene (95-63-6)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
1,3,5-Trimethylbenzene (108-67-8)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
Vinyl Acetate (108-05-4)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
Vinyl Chloride (75-01-4)	mg/L	<0.001	0.001	8/18/16	16:20	EBP
Total Xylenes (1330-20-7)	mg/L	<0.003	0.003	8/18/16	16:20	EBP

Comments

All methods reference USEPA methods unless otherwise noted.

na - Indicates not applicable

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731Michigan
Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Volatile Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/26/16
ATS SRF: 815161

Sample Identification: RL-19

Sample Date:	8/15/16	Preparation Method:	EPA 5030B
Sample Time:	11:50 AM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0818161-G
Laboratory Receipt Date:	8/15/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Acetone (67-64-1)	mg/L	<0.025	0.025	8/18/16	15:43	EBP
Benzene (71-43-2)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
Bromobenzene (108-86-1)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
Bromochloromethane (74-97-5)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
Bromodichloromethane (75-27-4)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
Bromoform (75-25-2)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
Bromomethane (74-83-9)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
2-Butanone (78-93-3) (MEK)	mg/L	<0.005	0.005	8/18/16	15:43	EBP
n-Butylbenzene (104-51-8)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
sec-Butylbenzene (135-98-8)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
tert-Butylbenzene (98-06-6)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
Carbon Disulfide (75-15-0)	mg/L	<0.005	0.005	8/18/16	15:43	EBP
Carbon Tetrachloride (56-23-5)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
Chlorobenzene (108-90-7)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
Chloroethane (75-00-3)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
Chloroform (67-66-3)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
Chloromethane (74-87-3)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
2-Chlorotoluene (95-49-8)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
4-Chlorotoluene (106-43-4)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
Dibromochloromethane (124-48-1)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
1,2-Dibromo-3-chloropropane (96-12-8)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
1,2-Dibromoethane (106-93-4)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
Dibromomethane (74-95-3)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
Dichlorodifluoromethane (75-71-8)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
1,2-Dichlorobenzene (95-50-1)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
1,3-Dichlorobenzene (541-73-1)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
1,4-Dichlorobenzene (106-46-7)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
1,1-Dichloroethane (75-34-3)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
1,2-Dichloroethane (107-06-2)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
1,1-Dichloroethene (75-35-4)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
cis-1,2-Dichloroethene (156-59-2)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
trans-1,2-Dichloroethene (156-60-5)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
1,2-Dichloropropane (78-87-5)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
1,3-Dichloropropane (142-28-9)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
2,2-Dichloropropane (594-20-7)	mg/L	<0.001	0.001	8/18/16	15:43	EBP

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731Michigan
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Volatile Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/26/16
ATS SRF: 815161

Sample Identification: RL-19

Sample Date:	8/15/16	Preparation Method:	EPA 5030B
Sample Time:	11:50 AM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0818161-G
Laboratory Receipt Date:	8/15/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
1,1-Dichloropropene (563-58-6)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
cis-1,3-Dichloropropene (10061-01-5)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
trans-1,3-Dichloropropene (10061-02-6)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
Ethylbenzene (100-41-4)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
Hexachlorobutadiene (87-68-3)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
2-Hexanone (591-78-6)	mg/L	<0.005	0.005	8/18/16	15:43	EBP
Iodomethane (74-88-4)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
Isopropylbenzene (98-82-8)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
4-Isopropyltoluene (99-87-6)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
Methylene Chloride (75-09-2)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
4-Methyl-2-Pentanone (108-10-1)	mg/L	<0.005	0.005	8/18/16	15:43	EBP
Methyl tert-Butyl Ether (1634-04-4)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
Naphthalene (91-20-3)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
Propylbenzene (103-65-1)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
Styrene (100-42-5)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
1,1,1,2-Tetrachloroethane (630-20-6)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
1,1,2,2-Tetrachloroethane (79-34-5)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
Tetrachloroethene (127-18-4)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
Toluene (108-88-3)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
1,1,1-Trichloroethane (71-55-6)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
1,1,2-Trichloroethane (79-00-5)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
Trichloroethene (79-01-6)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
Trichlorofluoromethane (75-69-4)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
1,2,3-Trichlorobenzene (87-61-6)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
1,2,4-Trichlorobenzene (120-82-1)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
1,2,3-Trichloropropane (96-18-4)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
1,2,4-Trimethylbenzene (95-63-6)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
1,3,5-Trimethylbenzene (108-67-8)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
Vinyl Acetate (108-05-4)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
Vinyl Chloride (75-01-4)	mg/L	<0.001	0.001	8/18/16	15:43	EBP
Total Xylenes (1330-20-7)	mg/L	<0.003	0.003	8/18/16	15:43	EBP

Comments

All methods reference USEPA methods unless otherwise noted.
na - Indicates not applicable

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731
Michigan Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

CHAIN OF CUSTODY RECORD

PROJECT ID / NUMBER	LABORATORY INFORMATION	SHIPPING INFORMATION: SHIPPER (Check one) / TRACKING NUMBER(S) (
GeoProbe Samples/ Pall Corporation	Pall Corporation 642 S. Wagner Road, Ann Arbor, Mi	Date Fed Ex UPS DHL
SAMPLE CUSTODIAN (Print & Signature)		Date Fed Ex UPS DHL
Susan E.O. Peters Susan E.O. Peters		Date Fed Ex UPS DHL
		Date Fed Ex UPS DHL

RELINQUISHED BY (Print & Signature)	DATE / TIME	RECEIVED BY (Print & Signature)	DATE / TIME	RELINQUISHED BY (Print & Signature)	DATE
Susan E.O. Peters	08-15-16 16:49	Mark A. DeLong			
RELINQUISHED BY (Print & Signature)	DATE / TIME	RECEIVED BY (Print & Signature)	DATE / TIME	RELINQUISHED BY (Print & Signature)	DATE

COMMENTS (Preservation, etc.)

these sample showed TIC's for sub. Benzenes, Xylenes, and lots of Alkanes, alkenes, and fatty acids

LINE NO.	BAR CODE	DATE	TIME	COMP.	GRAB	SAMPLE IDENTIFICATION	NO. OF CONTAINERS	PRIORITY NUMBER	EPA 8260B	ANALYS
1.	RL-17	08/15/2016	10:55		X	groundwater	2		X	
2.	RL-21	08/15/2016	11:50		X	groundwater	2		X	
3.	RL-19	08/15/2016	12:55		X	groundwater	2		X	
4.										
5.										
6.										
7.										
8.										
9.										
10.										
11.										
12.										
13.										
14.										
15.										
16.										
17.										
18.										
19.										
20.										

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731
Michigan Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Data Transmittal Cover Page

Project Name: Pall Corporation
ATS Project Number: G001-002
ATS Report Number(s): ORG_SRF_0819161

Project Description: This data report contains the results of 15 water samples, received by ATS on 8/19/16, to be analyzed for VOC's.

We certify that the sample analyses for this report have been conducted in accordance with guidelines provided in the referenced standard test method, and are consistent with detailed procedures described in a written Standard Operating Procedure specific to the ATS Laboratories, as required by USEPA. Laboratory data sheets, SOPs, and QA/QC information are available for inspection and audit at the laboratory upon request. Unless specifically noted on the data report, all applicable sample preservation and holding time requirements have been met.

Recipient: Ms. Sue Peters **Email:** Sue_Peters@Pall.com
FAX Number:

No. of Pages (including cover pg.): 32

From: Sarah Stubblefield, Senior Chemist / Lab Manager **Email:** Sarah.Stubblefield@AnnArborTechnicalServices.com
FAX Number: 734-995-3731

Additional Message: Email Copy: Ms. Laurel Beyer (Laurel_Beyer@Pall.com)

Date: 8/29/16 **Signed:**

IF YOU DO NOT RECEIVE ALL PAGES OF THIS TRANSMITTAL, PLEASE CALL 734-995-0995.

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731Michigan
Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Volatile Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/29/16
ATS SRF: 819161

Sample Identification: RL-1

Sample Date:	8/16/16	Preparation Method:	EPA 5030B
Sample Time:	10:15 AM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0822161-G
Laboratory Receipt Date:	8/19/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Acetone (67-64-1)	mg/L	<0.025	0.025	8/22/16	13:18	EBP
Benzene (71-43-2)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
Bromobenzene (108-86-1)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
Bromochloromethane (74-97-5)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
Bromodichloromethane (75-27-4)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
Bromoform (75-25-2)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
Bromomethane (74-83-9)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
2-Butanone (78-93-3) (MEK)	mg/L	<0.005	0.005	8/22/16	13:18	EBP
n-Butylbenzene (104-51-8)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
sec-Butylbenzene (135-98-8)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
tert-Butylbenzene (98-06-6)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
Carbon Disulfide (75-15-0)	mg/L	<0.005	0.005	8/22/16	13:18	EBP
Carbon Tetrachloride (56-23-5)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
Chlorobenzene (108-90-7)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
Chloroethane (75-00-3)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
Chloroform (67-66-3)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
Chloromethane (74-87-3)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
2-Chlorotoluene (95-49-8)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
4-Chlorotoluene (106-43-4)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
Dibromochloromethane (124-48-1)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
1,2-Dibromo-3-chloropropane (96-12-8)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
1,2-Dibromoethane (106-93-4)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
Dibromomethane (74-95-3)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
Dichlorodifluoromethane (75-71-8)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
1,2-Dichlorobenzene (95-50-1)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
1,3-Dichlorobenzene (541-73-1)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
1,4-Dichlorobenzene (106-46-7)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
1,1-Dichloroethane (75-34-3)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
1,2-Dichloroethane (107-06-2)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
1,1-Dichloroethene (75-35-4)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
cis-1,2-Dichloroethene (156-59-2)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
trans-1,2-Dichloroethene (156-60-5)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
1,2-Dichloropropane (78-87-5)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
1,3-Dichloropropane (142-28-9)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
2,2-Dichloropropane (594-20-7)	mg/L	<0.001	0.001	8/22/16	13:18	EBP

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731Michigan
Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Volatile Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/29/16
ATS SRF: 819161

Sample Identification: RL-1

Sample Date:	8/16/16	Preparation Method:	EPA 5030B
Sample Time:	10:15 AM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0822161-G
Laboratory Receipt Date:	8/19/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
1,1-Dichloropropene (563-58-6)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
cis-1,3-Dichloropropene (10061-01-5)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
trans-1,3-Dichloropropene (10061-02-6)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
Ethylbenzene (100-41-4)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
Hexachlorobutadiene (87-68-3)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
2-Hexanone (591-78-6)	mg/L	<0.005	0.005	8/22/16	13:18	EBP
Iodomethane (74-88-4)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
Isopropylbenzene (98-82-8)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
4-Isopropyltoluene (99-87-6)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
Methylene Chloride (75-09-2)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
4-Methyl-2-Pentanone (108-10-1)	mg/L	<0.005	0.005	8/22/16	13:18	EBP
Methyl tert-Butyl Ether (1634-04-4)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
Naphthalene (91-20-3)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
Propylbenzene (103-65-1)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
Styrene (100-42-5)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
1,1,1,2-Tetrachloroethane (630-20-6)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
1,1,2,2-Tetrachloroethane (79-34-5)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
Tetrachloroethene (127-18-4)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
Toluene (108-88-3)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
1,1,1-Trichloroethane (71-55-6)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
1,1,2-Trichloroethane (79-00-5)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
Trichloroethene (79-01-6)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
Trichlorofluoromethane (75-69-4)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
1,2,3-Trichlorobenzene (87-61-6)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
1,2,4-Trichlorobenzene (120-82-1)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
1,2,3-Trichloropropane (96-18-4)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
1,2,4-Trimethylbenzene (95-63-6)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
1,3,5-Trimethylbenzene (108-67-8)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
Vinyl Acetate (108-05-4)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
Vinyl Chloride (75-01-4)	mg/L	<0.001	0.001	8/22/16	13:18	EBP
Total Xylenes (1330-20-7)	mg/L	<0.003	0.003	8/22/16	13:18	EBP

Comments

All methods reference USEPA methods unless otherwise noted.

na - Indicates not applicable

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731Michigan
Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Volatile Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/29/16
ATS SRF: 819161

Sample Identification: RL-2

Sample Date:	8/16/16	Preparation Method:	EPA 5030B
Sample Time:	4:15 PM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0822161-G
Laboratory Receipt Date:	8/19/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Acetone (67-64-1)	mg/L	<0.025	0.025	8/22/16	15:51	EBP
Benzene (71-43-2)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
Bromobenzene (108-86-1)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
Bromochloromethane (74-97-5)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
Bromodichloromethane (75-27-4)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
Bromoform (75-25-2)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
Bromomethane (74-83-9)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
2-Butanone (78-93-3) (MEK)	mg/L	<0.005	0.005	8/22/16	15:51	EBP
n-Butylbenzene (104-51-8)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
sec-Butylbenzene (135-98-8)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
tert-Butylbenzene (98-06-6)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
Carbon Disulfide (75-15-0)	mg/L	<0.005	0.005	8/22/16	15:51	EBP
Carbon Tetrachloride (56-23-5)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
Chlorobenzene (108-90-7)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
Chloroethane (75-00-3)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
Chloroform (67-66-3)	mg/L	0.005	0.001	8/22/16	15:51	EBP
Chloromethane (74-87-3)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
2-Chlorotoluene (95-49-8)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
4-Chlorotoluene (106-43-4)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
Dibromochloromethane (124-48-1)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
1,2-Dibromo-3-chloropropane (96-12-8)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
1,2-Dibromoethane (106-93-4)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
Dibromomethane (74-95-3)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
Dichlorodifluoromethane (75-71-8)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
1,2-Dichlorobenzene (95-50-1)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
1,3-Dichlorobenzene (541-73-1)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
1,4-Dichlorobenzene (106-46-7)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
1,1-Dichloroethane (75-34-3)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
1,2-Dichloroethane (107-06-2)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
1,1-Dichloroethene (75-35-4)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
cis-1,2-Dichloroethene (156-59-2)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
trans-1,2-Dichloroethene (156-60-5)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
1,2-Dichloropropane (78-87-5)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
1,3-Dichloropropane (142-28-9)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
2,2-Dichloropropane (594-20-7)	mg/L	<0.001	0.001	8/22/16	15:51	EBP

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731Michigan
Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Volatile Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/29/16
ATS SRF: 819161

Sample Identification: RL-2

Sample Date:	8/16/16	Preparation Method:	EPA 5030B
Sample Time:	4:15 PM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0822161-G
Laboratory Receipt Date:	8/19/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
1,1-Dichloropropene (563-58-6)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
cis-1,3-Dichloropropene (10061-01-5)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
trans-1,3-Dichloropropene (10061-02-6)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
Ethylbenzene (100-41-4)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
Hexachlorobutadiene (87-68-3)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
2-Hexanone (591-78-6)	mg/L	<0.005	0.005	8/22/16	15:51	EBP
Iodomethane (74-88-4)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
Isopropylbenzene (98-82-8)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
4-Isopropyltoluene (99-87-6)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
Methylene Chloride (75-09-2)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
4-Methyl-2-Pentanone (108-10-1)	mg/L	<0.005	0.005	8/22/16	15:51	EBP
Methyl tert-Butyl Ether (1634-04-4)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
Naphthalene (91-20-3)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
Propylbenzene (103-65-1)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
Styrene (100-42-5)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
1,1,1,2-Tetrachloroethane (630-20-6)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
1,1,2,2-Tetrachloroethane (79-34-5)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
Tetrachloroethene (127-18-4)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
Toluene (108-88-3)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
1,1,1-Trichloroethane (71-55-6)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
1,1,2-Trichloroethane (79-00-5)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
Trichloroethene (79-01-6)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
Trichlorofluoromethane (75-69-4)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
1,2,3-Trichlorobenzene (87-61-6)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
1,2,4-Trichlorobenzene (120-82-1)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
1,2,3-Trichloropropane (96-18-4)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
1,2,4-Trimethylbenzene (95-63-6)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
1,3,5-Trimethylbenzene (108-67-8)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
Vinyl Acetate (108-05-4)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
Vinyl Chloride (75-01-4)	mg/L	<0.001	0.001	8/22/16	15:51	EBP
Total Xylenes (1330-20-7)	mg/L	<0.003	0.003	8/22/16	15:51	EBP

Comments

All methods reference USEPA methods unless otherwise noted.
na - Indicates not applicable

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731Michigan
Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Volatile Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/29/16
ATS SRF: 8191616

Sample Identification: RL-3

Sample Date:	8/16/16	Preparation Method:	EPA 5030B
Sample Time:	3:25 PM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0822161-G
Laboratory Receipt Date:	8/19/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Acetone (67-64-1)	mg/L	<0.025	0.025	8/22/16	16:20	EBP
Benzene (71-43-2)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
Bromobenzene (108-86-1)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
Bromochloromethane (74-97-5)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
Bromodichloromethane (75-27-4)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
Bromoform (75-25-2)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
Bromomethane (74-83-9)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
2-Butanone (78-93-3) (MEK)	mg/L	<0.005	0.005	8/22/16	16:20	EBP
n-Butylbenzene (104-51-8)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
sec-Butylbenzene (135-98-8)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
tert-Butylbenzene (98-06-6)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
Carbon Disulfide (75-15-0)	mg/L	<0.005	0.005	8/22/16	16:20	EBP
Carbon Tetrachloride (56-23-5)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
Chlorobenzene (108-90-7)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
Chloroethane (75-00-3)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
Chloroform (67-66-3)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
Chloromethane (74-87-3)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
2-Chlorotoluene (95-49-8)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
4-Chlorotoluene (106-43-4)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
Dibromochloromethane (124-48-1)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
1,2-Dibromo-3-chloropropane (96-12-8)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
1,2-Dibromoethane (106-93-4)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
Dibromomethane (74-95-3)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
Dichlorodifluoromethane (75-71-8)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
1,2-Dichlorobenzene (95-50-1)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
1,3-Dichlorobenzene (541-73-1)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
1,4-Dichlorobenzene (106-46-7)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
1,1-Dichloroethane (75-34-3)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
1,2-Dichloroethane (107-06-2)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
1,1-Dichloroethene (75-35-4)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
cis-1,2-Dichloroethene (156-59-2)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
trans-1,2-Dichloroethene (156-60-5)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
1,2-Dichloropropane (78-87-5)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
1,3-Dichloropropane (142-28-9)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
2,2-Dichloropropane (594-20-7)	mg/L	<0.001	0.001	8/22/16	16:20	EBP

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731Michigan
Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Volatile Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/29/16
ATS SRF: 8191616

Sample Identification: RL-3

Sample Date:	8/16/16	Preparation Method:	EPA 5030B
Sample Time:	3:25 PM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0822161-G
Laboratory Receipt Date:	8/19/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
1,1-Dichloropropene (563-58-6)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
cis-1,3-Dichloropropene (10061-01-5)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
trans-1,3-Dichloropropene (10061-02-6)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
Ethylbenzene (100-41-4)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
Hexachlorobutadiene (87-68-3)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
2-Hexanone (591-78-6)	mg/L	<0.005	0.005	8/22/16	16:20	EBP
Iodomethane (74-88-4)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
Isopropylbenzene (98-82-8)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
4-Isopropyltoluene (99-87-6)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
Methylene Chloride (75-09-2)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
4-Methyl-2-Pentanone (108-10-1)	mg/L	<0.005	0.005	8/22/16	16:20	EBP
Methyl tert-Butyl Ether (1634-04-4)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
Naphthalene (91-20-3)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
Propylbenzene (103-65-1)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
Styrene (100-42-5)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
1,1,1,2-Tetrachloroethane (630-20-6)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
1,1,2,2-Tetrachloroethane (79-34-5)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
Tetrachloroethene (127-18-4)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
Toluene (108-88-3)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
1,1,1-Trichloroethane (71-55-6)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
1,1,2-Trichloroethane (79-00-5)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
Trichloroethene (79-01-6)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
Trichlorofluoromethane (75-69-4)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
1,2,3-Trichlorobenzene (87-61-6)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
1,2,4-Trichlorobenzene (120-82-1)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
1,2,3-Trichloropropane (96-18-4)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
1,2,4-Trimethylbenzene (95-63-6)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
1,3,5-Trimethylbenzene (108-67-8)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
Vinyl Acetate (108-05-4)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
Vinyl Chloride (75-01-4)	mg/L	<0.001	0.001	8/22/16	16:20	EBP
Total Xylenes (1330-20-7)	mg/L	<0.003	0.003	8/22/16	16:20	EBP

Comments

All methods reference USEPA methods unless otherwise noted.
na - Indicates not applicable

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731Michigan
Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Volatile Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/29/16
ATS SRF: 8191616

Sample Identification: RL-4

Sample Date:	8/16/16	Preparation Method:	EPA 5030B
Sample Time:	11:15 AM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0822161-G
Laboratory Receipt Date:	8/19/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Acetone (67-64-1)	mg/L	<0.025	0.025	8/22/16	16:49	EBP
Benzene (71-43-2)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
Bromobenzene (108-86-1)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
Bromochloromethane (74-97-5)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
Bromodichloromethane (75-27-4)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
Bromoform (75-25-2)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
Bromomethane (74-83-9)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
2-Butanone (78-93-3) (MEK)	mg/L	<0.005	0.005	8/22/16	16:49	EBP
n-Butylbenzene (104-51-8)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
sec-Butylbenzene (135-98-8)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
tert-Butylbenzene (98-06-6)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
Carbon Disulfide (75-15-0)	mg/L	<0.005	0.005	8/22/16	16:49	EBP
Carbon Tetrachloride (56-23-5)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
Chlorobenzene (108-90-7)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
Chloroethane (75-00-3)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
Chloroform (67-66-3)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
Chloromethane (74-87-3)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
2-Chlorotoluene (95-49-8)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
4-Chlorotoluene (106-43-4)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
Dibromochloromethane (124-48-1)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
1,2-Dibromo-3-chloropropane (96-12-8)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
1,2-Dibromoethane (106-93-4)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
Dibromomethane (74-95-3)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
Dichlorodifluoromethane (75-71-8)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
1,2-Dichlorobenzene (95-50-1)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
1,3-Dichlorobenzene (541-73-1)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
1,4-Dichlorobenzene (106-46-7)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
1,1-Dichloroethane (75-34-3)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
1,2-Dichloroethane (107-06-2)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
1,1-Dichloroethene (75-35-4)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
cis-1,2-Dichloroethene (156-59-2)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
trans-1,2-Dichloroethene (156-60-5)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
1,2-Dichloropropane (78-87-5)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
1,3-Dichloropropane (142-28-9)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
2,2-Dichloropropane (594-20-7)	mg/L	<0.001	0.001	8/22/16	16:49	EBP

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731Michigan
Laboratory ID: 9604
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Volatile Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/29/16
ATS SRF: 8191616

Sample Identification: RL-4

Sample Date:	8/16/16	Preparation Method:	EPA 5030B
Sample Time:	11:15 AM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0822161-G
Laboratory Receipt Date:	8/19/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
1,1-Dichloropropene (563-58-6)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
cis-1,3-Dichloropropene (10061-01-5)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
trans-1,3-Dichloropropene (10061-02-6)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
Ethylbenzene (100-41-4)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
Hexachlorobutadiene (87-68-3)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
2-Hexanone (591-78-6)	mg/L	<0.005	0.005	8/22/16	16:49	EBP
Iodomethane (74-88-4)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
Isopropylbenzene (98-82-8)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
4-Isopropyltoluene (99-87-6)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
Methylene Chloride (75-09-2)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
4-Methyl-2-Pentanone (108-10-1)	mg/L	<0.005	0.005	8/22/16	16:49	EBP
Methyl tert-Butyl Ether (1634-04-4)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
Naphthalene (91-20-3)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
Propylbenzene (103-65-1)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
Styrene (100-42-5)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
1,1,1,2-Tetrachloroethane (630-20-6)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
1,1,2,2-Tetrachloroethane (79-34-5)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
Tetrachloroethene (127-18-4)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
Toluene (108-88-3)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
1,1,1-Trichloroethane (71-55-6)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
1,1,2-Trichloroethane (79-00-5)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
Trichloroethene (79-01-6)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
Trichlorofluoromethane (75-69-4)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
1,2,3-Trichlorobenzene (87-61-6)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
1,2,4-Trichlorobenzene (120-82-1)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
1,2,3-Trichloropropane (96-18-4)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
1,2,4-Trimethylbenzene (95-63-6)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
1,3,5-Trimethylbenzene (108-67-8)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
Vinyl Acetate (108-05-4)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
Vinyl Chloride (75-01-4)	mg/L	<0.001	0.001	8/22/16	16:49	EBP
Total Xylenes (1330-20-7)	mg/L	<0.003	0.003	8/22/16	16:49	EBP

Comments

All methods reference USEPA methods unless otherwise noted.
na - Indicates not applicable

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731Michigan
Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Volatile Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/29/16
ATS SRF: 8191616

Sample Identification: RL-5

Sample Date:	8/16/16	Preparation Method:	EPA 5030B
Sample Time:	12:25 PM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0822161-G
Laboratory Receipt Date:	8/19/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Acetone (67-64-1)	mg/L	<0.025	0.025	8/22/16	17:18	EBP
Benzene (71-43-2)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
Bromobenzene (108-86-1)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
Bromochloromethane (74-97-5)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
Bromodichloromethane (75-27-4)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
Bromoform (75-25-2)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
Bromomethane (74-83-9)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
2-Butanone (78-93-3) (MEK)	mg/L	<0.005	0.005	8/22/16	17:18	EBP
n-Butylbenzene (104-51-8)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
sec-Butylbenzene (135-98-8)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
tert-Butylbenzene (98-06-6)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
Carbon Disulfide (75-15-0)	mg/L	<0.005	0.005	8/22/16	17:18	EBP
Carbon Tetrachloride (56-23-5)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
Chlorobenzene (108-90-7)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
Chloroethane (75-00-3)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
Chloroform (67-66-3)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
Chloromethane (74-87-3)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
2-Chlorotoluene (95-49-8)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
4-Chlorotoluene (106-43-4)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
Dibromochloromethane (124-48-1)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
1,2-Dibromo-3-chloropropane (96-12-8)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
1,2-Dibromoethane (106-93-4)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
Dibromomethane (74-95-3)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
Dichlorodifluoromethane (75-71-8)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
1,2-Dichlorobenzene (95-50-1)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
1,3-Dichlorobenzene (541-73-1)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
1,4-Dichlorobenzene (106-46-7)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
1,1-Dichloroethane (75-34-3)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
1,2-Dichloroethane (107-06-2)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
1,1-Dichloroethene (75-35-4)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
cis-1,2-Dichloroethene (156-59-2)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
trans-1,2-Dichloroethene (156-60-5)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
1,2-Dichloropropane (78-87-5)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
1,3-Dichloropropane (142-28-9)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
2,2-Dichloropropane (594-20-7)	mg/L	<0.001	0.001	8/22/16	17:18	EBP

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731Michigan
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Volatile Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/29/16
ATS SRF: 8191616

Sample Identification: RL-5

Sample Date:	8/16/16	Preparation Method:	EPA 5030B
Sample Time:	12:25 PM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0822161-G
Laboratory Receipt Date:	8/19/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
1,1-Dichloropropene (563-58-6)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
cis-1,3-Dichloropropene (10061-01-5)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
trans-1,3-Dichloropropene (10061-02-6)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
Ethylbenzene (100-41-4)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
Hexachlorobutadiene (87-68-3)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
2-Hexanone (591-78-6)	mg/L	<0.005	0.005	8/22/16	17:18	EBP
Iodomethane (74-88-4)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
Isopropylbenzene (98-82-8)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
4-Isopropyltoluene (99-87-6)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
Methylene Chloride (75-09-2)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
4-Methyl-2-Pentanone (108-10-1)	mg/L	<0.005	0.005	8/22/16	17:18	EBP
Methyl tert-Butyl Ether (1634-04-4)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
Naphthalene (91-20-3)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
Propylbenzene (103-65-1)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
Styrene (100-42-5)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
1,1,1,2-Tetrachloroethane (630-20-6)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
1,1,2,2-Tetrachloroethane (79-34-5)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
Tetrachloroethene (127-18-4)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
Toluene (108-88-3)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
1,1,1-Trichloroethane (71-55-6)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
1,1,2-Trichloroethane (79-00-5)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
Trichloroethene (79-01-6)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
Trichlorofluoromethane (75-69-4)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
1,2,3-Trichlorobenzene (87-61-6)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
1,2,4-Trichlorobenzene (120-82-1)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
1,2,3-Trichloropropane (96-18-4)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
1,2,4-Trimethylbenzene (95-63-6)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
1,3,5-Trimethylbenzene (108-67-8)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
Vinyl Acetate (108-05-4)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
Vinyl Chloride (75-01-4)	mg/L	<0.001	0.001	8/22/16	17:18	EBP
Total Xylenes (1330-20-7)	mg/L	<0.003	0.003	8/22/16	17:18	EBP

Comments

All methods reference USEPA methods unless otherwise noted.
na - Indicates not applicable

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731Michigan
Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Volatile Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/29/16
ATS SRF: 819161

Sample Identification: DUP

Sample Date:	8/16/16	Preparation Method:	EPA 5030B
Sample Time:	12:25 PM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0822161-G
Laboratory Receipt Date:	8/19/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Acetone (67-64-1)	mg/L	<0.025	0.025	8/22/16	17:48	EBP
Benzene (71-43-2)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
Bromobenzene (108-86-1)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
Bromochloromethane (74-97-5)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
Bromodichloromethane (75-27-4)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
Bromoform (75-25-2)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
Bromomethane (74-83-9)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
2-Butanone (78-93-3) (MEK)	mg/L	<0.005	0.005	8/22/16	17:48	EBP
n-Butylbenzene (104-51-8)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
sec-Butylbenzene (135-98-8)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
tert-Butylbenzene (98-06-6)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
Carbon Disulfide (75-15-0)	mg/L	<0.005	0.005	8/22/16	17:48	EBP
Carbon Tetrachloride (56-23-5)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
Chlorobenzene (108-90-7)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
Chloroethane (75-00-3)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
Chloroform (67-66-3)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
Chloromethane (74-87-3)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
2-Chlorotoluene (95-49-8)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
4-Chlorotoluene (106-43-4)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
Dibromochloromethane (124-48-1)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
1,2-Dibromo-3-chloropropane (96-12-8)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
1,2-Dibromoethane (106-93-4)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
Dibromomethane (74-95-3)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
Dichlorodifluoromethane (75-71-8)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
1,2-Dichlorobenzene (95-50-1)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
1,3-Dichlorobenzene (541-73-1)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
1,4-Dichlorobenzene (106-46-7)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
1,1-Dichloroethane (75-34-3)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
1,2-Dichloroethane (107-06-2)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
1,1-Dichloroethene (75-35-4)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
cis-1,2-Dichloroethene (156-59-2)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
trans-1,2-Dichloroethene (156-60-5)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
1,2-Dichloropropane (78-87-5)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
1,3-Dichloropropane (142-28-9)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
2,2-Dichloropropane (594-20-7)	mg/L	<0.001	0.001	8/22/16	17:48	EBP

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731Michigan
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Volatile Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/29/16
ATS SRF: 819161

Sample Identification: DUP

Sample Date:	8/16/16	Preparation Method:	EPA 5030B
Sample Time:	12:25 PM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0822161-G
Laboratory Receipt Date:	8/19/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
1,1-Dichloropropene (563-58-6)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
cis-1,3-Dichloropropene (10061-01-5)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
trans-1,3-Dichloropropene (10061-02-6)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
Ethylbenzene (100-41-4)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
Hexachlorobutadiene (87-68-3)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
2-Hexanone (591-78-6)	mg/L	<0.005	0.005	8/22/16	17:48	EBP
Iodomethane (74-88-4)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
Isopropylbenzene (98-82-8)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
4-Isopropyltoluene (99-87-6)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
Methylene Chloride (75-09-2)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
4-Methyl-2-Pentanone (108-10-1)	mg/L	<0.005	0.005	8/22/16	17:48	EBP
Methyl tert-Butyl Ether (1634-04-4)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
Naphthalene (91-20-3)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
Propylbenzene (103-65-1)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
Styrene (100-42-5)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
1,1,1,2-Tetrachloroethane (630-20-6)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
1,1,2,2-Tetrachloroethane (79-34-5)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
Tetrachloroethene (127-18-4)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
Toluene (108-88-3)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
1,1,1-Trichloroethane (71-55-6)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
1,1,2-Trichloroethane (79-00-5)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
Trichloroethene (79-01-6)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
Trichlorofluoromethane (75-69-4)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
1,2,3-Trichlorobenzene (87-61-6)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
1,2,4-Trichlorobenzene (120-82-1)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
1,2,3-Trichloropropane (96-18-4)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
1,2,4-Trimethylbenzene (95-63-6)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
1,3,5-Trimethylbenzene (108-67-8)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
Vinyl Acetate (108-05-4)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
Vinyl Chloride (75-01-4)	mg/L	<0.001	0.001	8/22/16	17:48	EBP
Total Xylenes (1330-20-7)	mg/L	<0.003	0.003	8/22/16	17:48	EBP

Comments

All methods reference USEPA methods unless otherwise noted.
na - Indicates not applicable

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731Michigan
Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Volatile Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/29/16
ATS SRF: 819161

Sample Identification: RL-6

Sample Date: 8/16/16
Sample Time: 2:40 PM
Sampled By: Client
Laboratory Receipt Date: 8/19/16
Sample Matrix: Groundwater

Preparation Method: EPA 5030B
Analytical Method(s): EPA 8260B
QC Batch Number: ORGQC0822161-G

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Acetone (67-64-1)	mg/L	<0.025	0.025	8/22/16	18:17	EBP
Benzene (71-43-2)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
Bromobenzene (108-86-1)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
Bromochloromethane (74-97-5)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
Bromodichloromethane (75-27-4)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
Bromoform (75-25-2)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
Bromomethane (74-83-9)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
2-Butanone (78-93-3) (MEK)	mg/L	<0.005	0.005	8/22/16	18:17	EBP
n-Butylbenzene (104-51-8)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
sec-Butylbenzene (135-98-8)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
tert-Butylbenzene (98-06-6)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
Carbon Disulfide (75-15-0)	mg/L	<0.005	0.005	8/22/16	18:17	EBP
Carbon Tetrachloride (56-23-5)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
Chlorobenzene (108-90-7)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
Chloroethane (75-00-3)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
Chloroform (67-66-3)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
Chloromethane (74-87-3)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
2-Chlorotoluene (95-49-8)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
4-Chlorotoluene (106-43-4)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
Dibromochloromethane (124-48-1)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
1,2-Dibromo-3-chloropropane (96-12-8)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
1,2-Dibromoethane (106-93-4)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
Dibromomethane (74-95-3)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
Dichlorodifluoromethane (75-71-8)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
1,2-Dichlorobenzene (95-50-1)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
1,3-Dichlorobenzene (541-73-1)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
1,4-Dichlorobenzene (106-46-7)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
1,1-Dichloroethane (75-34-3)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
1,2-Dichloroethane (107-06-2)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
1,1-Dichloroethene (75-35-4)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
cis-1,2-Dichloroethene (156-59-2)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
trans-1,2-Dichloroethene (156-60-5)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
1,2-Dichloropropane (78-87-5)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
1,3-Dichloropropane (142-28-9)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
2,2-Dichloropropane (594-20-7)	mg/L	<0.001	0.001	8/22/16	18:17	EBP

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731Michigan
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Volatile Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/29/16
ATS SRF: 819161

Sample Identification: RL-6

Sample Date:	8/16/16	Preparation Method:	EPA 5030B
Sample Time:	2:40 PM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0822161-G
Laboratory Receipt Date:	8/19/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
1,1-Dichloropropene (563-58-6)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
cis-1,3-Dichloropropene (10061-01-5)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
trans-1,3-Dichloropropene (10061-02-6)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
Ethylbenzene (100-41-4)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
Hexachlorobutadiene (87-68-3)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
2-Hexanone (591-78-6)	mg/L	<0.005	0.005	8/22/16	18:17	EBP
Iodomethane (74-88-4)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
Isopropylbenzene (98-82-8)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
4-Isopropyltoluene (99-87-6)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
Methylene Chloride (75-09-2)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
4-Methyl-2-Pentanone (108-10-1)	mg/L	<0.005	0.005	8/22/16	18:17	EBP
Methyl tert-Butyl Ether (1634-04-4)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
Naphthalene (91-20-3)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
Propylbenzene (103-65-1)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
Styrene (100-42-5)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
1,1,1,2-Tetrachloroethane (630-20-6)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
1,1,2,2-Tetrachloroethane (79-34-5)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
Tetrachloroethene (127-18-4)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
Toluene (108-88-3)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
1,1,1-Trichloroethane (71-55-6)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
1,1,2-Trichloroethane (79-00-5)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
Trichloroethene (79-01-6)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
Trichlorofluoromethane (75-69-4)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
1,2,3-Trichlorobenzene (87-61-6)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
1,2,4-Trichlorobenzene (120-82-1)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
1,2,3-Trichloropropane (96-18-4)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
1,2,4-Trimethylbenzene (95-63-6)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
1,3,5-Trimethylbenzene (108-67-8)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
Vinyl Acetate (108-05-4)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
Vinyl Chloride (75-01-4)	mg/L	<0.001	0.001	8/22/16	18:17	EBP
Total Xylenes (1330-20-7)	mg/L	<0.003	0.003	8/22/16	18:17	EBP

Comments

All methods reference USEPA methods unless otherwise noted.
na - Indicates not applicable

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731Michigan
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Wisconsin Laboratory ID: 998321720

Volatile Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/29/16
ATS SRF: 8191616

Sample Identification: RL-7

Sample Date:	8/16/16	Preparation Method:	EPA 5030B
Sample Time:	5:55 PM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0822161-G
Laboratory Receipt Date:	8/19/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Acetone (67-64-1)	mg/L	<0.025	0.025	8/22/16	18:46	EBP
Benzene (71-43-2)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
Bromobenzene (108-86-1)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
Bromochloromethane (74-97-5)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
Bromodichloromethane (75-27-4)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
Bromoform (75-25-2)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
Bromomethane (74-83-9)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
2-Butanone (78-93-3) (MEK)	mg/L	<0.005	0.005	8/22/16	18:46	EBP
n-Butylbenzene (104-51-8)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
sec-Butylbenzene (135-98-8)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
tert-Butylbenzene (98-06-6)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
Carbon Disulfide (75-15-0)	mg/L	<0.005	0.005	8/22/16	18:46	EBP
Carbon Tetrachloride (56-23-5)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
Chlorobenzene (108-90-7)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
Chloroethane (75-00-3)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
Chloroform (67-66-3)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
Chloromethane (74-87-3)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
2-Chlorotoluene (95-49-8)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
4-Chlorotoluene (106-43-4)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
Dibromochloromethane (124-48-1)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
1,2-Dibromo-3-chloropropane (96-12-8)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
1,2-Dibromoethane (106-93-4)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
Dibromomethane (74-95-3)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
Dichlorodifluoromethane (75-71-8)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
1,2-Dichlorobenzene (95-50-1)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
1,3-Dichlorobenzene (541-73-1)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
1,4-Dichlorobenzene (106-46-7)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
1,1-Dichloroethane (75-34-3)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
1,2-Dichloroethane (107-06-2)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
1,1-Dichloroethene (75-35-4)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
cis-1,2-Dichloroethene (156-59-2)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
trans-1,2-Dichloroethene (156-60-5)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
1,2-Dichloropropane (78-87-5)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
1,3-Dichloropropane (142-28-9)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
2,2-Dichloropropane (594-20-7)	mg/L	<0.001	0.001	8/22/16	18:46	EBP

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731Michigan
Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Volatile Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/29/16
ATS SRF: 8191616

Sample Identification: RL-7

Sample Date:	8/16/16	Preparation Method:	EPA 5030B
Sample Time:	5:55 PM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0822161-G
Laboratory Receipt Date:	8/19/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
1,1-Dichloropropene (563-58-6)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
cis-1,3-Dichloropropene (10061-01-5)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
trans-1,3-Dichloropropene (10061-02-6)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
Ethylbenzene (100-41-4)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
Hexachlorobutadiene (87-68-3)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
2-Hexanone (591-78-6)	mg/L	<0.005	0.005	8/22/16	18:46	EBP
Iodomethane (74-88-4)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
Isopropylbenzene (98-82-8)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
4-Isopropyltoluene (99-87-6)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
Methylene Chloride (75-09-2)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
4-Methyl-2-Pentanone (108-10-1)	mg/L	<0.005	0.005	8/22/16	18:46	EBP
Methyl tert-Butyl Ether (1634-04-4)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
Naphthalene (91-20-3)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
Propylbenzene (103-65-1)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
Styrene (100-42-5)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
1,1,1,2-Tetrachloroethane (630-20-6)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
1,1,2,2-Tetrachloroethane (79-34-5)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
Tetrachloroethene (127-18-4)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
Toluene (108-88-3)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
1,1,1-Trichloroethane (71-55-6)	mg/L	0.014	0.001	8/22/16	18:46	EBP
1,1,2-Trichloroethane (79-00-5)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
Trichloroethene (79-01-6)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
Trichlorofluoromethane (75-69-4)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
1,2,3-Trichlorobenzene (87-61-6)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
1,2,4-Trichlorobenzene (120-82-1)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
1,2,3-Trichloropropane (96-18-4)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
1,2,4-Trimethylbenzene (95-63-6)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
1,3,5-Trimethylbenzene (108-67-8)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
Vinyl Acetate (108-05-4)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
Vinyl Chloride (75-01-4)	mg/L	<0.001	0.001	8/22/16	18:46	EBP
Total Xylenes (1330-20-7)	mg/L	<0.003	0.003	8/22/16	18:46	EBP

Comments

All methods reference USEPA methods unless otherwise noted.
na - Indicates not applicable

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731Michigan
Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Volatile Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/29/16
ATS SRF: 8191616

Sample Identification: RL-8

Sample Date:	8/17/16	Preparation Method:	EPA 5030B
Sample Time:	9:05 AM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0822161-G
Laboratory Receipt Date:	8/19/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Acetone (67-64-1)	mg/L	<0.025	0.025	8/22/16	19:16	EBP
Benzene (71-43-2)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
Bromobenzene (108-86-1)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
Bromochloromethane (74-97-5)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
Bromodichloromethane (75-27-4)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
Bromoform (75-25-2)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
Bromomethane (74-83-9)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
2-Butanone (78-93-3) (MEK)	mg/L	<0.005	0.005	8/22/16	19:16	EBP
n-Butylbenzene (104-51-8)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
sec-Butylbenzene (135-98-8)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
tert-Butylbenzene (98-06-6)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
Carbon Disulfide (75-15-0)	mg/L	<0.005	0.005	8/22/16	19:16	EBP
Carbon Tetrachloride (56-23-5)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
Chlorobenzene (108-90-7)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
Chloroethane (75-00-3)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
Chloroform (67-66-3)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
Chloromethane (74-87-3)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
2-Chlorotoluene (95-49-8)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
4-Chlorotoluene (106-43-4)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
Dibromochloromethane (124-48-1)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
1,2-Dibromo-3-chloropropane (96-12-8)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
1,2-Dibromoethane (106-93-4)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
Dibromomethane (74-95-3)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
Dichlorodifluoromethane (75-71-8)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
1,2-Dichlorobenzene (95-50-1)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
1,3-Dichlorobenzene (541-73-1)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
1,4-Dichlorobenzene (106-46-7)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
1,1-Dichloroethane (75-34-3)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
1,2-Dichloroethane (107-06-2)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
1,1-Dichloroethene (75-35-4)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
cis-1,2-Dichloroethene (156-59-2)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
trans-1,2-Dichloroethene (156-60-5)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
1,2-Dichloropropane (78-87-5)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
1,3-Dichloropropane (142-28-9)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
2,2-Dichloropropane (594-20-7)	mg/L	<0.001	0.001	8/22/16	19:16	EBP

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731Michigan
Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Volatile Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/29/16
ATS SRF: 8191616

Sample Identification: RL-8

Sample Date:	8/17/16	Preparation Method:	EPA 5030B
Sample Time:	9:05 AM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0822161-G
Laboratory Receipt Date:	8/19/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
1,1-Dichloropropene (563-58-6)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
cis-1,3-Dichloropropene (10061-01-5)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
trans-1,3-Dichloropropene (10061-02-6)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
Ethylbenzene (100-41-4)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
Hexachlorobutadiene (87-68-3)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
2-Hexanone (591-78-6)	mg/L	<0.005	0.005	8/22/16	19:16	EBP
Iodomethane (74-88-4)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
Isopropylbenzene (98-82-8)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
4-Isopropyltoluene (99-87-6)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
Methylene Chloride (75-09-2)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
4-Methyl-2-Pentanone (108-10-1)	mg/L	<0.005	0.005	8/22/16	19:16	EBP
Methyl tert-Butyl Ether (1634-04-4)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
Naphthalene (91-20-3)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
Propylbenzene (103-65-1)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
Styrene (100-42-5)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
1,1,1,2-Tetrachloroethane (630-20-6)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
1,1,2,2-Tetrachloroethane (79-34-5)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
Tetrachloroethene (127-18-4)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
Toluene (108-88-3)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
1,1,1-Trichloroethane (71-55-6)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
1,1,2-Trichloroethane (79-00-5)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
Trichloroethene (79-01-6)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
Trichlorofluoromethane (75-69-4)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
1,2,3-Trichlorobenzene (87-61-6)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
1,2,4-Trichlorobenzene (120-82-1)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
1,2,3-Trichloropropane (96-18-4)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
1,2,4-Trimethylbenzene (95-63-6)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
1,3,5-Trimethylbenzene (108-67-8)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
Vinyl Acetate (108-05-4)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
Vinyl Chloride (75-01-4)	mg/L	<0.001	0.001	8/22/16	19:16	EBP
Total Xylenes (1330-20-7)	mg/L	<0.003	0.003	8/22/16	19:16	EBP

Comments

All methods reference USEPA methods unless otherwise noted.
na - Indicates not applicable

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731Michigan
Laboratory ID: 9604
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Volatile Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/29/16
ATS SRF: 8191616

Sample Identification: RL-10

Sample Date:	8/17/16	Preparation Method:	EPA 5030B
Sample Time:	11:00 AM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0822161-G
Laboratory Receipt Date:	8/19/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Acetone (67-64-1)	mg/L	<0.025	0.025	8/22/16	19:45	EBP
Benzene (71-43-2)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
Bromobenzene (108-86-1)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
Bromochloromethane (74-97-5)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
Bromodichloromethane (75-27-4)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
Bromoform (75-25-2)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
Bromomethane (74-83-9)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
2-Butanone (78-93-3) (MEK)	mg/L	<0.005	0.005	8/22/16	19:45	EBP
n-Butylbenzene (104-51-8)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
sec-Butylbenzene (135-98-8)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
tert-Butylbenzene (98-06-6)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
Carbon Disulfide (75-15-0)	mg/L	<0.005	0.005	8/22/16	19:45	EBP
Carbon Tetrachloride (56-23-5)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
Chlorobenzene (108-90-7)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
Chloroethane (75-00-3)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
Chloroform (67-66-3)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
Chloromethane (74-87-3)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
2-Chlorotoluene (95-49-8)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
4-Chlorotoluene (106-43-4)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
Dibromochloromethane (124-48-1)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
1,2-Dibromo-3-chloropropane (96-12-8)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
1,2-Dibromoethane (106-93-4)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
Dibromomethane (74-95-3)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
Dichlorodifluoromethane (75-71-8)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
1,2-Dichlorobenzene (95-50-1)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
1,3-Dichlorobenzene (541-73-1)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
1,4-Dichlorobenzene (106-46-7)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
1,1-Dichloroethane (75-34-3)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
1,2-Dichloroethane (107-06-2)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
1,1-Dichloroethene (75-35-4)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
cis-1,2-Dichloroethene (156-59-2)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
trans-1,2-Dichloroethene (156-60-5)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
1,2-Dichloropropane (78-87-5)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
1,3-Dichloropropane (142-28-9)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
2,2-Dichloropropane (594-20-7)	mg/L	<0.001	0.001	8/22/16	19:45	EBP

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731Michigan
Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Volatile Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/29/16
ATS SRF: 8191616

Sample Identification: RL-10

Sample Date:	8/17/16	Preparation Method:	EPA 5030B
Sample Time:	11:00 AM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0822161-G
Laboratory Receipt Date:	8/19/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
1,1-Dichloropropene (563-58-6)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
cis-1,3-Dichloropropene (10061-01-5)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
trans-1,3-Dichloropropene (10061-02-6)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
Ethylbenzene (100-41-4)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
Hexachlorobutadiene (87-68-3)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
2-Hexanone (591-78-6)	mg/L	<0.005	0.005	8/22/16	19:45	EBP
Iodomethane (74-88-4)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
Isopropylbenzene (98-82-8)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
4-Isopropyltoluene (99-87-6)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
Methylene Chloride (75-09-2)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
4-Methyl-2-Pentanone (108-10-1)	mg/L	<0.005	0.005	8/22/16	19:45	EBP
Methyl tert-Butyl Ether (1634-04-4)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
Naphthalene (91-20-3)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
Propylbenzene (103-65-1)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
Styrene (100-42-5)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
1,1,1,2-Tetrachloroethane (630-20-6)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
1,1,2,2-Tetrachloroethane (79-34-5)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
Tetrachloroethene (127-18-4)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
Toluene (108-88-3)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
1,1,1-Trichloroethane (71-55-6)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
1,1,2-Trichloroethane (79-00-5)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
Trichloroethene (79-01-6)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
Trichlorofluoromethane (75-69-4)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
1,2,3-Trichlorobenzene (87-61-6)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
1,2,4-Trichlorobenzene (120-82-1)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
1,2,3-Trichloropropane (96-18-4)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
1,2,4-Trimethylbenzene (95-63-6)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
1,3,5-Trimethylbenzene (108-67-8)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
Vinyl Acetate (108-05-4)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
Vinyl Chloride (75-01-4)	mg/L	<0.001	0.001	8/22/16	19:45	EBP
Total Xylenes (1330-20-7)	mg/L	<0.003	0.003	8/22/16	19:45	EBP

Comments

All methods reference USEPA methods unless otherwise noted.
na - Indicates not applicable

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Volatile Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/29/16
ATS SRF: 819161

Sample Identification: RL-11

Sample Date:	8/17/16	Preparation Method:	EPA 5030B
Sample Time:	11:45 AM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0822161-G
Laboratory Receipt Date:	8/19/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Acetone (67-64-1)	mg/L	<0.025	0.025	8/22/16	20:15	EBP
Benzene (71-43-2)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
Bromobenzene (108-86-1)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
Bromochloromethane (74-97-5)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
Bromodichloromethane (75-27-4)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
Bromoform (75-25-2)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
Bromomethane (74-83-9)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
2-Butanone (78-93-3) (MEK)	mg/L	<0.005	0.005	8/22/16	20:15	EBP
n-Butylbenzene (104-51-8)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
sec-Butylbenzene (135-98-8)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
tert-Butylbenzene (98-06-6)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
Carbon Disulfide (75-15-0)	mg/L	<0.005	0.005	8/22/16	20:15	EBP
Carbon Tetrachloride (56-23-5)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
Chlorobenzene (108-90-7)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
Chloroethane (75-00-3)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
Chloroform (67-66-3)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
Chloromethane (74-87-3)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
2-Chlorotoluene (95-49-8)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
4-Chlorotoluene (106-43-4)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
Dibromochloromethane (124-48-1)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
1,2-Dibromo-3-chloropropane (96-12-8)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
1,2-Dibromoethane (106-93-4)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
Dibromomethane (74-95-3)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
Dichlorodifluoromethane (75-71-8)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
1,2-Dichlorobenzene (95-50-1)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
1,3-Dichlorobenzene (541-73-1)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
1,4-Dichlorobenzene (106-46-7)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
1,1-Dichloroethane (75-34-3)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
1,2-Dichloroethane (107-06-2)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
1,1-Dichloroethene (75-35-4)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
cis-1,2-Dichloroethene (156-59-2)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
trans-1,2-Dichloroethene (156-60-5)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
1,2-Dichloropropane (78-87-5)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
1,3-Dichloropropane (142-28-9)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
2,2-Dichloropropane (594-20-7)	mg/L	<0.001	0.001	8/22/16	20:15	EBP

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Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/29/16
ATS SRF: 819161

Sample Identification: RL-11

Sample Date:	8/17/16	Preparation Method:	EPA 5030B
Sample Time:	11:45 AM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0822161-G
Laboratory Receipt Date:	8/19/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
1,1-Dichloropropene (563-58-6)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
cis-1,3-Dichloropropene (10061-01-5)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
trans-1,3-Dichloropropene (10061-02-6)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
Ethylbenzene (100-41-4)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
Hexachlorobutadiene (87-68-3)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
2-Hexanone (591-78-6)	mg/L	<0.005	0.005	8/22/16	20:15	EBP
Iodomethane (74-88-4)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
Isopropylbenzene (98-82-8)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
4-Isopropyltoluene (99-87-6)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
Methylene Chloride (75-09-2)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
4-Methyl-2-Pentanone (108-10-1)	mg/L	<0.005	0.005	8/22/16	20:15	EBP
Methyl tert-Butyl Ether (1634-04-4)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
Naphthalene (91-20-3)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
Propylbenzene (103-65-1)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
Styrene (100-42-5)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
1,1,1,2-Tetrachloroethane (630-20-6)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
1,1,2,2-Tetrachloroethane (79-34-5)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
Tetrachloroethene (127-18-4)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
Toluene (108-88-3)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
1,1,1-Trichloroethane (71-55-6)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
1,1,2-Trichloroethane (79-00-5)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
Trichloroethene (79-01-6)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
Trichlorofluoromethane (75-69-4)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
1,2,3-Trichlorobenzene (87-61-6)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
1,2,4-Trichlorobenzene (120-82-1)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
1,2,3-Trichloropropane (96-18-4)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
1,2,4-Trimethylbenzene (95-63-6)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
1,3,5-Trimethylbenzene (108-67-8)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
Vinyl Acetate (108-05-4)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
Vinyl Chloride (75-01-4)	mg/L	<0.001	0.001	8/22/16	20:15	EBP
Total Xylenes (1330-20-7)	mg/L	<0.003	0.003	8/22/16	20:15	EBP

Comments

All methods reference USEPA methods unless otherwise noted.
na - Indicates not applicable

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Volatile Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/29/16
ATS SRF: 819161

Sample Identification: RL-12

Sample Date:	8/17/16	Preparation Method:	EPA 5030B
Sample Time:	10:10 AM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0822161-G
Laboratory Receipt Date:	8/19/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Acetone (67-64-1)	mg/L	<0.025	0.025	8/22/16	20:44	EBP
Benzene (71-43-2)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
Bromobenzene (108-86-1)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
Bromochloromethane (74-97-5)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
Bromodichloromethane (75-27-4)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
Bromoform (75-25-2)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
Bromomethane (74-83-9)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
2-Butanone (78-93-3) (MEK)	mg/L	<0.005	0.005	8/22/16	20:44	EBP
n-Butylbenzene (104-51-8)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
sec-Butylbenzene (135-98-8)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
tert-Butylbenzene (98-06-6)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
Carbon Disulfide (75-15-0)	mg/L	<0.005	0.005	8/22/16	20:44	EBP
Carbon Tetrachloride (56-23-5)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
Chlorobenzene (108-90-7)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
Chloroethane (75-00-3)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
Chloroform (67-66-3)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
Chloromethane (74-87-3)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
2-Chlorotoluene (95-49-8)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
4-Chlorotoluene (106-43-4)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
Dibromochloromethane (124-48-1)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
1,2-Dibromo-3-chloropropane (96-12-8)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
1,2-Dibromoethane (106-93-4)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
Dibromomethane (74-95-3)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
Dichlorodifluoromethane (75-71-8)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
1,2-Dichlorobenzene (95-50-1)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
1,3-Dichlorobenzene (541-73-1)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
1,4-Dichlorobenzene (106-46-7)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
1,1-Dichloroethane (75-34-3)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
1,2-Dichloroethane (107-06-2)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
1,1-Dichloroethene (75-35-4)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
cis-1,2-Dichloroethene (156-59-2)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
trans-1,2-Dichloroethene (156-60-5)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
1,2-Dichloropropane (78-87-5)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
1,3-Dichloropropane (142-28-9)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
2,2-Dichloropropane (594-20-7)	mg/L	<0.001	0.001	8/22/16	20:44	EBP

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Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/29/16
ATS SRF: 819161

Sample Identification: RL-12

Sample Date:	8/17/16	Preparation Method:	EPA 5030B
Sample Time:	10:10 AM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0822161-G
Laboratory Receipt Date:	8/19/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
1,1-Dichloropropene (563-58-6)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
cis-1,3-Dichloropropene (10061-01-5)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
trans-1,3-Dichloropropene (10061-02-6)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
Ethylbenzene (100-41-4)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
Hexachlorobutadiene (87-68-3)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
2-Hexanone (591-78-6)	mg/L	<0.005	0.005	8/22/16	20:44	EBP
Iodomethane (74-88-4)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
Isopropylbenzene (98-82-8)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
4-Isopropyltoluene (99-87-6)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
Methylene Chloride (75-09-2)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
4-Methyl-2-Pentanone (108-10-1)	mg/L	<0.005	0.005	8/22/16	20:44	EBP
Methyl tert-Butyl Ether (1634-04-4)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
Naphthalene (91-20-3)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
Propylbenzene (103-65-1)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
Styrene (100-42-5)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
1,1,1,2-Tetrachloroethane (630-20-6)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
1,1,2,2-Tetrachloroethane (79-34-5)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
Tetrachloroethene (127-18-4)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
Toluene (108-88-3)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
1,1,1-Trichloroethane (71-55-6)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
1,1,2-Trichloroethane (79-00-5)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
Trichloroethene (79-01-6)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
Trichlorofluoromethane (75-69-4)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
1,2,3-Trichlorobenzene (87-61-6)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
1,2,4-Trichlorobenzene (120-82-1)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
1,2,3-Trichloropropane (96-18-4)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
1,2,4-Trimethylbenzene (95-63-6)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
1,3,5-Trimethylbenzene (108-67-8)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
Vinyl Acetate (108-05-4)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
Vinyl Chloride (75-01-4)	mg/L	<0.001	0.001	8/22/16	20:44	EBP
Total Xylenes (1330-20-7)	mg/L	<0.003	0.003	8/22/16	20:44	EBP

Comments

All methods reference USEPA methods unless otherwise noted.
na - Indicates not applicable

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731Michigan
Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Volatile Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/29/16
ATS SRF: 8191616

Sample Identification: RL-13

Sample Date:	8/17/16	Preparation Method:	EPA 5030B
Sample Time:	12:40 PM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0822161-G
Laboratory Receipt Date:	8/19/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Acetone (67-64-1)	mg/L	<0.025	0.025	8/22/16	21:13	EBP
Benzene (71-43-2)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
Bromobenzene (108-86-1)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
Bromochloromethane (74-97-5)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
Bromodichloromethane (75-27-4)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
Bromoform (75-25-2)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
Bromomethane (74-83-9)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
2-Butanone (78-93-3) (MEK)	mg/L	<0.005	0.005	8/22/16	21:13	EBP
n-Butylbenzene (104-51-8)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
sec-Butylbenzene (135-98-8)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
tert-Butylbenzene (98-06-6)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
Carbon Disulfide (75-15-0)	mg/L	<0.005	0.005	8/22/16	21:13	EBP
Carbon Tetrachloride (56-23-5)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
Chlorobenzene (108-90-7)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
Chloroethane (75-00-3)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
Chloroform (67-66-3)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
Chloromethane (74-87-3)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
2-Chlorotoluene (95-49-8)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
4-Chlorotoluene (106-43-4)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
Dibromochloromethane (124-48-1)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
1,2-Dibromo-3-chloropropane (96-12-8)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
1,2-Dibromoethane (106-93-4)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
Dibromomethane (74-95-3)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
Dichlorodifluoromethane (75-71-8)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
1,2-Dichlorobenzene (95-50-1)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
1,3-Dichlorobenzene (541-73-1)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
1,4-Dichlorobenzene (106-46-7)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
1,1-Dichloroethane (75-34-3)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
1,2-Dichloroethane (107-06-2)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
1,1-Dichloroethene (75-35-4)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
cis-1,2-Dichloroethene (156-59-2)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
trans-1,2-Dichloroethene (156-60-5)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
1,2-Dichloropropane (78-87-5)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
1,3-Dichloropropane (142-28-9)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
2,2-Dichloropropane (594-20-7)	mg/L	<0.001	0.001	8/22/16	21:13	EBP

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731Michigan
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Volatile Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/29/16
ATS SRF: 8191616

Sample Identification: RL-13

Sample Date:	8/17/16	Preparation Method:	EPA 5030B
Sample Time:	12:40 PM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0822161-G
Laboratory Receipt Date:	8/19/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
1,1-Dichloropropene (563-58-6)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
cis-1,3-Dichloropropene (10061-01-5)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
trans-1,3-Dichloropropene (10061-02-6)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
Ethylbenzene (100-41-4)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
Hexachlorobutadiene (87-68-3)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
2-Hexanone (591-78-6)	mg/L	<0.005	0.005	8/22/16	21:13	EBP
Iodomethane (74-88-4)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
Isopropylbenzene (98-82-8)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
4-Isopropyltoluene (99-87-6)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
Methylene Chloride (75-09-2)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
4-Methyl-2-Pentanone (108-10-1)	mg/L	<0.005	0.005	8/22/16	21:13	EBP
Methyl tert-Butyl Ether (1634-04-4)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
Naphthalene (91-20-3)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
Propylbenzene (103-65-1)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
Styrene (100-42-5)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
1,1,1,2-Tetrachloroethane (630-20-6)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
1,1,2,2-Tetrachloroethane (79-34-5)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
Tetrachloroethene (127-18-4)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
Toluene (108-88-3)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
1,1,1-Trichloroethane (71-55-6)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
1,1,2-Trichloroethane (79-00-5)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
Trichloroethene (79-01-6)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
Trichlorofluoromethane (75-69-4)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
1,2,3-Trichlorobenzene (87-61-6)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
1,2,4-Trichlorobenzene (120-82-1)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
1,2,3-Trichloropropane (96-18-4)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
1,2,4-Trimethylbenzene (95-63-6)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
1,3,5-Trimethylbenzene (108-67-8)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
Vinyl Acetate (108-05-4)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
Vinyl Chloride (75-01-4)	mg/L	<0.001	0.001	8/22/16	21:13	EBP
Total Xylenes (1330-20-7)	mg/L	<0.003	0.003	8/22/16	21:13	EBP

Comments

All methods reference USEPA methods unless otherwise noted.
na - Indicates not applicable

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731Michigan
Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Volatile Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/29/16
ATS SRF: 8191616

Sample Identification: RL-22

Sample Date:	8/17/16	Preparation Method:	EPA 5030B
Sample Time:	4:50 PM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0822161-G
Laboratory Receipt Date:	8/19/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Acetone (67-64-1)	mg/L	<0.025	0.025	8/22/16	21:42	EBP
Benzene (71-43-2)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
Bromobenzene (108-86-1)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
Bromochloromethane (74-97-5)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
Bromodichloromethane (75-27-4)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
Bromoform (75-25-2)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
Bromomethane (74-83-9)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
2-Butanone (78-93-3) (MEK)	mg/L	<0.005	0.005	8/22/16	21:42	EBP
n-Butylbenzene (104-51-8)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
sec-Butylbenzene (135-98-8)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
tert-Butylbenzene (98-06-6)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
Carbon Disulfide (75-15-0)	mg/L	<0.005	0.005	8/22/16	21:42	EBP
Carbon Tetrachloride (56-23-5)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
Chlorobenzene (108-90-7)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
Chloroethane (75-00-3)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
Chloroform (67-66-3)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
Chloromethane (74-87-3)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
2-Chlorotoluene (95-49-8)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
4-Chlorotoluene (106-43-4)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
Dibromochloromethane (124-48-1)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
1,2-Dibromo-3-chloropropane (96-12-8)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
1,2-Dibromoethane (106-93-4)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
Dibromomethane (74-95-3)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
Dichlorodifluoromethane (75-71-8)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
1,2-Dichlorobenzene (95-50-1)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
1,3-Dichlorobenzene (541-73-1)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
1,4-Dichlorobenzene (106-46-7)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
1,1-Dichloroethane (75-34-3)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
1,2-Dichloroethane (107-06-2)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
1,1-Dichloroethene (75-35-4)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
cis-1,2-Dichloroethene (156-59-2)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
trans-1,2-Dichloroethene (156-60-5)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
1,2-Dichloropropane (78-87-5)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
1,3-Dichloropropane (142-28-9)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
2,2-Dichloropropane (594-20-7)	mg/L	<0.001	0.001	8/22/16	21:42	EBP

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731Michigan
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Volatile Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/29/16
ATS SRF: 8191616

Sample Identification: RL-22

Sample Date:	8/17/16	Preparation Method:	EPA 5030B
Sample Time:	4:50 PM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0822161-G
Laboratory Receipt Date:	8/19/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
1,1-Dichloropropene (563-58-6)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
cis-1,3-Dichloropropene (10061-01-5)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
trans-1,3-Dichloropropene (10061-02-6)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
Ethylbenzene (100-41-4)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
Hexachlorobutadiene (87-68-3)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
2-Hexanone (591-78-6)	mg/L	<0.005	0.005	8/22/16	21:42	EBP
Iodomethane (74-88-4)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
Isopropylbenzene (98-82-8)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
4-Isopropyltoluene (99-87-6)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
Methylene Chloride (75-09-2)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
4-Methyl-2-Pentanone (108-10-1)	mg/L	<0.005	0.005	8/22/16	21:42	EBP
Methyl tert-Butyl Ether (1634-04-4)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
Naphthalene (91-20-3)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
Propylbenzene (103-65-1)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
Styrene (100-42-5)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
1,1,1,2-Tetrachloroethane (630-20-6)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
1,1,2,2-Tetrachloroethane (79-34-5)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
Tetrachloroethene (127-18-4)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
Toluene (108-88-3)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
1,1,1-Trichloroethane (71-55-6)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
1,1,2-Trichloroethane (79-00-5)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
Trichloroethene (79-01-6)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
Trichlorofluoromethane (75-69-4)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
1,2,3-Trichlorobenzene (87-61-6)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
1,2,4-Trichlorobenzene (120-82-1)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
1,2,3-Trichloropropane (96-18-4)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
1,2,4-Trimethylbenzene (95-63-6)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
1,3,5-Trimethylbenzene (108-67-8)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
Vinyl Acetate (108-05-4)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
Vinyl Chloride (75-01-4)	mg/L	<0.001	0.001	8/22/16	21:42	EBP
Total Xylenes (1330-20-7)	mg/L	<0.003	0.003	8/22/16	21:42	EBP

Comments

All methods reference USEPA methods unless otherwise noted.
na - Indicates not applicable

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731Michigan
Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Volatile Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/29/16
ATS SRF: 8191616

Sample Identification: DUP2

Sample Date:	8/17/16	Preparation Method:	EPA 5030B
Sample Time:	4:50 PM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0822161-G
Laboratory Receipt Date:	8/19/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
Acetone (67-64-1)	mg/L	<0.025	0.025	8/22/16	22:12	EBP
Benzene (71-43-2)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
Bromobenzene (108-86-1)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
Bromochloromethane (74-97-5)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
Bromodichloromethane (75-27-4)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
Bromoform (75-25-2)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
Bromomethane (74-83-9)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
2-Butanone (78-93-3) (MEK)	mg/L	<0.005	0.005	8/22/16	22:12	EBP
n-Butylbenzene (104-51-8)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
sec-Butylbenzene (135-98-8)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
tert-Butylbenzene (98-06-6)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
Carbon Disulfide (75-15-0)	mg/L	<0.005	0.005	8/22/16	22:12	EBP
Carbon Tetrachloride (56-23-5)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
Chlorobenzene (108-90-7)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
Chloroethane (75-00-3)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
Chloroform (67-66-3)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
Chloromethane (74-87-3)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
2-Chlorotoluene (95-49-8)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
4-Chlorotoluene (106-43-4)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
Dibromochloromethane (124-48-1)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
1,2-Dibromo-3-chloropropane (96-12-8)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
1,2-Dibromoethane (106-93-4)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
Dibromomethane (74-95-3)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
Dichlorodifluoromethane (75-71-8)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
1,2-Dichlorobenzene (95-50-1)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
1,3-Dichlorobenzene (541-73-1)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
1,4-Dichlorobenzene (106-46-7)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
1,1-Dichloroethane (75-34-3)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
1,2-Dichloroethane (107-06-2)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
1,1-Dichloroethene (75-35-4)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
cis-1,2-Dichloroethene (156-59-2)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
trans-1,2-Dichloroethene (156-60-5)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
1,2-Dichloropropane (78-87-5)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
1,3-Dichloropropane (142-28-9)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
2,2-Dichloropropane (594-20-7)	mg/L	<0.001	0.001	8/22/16	22:12	EBP

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731Michigan
Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

Volatile Organic Analysis
Data Summary Sheet

For: Ms. Sue Peters
Pall Corporation
642 South Wagner Rd.
Ann Arbor, MI 48103

ATS Project: Pall Corporation #G001-002
Report Date: 8/29/16
ATS SRF: 8191616

Sample Identification: DUP2

Sample Date:	8/17/16	Preparation Method:	EPA 5030B
Sample Time:	4:50 PM	Analytical Method(s):	EPA 8260B
Sampled By:	Client	QC Batch Number:	ORGQC0822161-G
Laboratory Receipt Date:	8/19/16		
Sample Matrix:	Groundwater		

Parameter (CAS)	Units	Result	Reporting Limit	Analysis Date	Analysis Time	Analyzed By
1,1-Dichloropropene (563-58-6)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
cis-1,3-Dichloropropene (10061-01-5)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
trans-1,3-Dichloropropene (10061-02-6)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
Ethylbenzene (100-41-4)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
Hexachlorobutadiene (87-68-3)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
2-Hexanone (591-78-6)	mg/L	<0.005	0.005	8/22/16	22:12	EBP
Iodomethane (74-88-4)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
Isopropylbenzene (98-82-8)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
4-Isopropyltoluene (99-87-6)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
Methylene Chloride (75-09-2)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
4-Methyl-2-Pentanone (108-10-1)	mg/L	<0.005	0.005	8/22/16	22:12	EBP
Methyl tert-Butyl Ether (1634-04-4)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
Naphthalene (91-20-3)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
Propylbenzene (103-65-1)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
Styrene (100-42-5)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
1,1,1,2-Tetrachloroethane (630-20-6)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
1,1,2,2-Tetrachloroethane (79-34-5)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
Tetrachloroethene (127-18-4)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
Toluene (108-88-3)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
1,1,1-Trichloroethane (71-55-6)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
1,1,2-Trichloroethane (79-00-5)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
Trichloroethene (79-01-6)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
Trichlorofluoromethane (75-69-4)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
1,2,3-Trichlorobenzene (87-61-6)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
1,2,4-Trichlorobenzene (120-82-1)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
1,2,3-Trichloropropane (96-18-4)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
1,2,4-Trimethylbenzene (95-63-6)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
1,3,5-Trimethylbenzene (108-67-8)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
Vinyl Acetate (108-05-4)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
Vinyl Chloride (75-01-4)	mg/L	<0.001	0.001	8/22/16	22:12	EBP
Total Xylenes (1330-20-7)	mg/L	<0.003	0.003	8/22/16	22:12	EBP

Comments

All methods reference USEPA methods unless otherwise noted.
na - Indicates not applicable

290 South Wagner Road
Ann Arbor, Michigan 48103
Tel. 734/995-0995 Fax. 734/995-3731
Michigan Laboratory ID: 9604
Wisconsin Laboratory ID: 998321720

CHAIN OF CUSTODY RECORD

PROJECT ID / NUMBER	LABORATORY INFORMATION	SHIPPING INFORMATION: SHIPPER (Check one) / TRACKING NUMBER(S) (If
Pall Corporation Geoprobe	Pall Corp. 642 S. Wagner Rd. Ann Arbor, Mi	Date / Fed Ex / UPS / DHL

SAMPLE CUSTODIAN (Print & Signature)

Susan E.O. Peters

RELINQUISHED BY (Print & Signature)	DATE / TIME	RECEIVED BY (Print & Signature)	DATE / TIME	RELINQUISHED BY (Print & Signature)	DATE /
Susan EO Peters	08-19-16				
RELINQUISHED BY (Print & Signature)	DATE / TIME	RECEIVED BY (Print & Signature)	DATE / TIME	RELINQUISHED BY (Print & Signature)	DATE /

COMMENTS (Preservation, etc.)

HCl preservation

LINE NO.	BAR CODE	DATE	TIME	COMP.	GRAB	SAMPLE IDENTIFICATION	NO. OF CONTAINERS	PRIORITY NUMBER	ANALYSIS: 8260
1.	RL-1	08/16/2016	10:15		X	groundwater	2		X
2.	RL-2	08/16/2016	16:15		X	groundwater	2		X
3.	RL-3	08/16/2016	15:25		X	groundwater	2		X
4.	RL-4	08/16/2016	11:15		X	groundwater	2		X
5.	RL-5	08/16/2016	12:25		X	groundwater	2		X
6.	DUP	08/16/2016	12:25		X	groundwater	2		X
7.	RL-6	08/16/2016	14:40		X	groundwater	2		X
8.	RL-7	08/16/2016	17:55		X	groundwater	2		X
9.	RL-8	08/17/2016	09:05		X	groundwater	2		X
10.	RL-10	08/17/2016	11:00		X	groundwater	2		X
11.	RL-11	08/17/2016	11:45		X	groundwater	2		X
12.	RL-12	08/17/2016	10:10		X	groundwater	2		X
13.	RL-13	08/17/2016	12:40		X	groundwater	2		X
14.	RL-22	08/17/2016	16:50		X	groundwater	2		X
15.	DUP2	08/17/2016	16:50		X	groundwater	2		X
16.									
17.									
18.									
19.									
20.									

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

16 September 2016

Work Order: 1608255

Price: $1,960.00

Dan Hamel
MDEQ-RRD-JACKSON
301 E. Louis Glick Highway
Jackson, MI 49201-1556

RE: GELMAN SCIENCES, INC

I certify that the analyses performed by the MDEQ Environmental Laboratory were conducted by methods approved by the U.S. Environmental Protection Agency and other appropriate regulatory agencies.

Sincerely,

George Krisztian
Laboratory Director

STATE OF MICHIGAN
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MDEQ-RRD-JACKSON
301 E. Louis Glick Highway
Jackson MI, 49201-1556

Project: GELMAN SCIENCES, INC
Site Code: 81000018
Project Manager: Dan Hamel

Reported:
09/16/2016

Analytical Report for Samples

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Qualifier
RL-3	1608255-01	Water	08/16/2016	08/18/2016	
RL-2	1608255-02	Water	08/16/2016	08/18/2016	
RL-7	1608255-03	Water	08/16/2016	08/18/2016	
RL-12	1608255-04	Water	08/17/2016	08/18/2016	
RL-11	1608255-05	Water	08/17/2016	08/18/2016	
RL-10	1608255-06	Water	08/17/2016	08/18/2016	
RL-13	1608255-07	Water	08/17/2016	08/18/2016	
RL-22	1608255-08	Water	08/17/2016	08/18/2016	

Notes and Definitions

Y28	1,4-dioxane analysis is performed using selective ion monitoring (SIM). Results reported below 5 ug/L (aqueous) or 1000 ug/Kg (solids) are estimated.
X	Methods 8260 & 624 are used to analyze volatile organics that have boiling points below 200 ºC. 2-Methylnaphthalene & naphthalene have boiling points above 200 ºC and are better suited to analysis by methods 8270 & 625 as semivolatile organics.
A11	Result is estimated due to high initial verification standard criteria failure.
A09	Result is estimated due to high recovery of batch quality control.
A06	Result is estimated due to high continuing calibration standard criteria failure.
A04	Result is estimated due to high matrix spike recovery.
A03	Result(s) and reporting limit(s) are estimated due to low matrix spike recovery.
ND	Indicates compound analyzed for but not detected
RL	Reporting Limit
NA	Not Applicable

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P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-3

Lab ID: 1608255-01

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
96-18-4	1,2,3-Trichloropropane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
526-73-8	1,2,3-Trimethylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
591-78-6	2-Hexanone	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	X
67-64-1	2-Propanone (acetone)	ND	20	ug/L	1	08/21/16	B6H2101	8260	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
107-13-1	Acrylonitrile	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
71-43-2	Benzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
108-86-1	Bromobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
74-97-5	Bromochloromethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-27-4	Bromodichloromethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-25-2	Bromoform	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
74-83-9	Bromomethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
75-15-0	Carbon disulfide	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
56-23-5	Carbon tetrachloride	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
108-90-7	Chlorobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-00-3	Chloroethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
67-66-3	Chloroform	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
74-87-3	Chloromethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
110-82-7	Cyclohexane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
124-48-1	Dibromochloromethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	

STATE OF MICHIGAN
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ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-3

Lab ID: 1608255-01

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
74-95-3	Dibromomethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-71-8	Dichlorodifluoromethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
60-29-7	Diethyl ether	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
108-20-3	Diisopropyl Ether	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
100-41-4	Ethylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
637-92-3	Ethyltertiarybutylether	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
67-72-1	Hexachloroethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
98-82-8	Isopropylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
1330-20-7	m & p - Xylene	ND	2.0	ug/L	1	08/21/16	B6H2101	8260	
74-88-4	Methyl iodide	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-09-2	Methylene chloride	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
1634-04-4	Methyltertiarybutylether	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
91-20-3	Naphthalene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	X
104-51-8	n-Butylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
103-65-1	n-Propylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
95-47-6	o-Xylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
99-87-6	p-Isopropyl toluene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
135-98-8	sec-Butylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
100-42-5	Styrene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
98-06-6	tert-Butylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-65-0	tertiary Butyl Alcohol	ND	50	ug/L	1	08/21/16	B6H2101	8260	
994-05-8	tertiaryAmylmethylether	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
127-18-4	Tetrachloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
109-99-9	Tetrahydrofuran	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
108-88-3	Toluene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
110-57-6	trans-1,4-Dichloro-2-butene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
79-01-6	Trichloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-01-4	Vinyl chloride	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
Surrogate: Bromofluorobenzene			*101 %*	*85-115*		*08/21/16*	B6H2101	*8260*	
Surrogate: Dibromofluoromethane			*103 %*	*82.7-115*		*08/21/16*	B6H2101	*8260*	
Surrogate: Toluene-d8			*104 %*	*85-115*		*08/21/16*	B6H2101	*8260*	

Lab Work Order # 1608255

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-3

Lab ID: 1608255-01

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									**See note Y28**
123-91-1	1,4-dioxane	ND	1.0	ug/L	1	08/23/16	B6H2316	8260 Modified	

Lab Work Order # 1608255

STATE OF MICHIGAN
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P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-2

Lab ID: 1608255-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
96-18-4	1,2,3-Trichloropropane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
526-73-8	1,2,3-Trimethylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
591-78-6	2-Hexanone	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	X
67-64-1	2-Propanone (acetone)	ND	20	ug/L	1	08/21/16	B6H2101	8260	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
107-13-1	Acrylonitrile	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
71-43-2	Benzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
108-86-1	Bromobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
74-97-5	Bromochloromethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-27-4	Bromodichloromethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-25-2	Bromoform	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
74-83-9	Bromomethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
75-15-0	Carbon disulfide	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
56-23-5	Carbon tetrachloride	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
108-90-7	Chlorobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-00-3	Chloroethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
67-66-3	**Chloroform**	**5.8**	1.0	ug/L	1	08/21/16	B6H2101	8260	
74-87-3	Chloromethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
110-82-7	Cyclohexane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
124-48-1	Dibromochloromethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	

STATE OF MICHIGAN
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ENVIRONMENTAL LABORATORY

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Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-2

Lab ID: 1608255-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
74-95-3	Dibromomethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-71-8	Dichlorodifluoromethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
60-29-7	Diethyl ether	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
108-20-3	Diisopropyl Ether	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
100-41-4	Ethylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
637-92-3	Ethyltertiarybutylether	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
67-72-1	Hexachloroethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
98-82-8	Isopropylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
1330-20-7	m & p - Xylene	ND	2.0	ug/L	1	08/21/16	B6H2101	8260	
74-88-4	Methyl iodide	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-09-2	Methylene chloride	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
1634-04-4	Methyltertiarybutylether	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
91-20-3	Naphthalene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	X
104-51-8	n-Butylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
103-65-1	n-Propylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
95-47-6	o-Xylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
99-87-6	p-Isopropyl toluene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
135-98-8	sec-Butylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
100-42-5	Styrene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
98-06-6	tert-Butylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-65-0	tertiary Butyl Alcohol	ND	50	ug/L	1	08/21/16	B6H2101	8260	
994-05-8	tertiaryAmylmethylether	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
127-18-4	Tetrachloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
109-99-9	Tetrahydrofuran	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
108-88-3	Toluene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
110-57-6	trans-1,4-Dichloro-2-butene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
79-01-6	Trichloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-01-4	Vinyl chloride	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
Surrogate: Bromofluorobenzene			*98.9 %*	*85-115*		*08/21/16*	B6H2101	*8260*	
Surrogate: Dibromofluoromethane			*102 %*	*82.7-115*		*08/21/16*	B6H2101	*8260*	
Surrogate: Toluene-d8			*103 %*	*85-115*		*08/21/16*	B6H2101	*8260*	

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TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-2

Lab ID: 1608255-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									**See note Y28**
123-91-1	1,4-dioxane	ND	1.0	ug/L	1	08/23/16	B6H2316	8260 Modified	

Lab Work Order # 1608255

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Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-7

Lab ID: 1608255-03

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
71-55-6	**1,1,1-Trichloroethane**	**12**	1.0	ug/L	1	08/21/16	B6H2101	8260	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
96-18-4	1,2,3-Trichloropropane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
526-73-8	1,2,3-Trimethylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
591-78-6	2-Hexanone	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	X
67-64-1	2-Propanone (acetone)	ND	20	ug/L	1	08/21/16	B6H2101	8260	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
107-13-1	Acrylonitrile	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
71-43-2	Benzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
108-86-1	Bromobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
74-97-5	Bromochloromethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-27-4	Bromodichloromethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-25-2	Bromoform	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
74-83-9	Bromomethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
75-15-0	Carbon disulfide	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
56-23-5	Carbon tetrachloride	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
108-90-7	Chlorobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-00-3	Chloroethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
67-66-3	Chloroform	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
74-87-3	Chloromethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
110-82-7	Cyclohexane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
124-48-1	Dibromochloromethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	

STATE OF MICHIGAN
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ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-7

Lab ID: 1608255-03

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
74-95-3	Dibromomethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-71-8	Dichlorodifluoromethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
60-29-7	Diethyl ether	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
108-20-3	Diisopropyl Ether	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
100-41-4	Ethylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
637-92-3	Ethyltertiarybutylether	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
67-72-1	Hexachloroethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
98-82-8	Isopropylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
1330-20-7	m & p - Xylene	ND	2.0	ug/L	1	08/21/16	B6H2101	8260	
74-88-4	Methyl iodide	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-09-2	Methylene chloride	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
1634-04-4	Methyltertiarybutylether	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
91-20-3	Naphthalene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	X
104-51-8	n-Butylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
103-65-1	n-Propylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
95-47-6	o-Xylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
99-87-6	p-Isopropyl toluene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
135-98-8	sec-Butylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
100-42-5	Styrene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
98-06-6	tert-Butylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-65-0	tertiary Butyl Alcohol	ND	50	ug/L	1	08/21/16	B6H2101	8260	
994-05-8	tertiaryAmylmethylether	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
127-18-4	Tetrachloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
109-99-9	Tetrahydrofuran	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
108-88-3	Toluene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
110-57-6	trans-1,4-Dichloro-2-butene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
79-01-6	Trichloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-01-4	Vinyl chloride	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
Surrogate: Bromofluorobenzene			*99.3 %*	*85-115*		*08/21/16*	B6H2101	*8260*	
Surrogate: Dibromofluoromethane			*105 %*	*82.7-115*		*08/21/16*	B6H2101	*8260*	
Surrogate: Toluene-d8			*105 %*	*85-115*		*08/21/16*	B6H2101	*8260*	

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TEL: (517) 335-9800
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Client ID: RL-7

Lab ID: 1608255-03

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									**See note Y28**
123-91-1	1,4-dioxane	ND	1.0	ug/L	1	08/23/16	B6H2316	8260 Modified	

Lab Work Order # 1608255

STATE OF MICHIGAN
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ENVIRONMENTAL LABORATORY

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Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-12

Lab ID: 1608255-04

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
96-18-4	1,2,3-Trichloropropane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
526-73-8	1,2,3-Trimethylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
591-78-6	2-Hexanone	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	X
67-64-1	2-Propanone (acetone)	ND	20	ug/L	1	08/21/16	B6H2101	8260	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
107-13-1	Acrylonitrile	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
71-43-2	Benzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
108-86-1	Bromobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
74-97-5	Bromochloromethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-27-4	Bromodichloromethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-25-2	Bromoform	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
74-83-9	Bromomethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
75-15-0	Carbon disulfide	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
56-23-5	Carbon tetrachloride	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
108-90-7	Chlorobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-00-3	Chloroethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
67-66-3	Chloroform	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
74-87-3	Chloromethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
110-82-7	Cyclohexane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
124-48-1	Dibromochloromethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	

STATE OF MICHIGAN
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ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-12

Lab ID: 1608255-04

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
74-95-3	Dibromomethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-71-8	Dichlorodifluoromethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
60-29-7	Diethyl ether	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
108-20-3	Diisopropyl Ether	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
100-41-4	Ethylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
637-92-3	Ethyltertiarybutylether	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
67-72-1	Hexachloroethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
98-82-8	Isopropylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
1330-20-7	m & p - Xylene	ND	2.0	ug/L	1	08/21/16	B6H2101	8260	
74-88-4	Methyl iodide	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-09-2	Methylene chloride	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
1634-04-4	Methyltertiarybutylether	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
91-20-3	Naphthalene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	X
104-51-8	n-Butylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
103-65-1	n-Propylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
95-47-6	o-Xylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
99-87-6	p-Isopropyl toluene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
135-98-8	sec-Butylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
100-42-5	Styrene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
98-06-6	tert-Butylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-65-0	tertiary Butyl Alcohol	ND	50	ug/L	1	08/21/16	B6H2101	8260	
994-05-8	tertiaryAmylmethylether	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
127-18-4	Tetrachloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
109-99-9	Tetrahydrofuran	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
108-88-3	Toluene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
110-57-6	trans-1,4-Dichloro-2-butene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
79-01-6	Trichloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-01-4	Vinyl chloride	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
Surrogate: Bromofluorobenzene			*99.2 %*	*85-115*		*08/21/16*	B6H2101	*8260*	
Surrogate: Dibromofluoromethane			*103 %*	*82.7-115*		*08/21/16*	B6H2101	*8260*	
Surrogate: Toluene-d8			*102 %*	*85-115*		*08/21/16*	B6H2101	*8260*	

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TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-12

Lab ID: 1608255-04

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									**See note Y28**
123-91-1	**1,4-dioxane**	**2.7**	1.0	ug/L	1	08/23/16	B6H2316	8260 Modified	

Lab Work Order # 1608255

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TEL: (517) 335-9800
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Client ID: RL-11

Lab ID: 1608255-05

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
96-18-4	1,2,3-Trichloropropane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
526-73-8	1,2,3-Trimethylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
591-78-6	2-Hexanone	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	X
67-64-1	2-Propanone (acetone)	ND	20	ug/L	1	08/21/16	B6H2101	8260	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
107-13-1	Acrylonitrile	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
71-43-2	Benzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
108-86-1	Bromobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
74-97-5	Bromochloromethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-27-4	Bromodichloromethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-25-2	Bromoform	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
74-83-9	Bromomethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
75-15-0	Carbon disulfide	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
56-23-5	Carbon tetrachloride	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
108-90-7	Chlorobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-00-3	Chloroethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
67-66-3	Chloroform	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
74-87-3	Chloromethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
110-82-7	Cyclohexane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
124-48-1	Dibromochloromethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	

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ENVIRONMENTAL LABORATORY

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Lansing, MI 48909
TEL: (517) 335-9800
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Client ID: RL-11

Lab ID: 1608255-05

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
74-95-3	Dibromomethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-71-8	Dichlorodifluoromethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
60-29-7	Diethyl ether	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
108-20-3	Diisopropyl Ether	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
100-41-4	Ethylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
637-92-3	Ethyltertiarybutylether	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
67-72-1	Hexachloroethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
98-82-8	Isopropylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
1330-20-7	m & p - Xylene	ND	2.0	ug/L	1	08/21/16	B6H2101	8260	
74-88-4	Methyl iodide	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-09-2	Methylene chloride	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
1634-04-4	Methyltertiarybutylether	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
91-20-3	Naphthalene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	X
104-51-8	n-Butylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
103-65-1	n-Propylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
95-47-6	o-Xylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
99-87-6	p-Isopropyl toluene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
135-98-8	sec-Butylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
100-42-5	Styrene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
98-06-6	tert-Butylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-65-0	tertiary Butyl Alcohol	ND	50	ug/L	1	08/21/16	B6H2101	8260	
994-05-8	tertiaryAmylmethylether	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
127-18-4	Tetrachloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
109-99-9	Tetrahydrofuran	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
108-88-3	Toluene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
110-57-6	trans-1,4-Dichloro-2-butene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
79-01-6	Trichloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-01-4	Vinyl chloride	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
Surrogate: Bromofluorobenzene			*97.6 %*	*85-115*		*08/21/16*	B6H2101	*8260*	
Surrogate: Dibromofluoromethane			*102 %*	*82.7-115*		*08/21/16*	B6H2101	*8260*	
Surrogate: Toluene-d8			*101 %*	*85-115*		*08/21/16*	B6H2101	*8260*	

STATE OF MICHIGAN
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ENVIRONMENTAL LABORATORY

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TEL: (517) 335-9800
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Client ID: RL-11

Lab ID: 1608255-05

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									**See note Y28**
123-91-1	1,4-dioxane	ND	1.0	ug/L	1	08/23/16	B6H2316	8260 Modified	

Lab Work Order # 1608255

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-10

Lab ID: 1608255-06

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
96-18-4	1,2,3-Trichloropropane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
526-73-8	1,2,3-Trimethylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
591-78-6	2-Hexanone	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	X
67-64-1	2-Propanone (acetone)	ND	20	ug/L	1	08/21/16	B6H2101	8260	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
107-13-1	Acrylonitrile	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
71-43-2	Benzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
108-86-1	Bromobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
74-97-5	Bromochloromethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-27-4	Bromodichloromethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-25-2	Bromoform	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
74-83-9	Bromomethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
75-15-0	Carbon disulfide	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
56-23-5	Carbon tetrachloride	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
108-90-7	Chlorobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-00-3	Chloroethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
67-66-3	Chloroform	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
74-87-3	Chloromethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
110-82-7	Cyclohexane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
124-48-1	Dibromochloromethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	

STATE OF MICHIGAN
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MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-10

Lab ID: 1608255-06

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
74-95-3	Dibromomethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-71-8	Dichlorodifluoromethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
60-29-7	Diethyl ether	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
108-20-3	Diisopropyl Ether	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
100-41-4	Ethylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
637-92-3	Ethyltertiarybutylether	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
67-72-1	Hexachloroethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
98-82-8	Isopropylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
1330-20-7	m & p - Xylene	ND	2.0	ug/L	1	08/21/16	B6H2101	8260	
74-88-4	Methyl iodide	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-09-2	Methylene chloride	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
1634-04-4	Methyltertiarybutylether	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
91-20-3	Naphthalene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	X
104-51-8	n-Butylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
103-65-1	n-Propylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
95-47-6	o-Xylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
99-87-6	p-Isopropyl toluene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
135-98-8	sec-Butylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
100-42-5	Styrene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
98-06-6	tert-Butylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-65-0	tertiary Butyl Alcohol	ND	50	ug/L	1	08/21/16	B6H2101	8260	
994-05-8	tertiaryAmylmethylether	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
127-18-4	Tetrachloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
109-99-9	Tetrahydrofuran	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
108-88-3	Toluene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
110-57-6	trans-1,4-Dichloro-2-butene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
79-01-6	Trichloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-01-4	Vinyl chloride	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
Surrogate: Bromofluorobenzene			*98.7 %*	*85-115*		*08/21/16*	B6H2101	*8260*	
Surrogate: Dibromofluoromethane			*102 %*	*82.7-115*		*08/21/16*	B6H2101	*8260*	
Surrogate: Toluene-d8			*102 %*	*85-115*		*08/21/16*	B6H2101	*8260*	

STATE OF MICHIGAN
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ENVIRONMENTAL LABORATORY

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TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-10

Lab ID: 1608255-06

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									**See note Y28**
123-91-1	1,4-dioxane	ND	1.0	ug/L	1	08/23/16	B6H2316	8260 Modified	

Lab Work Order # 1608255

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P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-13

Lab ID: 1608255-07

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
96-18-4	1,2,3-Trichloropropane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
526-73-8	1,2,3-Trimethylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
591-78-6	2-Hexanone	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	X
67-64-1	2-Propanone (acetone)	ND	20	ug/L	1	08/21/16	B6H2101	8260	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
107-13-1	Acrylonitrile	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
71-43-2	Benzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
108-86-1	Bromobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
74-97-5	Bromochloromethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-27-4	Bromodichloromethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-25-2	Bromoform	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
74-83-9	Bromomethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
75-15-0	Carbon disulfide	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
56-23-5	Carbon tetrachloride	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
108-90-7	Chlorobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-00-3	Chloroethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
67-66-3	Chloroform	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
74-87-3	Chloromethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
110-82-7	Cyclohexane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
124-48-1	Dibromochloromethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	

STATE OF MICHIGAN
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ENVIRONMENTAL LABORATORY

P.O. Box 30270
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TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-13

Lab ID: 1608255-07

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
74-95-3	Dibromomethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-71-8	Dichlorodifluoromethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
60-29-7	Diethyl ether	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
108-20-3	Diisopropyl Ether	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
100-41-4	Ethylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
637-92-3	Ethyltertiarybutylether	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
67-72-1	Hexachloroethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
98-82-8	Isopropylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
1330-20-7	m & p - Xylene	ND	2.0	ug/L	1	08/21/16	B6H2101	8260	
74-88-4	Methyl iodide	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-09-2	Methylene chloride	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
1634-04-4	Methyltertiarybutylether	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
91-20-3	Naphthalene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	X
104-51-8	n-Butylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
103-65-1	n-Propylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
95-47-6	o-Xylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
99-87-6	p-Isopropyl toluene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
135-98-8	sec-Butylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
100-42-5	Styrene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
98-06-6	tert-Butylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-65-0	tertiary Butyl Alcohol	ND	50	ug/L	1	08/21/16	B6H2101	8260	
994-05-8	tertiaryAmylmethylether	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
127-18-4	Tetrachloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
109-99-9	Tetrahydrofuran	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
108-88-3	Toluene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
110-57-6	trans-1,4-Dichloro-2-butene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
79-01-6	Trichloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-01-4	Vinyl chloride	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
Surrogate: Bromofluorobenzene			*99.5 %*	*85-115*		*08/21/16*	B6H2101	*8260*	
Surrogate: Dibromofluoromethane			*103 %*	*82.7-115*		*08/21/16*	B6H2101	*8260*	
Surrogate: Toluene-d8			*104 %*	*85-115*		*08/21/16*	B6H2101	*8260*	

STATE OF MICHIGAN
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ENVIRONMENTAL LABORATORY

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Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-13

Lab ID: 1608255-07

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									**See note Y28**
123-91-1	**1,4-dioxane**	**2.0**	1.0	ug/L	1	08/23/16	B6H2316	8260 Modified	

Lab Work Order # 1608255

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P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-22

Lab ID: 1608255-08

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
96-18-4	1,2,3-Trichloropropane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
526-73-8	1,2,3-Trimethylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
591-78-6	2-Hexanone	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	X
67-64-1	2-Propanone (acetone)	ND	20	ug/L	1	08/21/16	B6H2101	8260	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
107-13-1	Acrylonitrile	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
71-43-2	Benzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
108-86-1	Bromobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
74-97-5	Bromochloromethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-27-4	Bromodichloromethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-25-2	Bromoform	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
74-83-9	Bromomethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
75-15-0	Carbon disulfide	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
56-23-5	Carbon tetrachloride	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
108-90-7	Chlorobenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-00-3	Chloroethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
67-66-3	Chloroform	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
74-87-3	Chloromethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
110-82-7	Cyclohexane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
124-48-1	Dibromochloromethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	

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ENVIRONMENTAL LABORATORY

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TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-22

Lab ID: 1608255-08

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
74-95-3	Dibromomethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-71-8	Dichlorodifluoromethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
60-29-7	Diethyl ether	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
108-20-3	Diisopropyl Ether	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
100-41-4	Ethylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
637-92-3	Ethyltertiarybutylether	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
67-72-1	Hexachloroethane	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
98-82-8	Isopropylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
1330-20-7	m & p - Xylene	ND	2.0	ug/L	1	08/21/16	B6H2101	8260	
74-88-4	Methyl iodide	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-09-2	Methylene chloride	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
1634-04-4	Methyltertiarybutylether	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
91-20-3	Naphthalene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	X
104-51-8	n-Butylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
103-65-1	n-Propylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
95-47-6	o-Xylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
99-87-6	p-Isopropyl toluene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
135-98-8	sec-Butylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
100-42-5	Styrene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
98-06-6	tert-Butylbenzene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-65-0	tertiary Butyl Alcohol	ND	50	ug/L	1	08/21/16	B6H2101	8260	
994-05-8	tertiaryAmylmethylether	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
127-18-4	Tetrachloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
109-99-9	Tetrahydrofuran	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
108-88-3	Toluene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
110-57-6	trans-1,4-Dichloro-2-butene	ND	5.0	ug/L	1	08/21/16	B6H2101	8260	
79-01-6	Trichloroethylene	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
75-01-4	Vinyl chloride	ND	1.0	ug/L	1	08/21/16	B6H2101	8260	
Surrogate: Bromofluorobenzene			*99.0 %*	*85-115*		*08/21/16*	B6H2101	*8260*	
Surrogate: Dibromofluoromethane			*105 %*	*82.7-115*		*08/21/16*	B6H2101	*8260*	
Surrogate: Toluene-d8			*105 %*	*85-115*		*08/21/16*	B6H2101	*8260*	

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Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-22

Lab ID: 1608255-08

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									**See note Y28**
123-91-1	1,4-dioxane	ND	1.0	ug/L	1	08/23/16	B6H2316	8260 Modified	

Lab Work Order # 1608255

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B6H2101 - Method: 5030				**Prepared: 08/21/2016**							
Blank (B6H2101-BLK1)											
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L							08/21/2016	
1,1,1-Trichloroethane	ND	1.0	ug/L							08/21/2016	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L							08/21/2016	
1,1,2-Trichloroethane	ND	1.0	ug/L							08/21/2016	
1,1-Dichloroethane	ND	1.0	ug/L							08/21/2016	
1,1-Dichloroethylene	ND	1.0	ug/L							08/21/2016	
1,2,3-Trichlorobenzene	ND	5.0	ug/L							08/21/2016	
1,2,3-Trichloropropane	ND	1.0	ug/L							08/21/2016	
1,2,3-Trimethylbenzene	ND	1.0	ug/L							08/21/2016	
1,2,4-Trichlorobenzene	ND	5.0	ug/L							08/21/2016	
1,2,4-Trimethylbenzene	ND	1.0	ug/L							08/21/2016	
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L							08/21/2016	
1,2-Dibromoethane	ND	1.0	ug/L							08/21/2016	
1,2-Dichlorobenzene	ND	1.0	ug/L							08/21/2016	
1,2-Dichloroethane	ND	1.0	ug/L							08/21/2016	
1,2-Dichloropropane	ND	1.0	ug/L							08/21/2016	
1,3,5-Trimethylbenzene	ND	1.0	ug/L							08/21/2016	
1,3-Dichlorobenzene	ND	1.0	ug/L							08/21/2016	
1,4-Dichlorobenzene	ND	1.0	ug/L							08/21/2016	
2-Butanone (MEK)	ND	5.0	ug/L							08/21/2016	
2-Hexanone	ND	5.0	ug/L							08/21/2016	
2-Methylnaphthalene	ND	5.0	ug/L							08/21/2016	X
2-Propanone (acetone)	ND	20	ug/L							08/21/2016	
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L							08/21/2016	
Acrylonitrile	ND	5.0	ug/L							08/21/2016	
Benzene	ND	1.0	ug/L							08/21/2016	
Bromobenzene	ND	1.0	ug/L							08/21/2016	
Bromochloromethane	ND	1.0	ug/L							08/21/2016	
Bromodichloromethane	ND	1.0	ug/L							08/21/2016	
Bromoform	ND	1.0	ug/L							08/21/2016	
Bromomethane	ND	5.0	ug/L							08/21/2016	
Carbon disulfide	ND	1.0	ug/L							08/21/2016	
Carbon tetrachloride	ND	1.0	ug/L							08/21/2016	
Chlorobenzene	ND	1.0	ug/L							08/21/2016	
Chloroethane	ND	5.0	ug/L							08/21/2016	
Chloroform	ND	1.0	ug/L							08/21/2016	
Chloromethane	ND	5.0	ug/L							08/21/2016	
cis-1,2-Dichloroethylene	ND	1.0	ug/L							08/21/2016	
cis-1,3-Dichloropropylene	ND	1.0	ug/L							08/21/2016	
Cyclohexane	ND	5.0	ug/L							08/21/2016	
Dibromochloromethane	ND	1.0	ug/L							08/21/2016	
Dibromomethane	ND	1.0	ug/L							08/21/2016	
Dichlorodifluoromethane	ND	5.0	ug/L							08/21/2016	
Diethyl ether	ND	5.0	ug/L							08/21/2016	
Diisopropyl Ether	ND	5.0	ug/L							08/21/2016	
Ethylbenzene	ND	1.0	ug/L							08/21/2016	
Ethyltertiarybutylether	ND	5.0	ug/L							08/21/2016	
Hexachloroethane	ND	5.0	ug/L							08/21/2016	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B6H2101 - Method: 5030				**Prepared: 08/21/2016**							
Blank (B6H2101-BLK1)											
Isopropylbenzene	ND	1.0	ug/L							08/21/2016	
m & p - Xylene	ND	2.0	ug/L							08/21/2016	
Methyl iodide	ND	1.0	ug/L							08/21/2016	
Methylene chloride	ND	5.0	ug/L							08/21/2016	
Methyltertiarybutylether	ND	1.0	ug/L							08/21/2016	
Naphthalene	ND	5.0	ug/L							08/21/2016	X
n-Butylbenzene	ND	1.0	ug/L							08/21/2016	
n-Propylbenzene	ND	1.0	ug/L							08/21/2016	
o-Xylene	ND	1.0	ug/L							08/21/2016	
p-Isopropyl toluene	ND	1.0	ug/L							08/21/2016	
sec-Butylbenzene	ND	1.0	ug/L							08/21/2016	
Styrene	ND	1.0	ug/L							08/21/2016	
tert-Butylbenzene	ND	1.0	ug/L							08/21/2016	
tertiary Butyl Alcohol	ND	50	ug/L							08/21/2016	
tertiaryAmylmethylether	ND	5.0	ug/L							08/21/2016	
Tetrachloroethylene	ND	1.0	ug/L							08/21/2016	
Tetrahydrofuran	ND	5.0	ug/L							08/21/2016	
Toluene	ND	1.0	ug/L							08/21/2016	
trans-1,2-Dichloroethylene	ND	1.0	ug/L							08/21/2016	
trans-1,3-Dichloropropylene	ND	1.0	ug/L							08/21/2016	
trans-1,4-Dichloro-2-butene	ND	5.0	ug/L							08/21/2016	
Trichloroethylene	ND	1.0	ug/L							08/21/2016	
Trichlorofluoromethane	ND	1.0	ug/L							08/21/2016	
Vinyl chloride	ND	1.0	ug/L							08/21/2016	
Surrogate: Bromofluorobenzene	*49.4*		ug/L	*50.00*		*98.9*	*85-115*			08/21/2016	
Surrogate: Dibromofluoromethane	*51.3*		ug/L	*50.00*		*103*	*82.7-115*			08/21/2016	
Surrogate: Toluene-d8	*51.5*		ug/L	*50.00*		*103*	*85-115*			08/21/2016	
LCS (B6H2101-BS1)											
1,1,1,2-Tetrachloroethane	50.9	1.0	ug/L	50.00		102	70-130			08/21/2016	
1,1,1-Trichloroethane	48.4	1.0	ug/L	50.00		96.9	70-130			08/21/2016	
1,1,2,2-Tetrachloroethane	53.5	1.0	ug/L	50.00		107	70-130			08/21/2016	
1,1,2-Trichloroethane	51.6	1.0	ug/L	50.00		103	70-130			08/21/2016	
1,1-Dichloroethane	50.2	1.0	ug/L	50.00		100	70-130			08/21/2016	
1,1-Dichloroethylene	49.1	1.0	ug/L	50.00		98.2	70-130			08/21/2016	
1,2,3-Trichlorobenzene	56.5	5.0	ug/L	50.00		113	70-130			08/21/2016	
1,2,3-Trichloropropane	45.0	1.0	ug/L	50.00		90.1	70-130			08/21/2016	
1,2,3-Trimethylbenzene	52.2	1.0	ug/L	50.00		104	70-130			08/21/2016	
1,2,4-Trichlorobenzene	57.8	5.0	ug/L	50.00		116	70-130			08/21/2016	
1,2,4-Trimethylbenzene	52.1	1.0	ug/L	50.00		104	70-130			08/21/2016	
1,2-Dibromo-3-chloropropane	50.5	5.0	ug/L	50.00		101	70-130			08/21/2016	
1,2-Dibromoethane	52.7	1.0	ug/L	50.00		105	70-130			08/21/2016	
1,2-Dichlorobenzene	53.0	1.0	ug/L	50.00		106	70-130			08/21/2016	
1,2-Dichloroethane	53.0	1.0	ug/L	50.00		106	70-130			08/21/2016	
1,2-Dichloropropane	51.1	1.0	ug/L	50.00		102	70-130			08/21/2016	
1,3,5-Trimethylbenzene	53.4	1.0	ug/L	50.00		107	70-130			08/21/2016	
1,3-Dichlorobenzene	53.0	1.0	ug/L	50.00		106	70-130			08/21/2016	
1,4-Dichlorobenzene	53.0	1.0	ug/L	50.00		106	70-130			08/21/2016	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B6H2101 - Method: 5030				**Prepared: 08/21/2016**							
LCS (B6H2101-BS1)											
2-Butanone (MEK)	51.7	5.0	ug/L	50.00		103	70-130			08/21/2016	
2-Hexanone	48.4	5.0	ug/L	50.00		96.9	70-130			08/21/2016	
2-Methylnaphthalene	49.4	5.0	ug/L	50.00		98.9	70-130			08/21/2016	X
2-Propanone (acetone)	36.4	20	ug/L	50.00		72.8	70-130			08/21/2016	
4-Methyl-2-pentanone (MIBK)	55.3	5.0	ug/L	50.00		111	70-130			08/21/2016	
Acrylonitrile	56.3	5.0	ug/L	50.00		113	70-130			08/21/2016	
Benzene	52.1	1.0	ug/L	50.00		104	70-130			08/21/2016	
Bromobenzene	52.4	1.0	ug/L	50.00		105	70-130			08/21/2016	
Bromochloromethane	50.3	1.0	ug/L	50.00		101	70-130			08/21/2016	
Bromodichloromethane	51.9	1.0	ug/L	50.00		104	70-130			08/21/2016	
Bromoform	47.6	1.0	ug/L	50.00		95.1	70-130			08/21/2016	
Bromomethane	61.9	5.0	ug/L	50.00		124	70-130			08/21/2016	
Carbon disulfide	49.7	1.0	ug/L	50.00		99.5	70-130			08/21/2016	
Carbon tetrachloride	50.1	1.0	ug/L	50.00		100	70-130			08/21/2016	
Chlorobenzene	52.7	1.0	ug/L	50.00		105	70-130			08/21/2016	
Chloroethane	59.1	5.0	ug/L	50.00		118	70-130			08/21/2016	
Chloroform	50.8	1.0	ug/L	50.00		102	70-130			08/21/2016	
Chloromethane	78.7	5.0	ug/L	50.00		157	70-130			08/21/2016	A06, A09, A11
cis-1,2-Dichloroethylene	53.1	1.0	ug/L	50.00		106	70-130			08/21/2016	
cis-1,3-Dichloropropylene	53.1	1.0	ug/L	50.00		106	70-130			08/21/2016	
Cyclohexane	53.4	5.0	ug/L	50.00		107	70-130			08/21/2016	
Dibromochloromethane	53.0	1.0	ug/L	50.00		106	70-130			08/21/2016	
Dibromomethane	51.4	1.0	ug/L	50.00		103	70-130			08/21/2016	
Dichlorodifluoromethane	73.1	5.0	ug/L	50.00		146	70-130			08/21/2016	A06, A09, A11
Diethyl ether	53.2	5.0	ug/L	50.00		106	70-130			08/21/2016	
Diisopropyl Ether	58.4	5.0	ug/L	50.00		117	70-130			08/21/2016	
Ethylbenzene	52.3	1.0	ug/L	50.00		105	70-130			08/21/2016	
Ethyltertiarybutylether	49.4	5.0	ug/L	50.00		98.8	70-130			08/21/2016	
Hexachloroethane	49.7	5.0	ug/L	50.00		99.3	70-130			08/21/2016	
Isopropylbenzene	54.5	1.0	ug/L	50.00		109	70-130			08/21/2016	
m & p - Xylene	102	2.0	ug/L	100.0		102	70-130			08/21/2016	
Methyl iodide	44.6	1.0	ug/L	50.00		89.3	70-130			08/21/2016	
Methylene chloride	54.4	5.0	ug/L	50.00		109	70-130			08/21/2016	
Methyltertiarybutylether	49.9	1.0	ug/L	50.00		99.8	70-130			08/21/2016	
Naphthalene	58.3	5.0	ug/L	50.00		117	70-130			08/21/2016	X
n-Butylbenzene	55.0	1.0	ug/L	50.00		110	70-130			08/21/2016	
n-Propylbenzene	54.7	1.0	ug/L	50.00		109	70-130			08/21/2016	
o-Xylene	51.2	1.0	ug/L	50.00		102	70-130			08/21/2016	
p-Isopropyl toluene	52.7	1.0	ug/L	50.00		105	70-130			08/21/2016	
sec-Butylbenzene	53.5	1.0	ug/L	50.00		107	70-130			08/21/2016	
Styrene	51.4	1.0	ug/L	50.00		103	70-130			08/21/2016	
tert-Butylbenzene	56.4	1.0	ug/L	50.00		113	70-130			08/21/2016	
tertiary Butyl Alcohol	277	50	ug/L	250.0		111	70-130			08/21/2016	
tertiaryAmylmethylether	48.3	5.0	ug/L	50.00		96.6	70-130			08/21/2016	
Tetrachloroethylene	49.2	1.0	ug/L	50.00		98.3	70-130			08/21/2016	
Tetrahydrofuran	58.3	5.0	ug/L	50.00		117	70-130			08/21/2016	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B6H2101 - Method: 5030				**Prepared: 08/21/2016**							
LCS (B6H2101-BS1)											
Toluene	51.6	1.0	ug/L	50.00		103	70-130			08/21/2016	
trans-1,2-Dichloroethylene	52.7	1.0	ug/L	50.00		105	70-130			08/21/2016	
trans-1,3-Dichloropropylene	51.5	1.0	ug/L	50.00		103	70-130			08/21/2016	
trans-1,4-Dichloro-2-butene	50.3	5.0	ug/L	50.00		101	70-130			08/21/2016	
Trichloroethylene	50.3	1.0	ug/L	50.00		101	70-130			08/21/2016	
Trichlorofluoromethane	55.3	1.0	ug/L	50.00		111	70-130			08/21/2016	
Vinyl chloride	60.7	1.0	ug/L	50.00		121	70-130			08/21/2016	
Surrogate: Bromofluorobenzene	*50.6*		ug/L	*50.00*		*101*	*85-115*			08/21/2016	
Surrogate: Dibromofluoromethane	*50.3*		ug/L	*50.00*		*101*	*82.7-115*			08/21/2016	
Surrogate: Toluene-d8	*49.9*		ug/L	*50.00*		*99.8*	*85-115*			08/21/2016	
Matrix Spike (B6H2101-MS1)	**Source: 1608256-11**										
1,1,1,2-Tetrachloroethane	50.2	1.0	ug/L	50.00	ND	100	70-130			08/21/2016	
1,1,1-Trichloroethane	47.8	1.0	ug/L	50.00	ND	95.6	70-130			08/21/2016	
1,1,2,2-Tetrachloroethane	53.0	1.0	ug/L	50.00	ND	106	70-130			08/21/2016	
1,1,2-Trichloroethane	51.0	1.0	ug/L	50.00	ND	102	70-130			08/21/2016	
1,1-Dichloroethane	50.5	1.0	ug/L	50.00	ND	101	70-130			08/21/2016	
1,1-Dichloroethylene	51.2	1.0	ug/L	50.00	ND	102	70-130			08/21/2016	
1,2,3-Trichlorobenzene	52.9	5.0	ug/L	50.00	ND	106	70-130			08/21/2016	
1,2,3-Trichloropropane	45.9	1.0	ug/L	50.00	ND	91.8	70-130			08/21/2016	
1,2,3-Trimethylbenzene	52.5	1.0	ug/L	50.00	ND	105	70-130			08/21/2016	
1,2,4-Trichlorobenzene	55.5	5.0	ug/L	50.00	ND	111	70-130			08/21/2016	
1,2,4-Trimethylbenzene	50.9	1.0	ug/L	50.00	ND	102	70-130			08/21/2016	
1,2-Dibromo-3-chloropropane	46.0	5.0	ug/L	50.00	ND	92.0	70-130			08/21/2016	
1,2-Dibromoethane	52.5	1.0	ug/L	50.00	ND	105	70-130			08/21/2016	
1,2-Dichlorobenzene	52.1	1.0	ug/L	50.00	ND	104	70-130			08/21/2016	
1,2-Dichloroethane	53.3	1.0	ug/L	50.00	ND	107	70-130			08/21/2016	
1,2-Dichloropropane	50.3	1.0	ug/L	50.00	ND	101	70-130			08/21/2016	
1,3,5-Trimethylbenzene	53.4	1.0	ug/L	50.00	ND	107	70-130			08/21/2016	
1,3-Dichlorobenzene	52.1	1.0	ug/L	50.00	ND	104	70-130			08/21/2016	
1,4-Dichlorobenzene	52.6	1.0	ug/L	50.00	ND	105	70-130			08/21/2016	
2-Butanone (MEK)	44.4	5.0	ug/L	50.00	ND	88.8	70-130			08/21/2016	
2-Hexanone	45.1	5.0	ug/L	50.00	ND	90.1	70-130			08/21/2016	
2-Methylnaphthalene	41.2	5.0	ug/L	50.00	ND	82.3	70-130			08/21/2016	X
2-Propanone (acetone)	29.8	20	ug/L	50.00	ND	59.6	70-130			08/21/2016	A03
4-Methyl-2-pentanone (MIBK)	52.1	5.0	ug/L	50.00	ND	104	70-130			08/21/2016	
Acrylonitrile	52.5	5.0	ug/L	50.00	ND	105	70-130			08/21/2016	
Benzene	51.5	1.0	ug/L	50.00	ND	103	70-130			08/21/2016	
Bromobenzene	54.2	1.0	ug/L	50.00	ND	108	70-130			08/21/2016	
Bromochloromethane	48.7	1.0	ug/L	50.00	ND	97.5	70-130			08/21/2016	
Bromodichloromethane	50.9	1.0	ug/L	50.00	ND	102	70-130			08/21/2016	
Bromoform	44.3	1.0	ug/L	50.00	ND	88.7	70-130			08/21/2016	
Bromomethane	52.9	5.0	ug/L	50.00	ND	106	70-130			08/21/2016	
Carbon disulfide	49.2	1.0	ug/L	50.00	ND	98.4	70-130			08/21/2016	
Carbon tetrachloride	48.8	1.0	ug/L	50.00	ND	97.6	70-130			08/21/2016	
Chlorobenzene	52.3	1.0	ug/L	50.00	ND	105	70-130			08/21/2016	
Chloroethane	60.1	5.0	ug/L	50.00	26.2	67.8	70-130			08/21/2016	A03
Chloroform	51.7	1.0	ug/L	50.00	ND	103	70-130			08/21/2016	

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Lansing, MI 48909
TEL: (517) 335-9800
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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B6H2101 - Method: 5030				**Prepared: 08/21/2016**							
Matrix Spike (B6H2101-MS1)	**Source: 1608256-11**										
Chloromethane	79.2	5.0	ug/L	50.00	ND	158	70-130			08/21/2016	A04, A06, A11
cis-1,2-Dichloroethylene	200	1.0	ug/L	50.00	153	94.0	70-130			08/21/2016	
cis-1,3-Dichloropropylene	50.6	1.0	ug/L	50.00	ND	101	70-130			08/21/2016	
Cyclohexane	50.8	5.0	ug/L	50.00	ND	102	70-130			08/21/2016	
Dibromochloromethane	51.1	1.0	ug/L	50.00	ND	102	70-130			08/21/2016	
Dibromomethane	51.0	1.0	ug/L	50.00	ND	102	70-130			08/21/2016	
Dichlorodifluoromethane	71.6	5.0	ug/L	50.00	ND	143	70-130			08/21/2016	A04, A06, A11
Diethyl ether	55.4	5.0	ug/L	50.00	ND	111	70-130			08/21/2016	
Diisopropyl Ether	56.4	5.0	ug/L	50.00	ND	113	70-130			08/21/2016	
Ethylbenzene	52.1	1.0	ug/L	50.00	ND	104	70-130			08/21/2016	
Ethyltertiarybutylether	48.0	5.0	ug/L	50.00	ND	96.0	70-130			08/21/2016	
Hexachloroethane	47.9	5.0	ug/L	50.00	ND	95.8	70-130			08/21/2016	
Isopropylbenzene	54.4	1.0	ug/L	50.00	ND	109	70-130			08/21/2016	
m & p - Xylene	102	2.0	ug/L	100.0	ND	102	70-130			08/21/2016	
Methyl iodide	41.5	1.0	ug/L	50.00	ND	83.0	70-130			08/21/2016	
Methylene chloride	56.1	5.0	ug/L	50.00	ND	112	70-130			08/21/2016	
Methyltertiarybutylether	49.0	1.0	ug/L	50.00	ND	98.0	70-130			08/21/2016	
Naphthalene	54.5	5.0	ug/L	50.00	ND	109	70-130			08/21/2016	X
n-Butylbenzene	52.6	1.0	ug/L	50.00	ND	105	70-130			08/21/2016	
n-Propylbenzene	54.6	1.0	ug/L	50.00	ND	109	70-130			08/21/2016	
o-Xylene	51.3	1.0	ug/L	50.00	ND	103	70-130			08/21/2016	
p-Isopropyl toluene	50.9	1.0	ug/L	50.00	ND	102	70-130			08/21/2016	
sec-Butylbenzene	52.2	1.0	ug/L	50.00	ND	104	70-130			08/21/2016	
Styrene	51.3	1.0	ug/L	50.00	ND	103	70-130			08/21/2016	
tert-Butylbenzene	50.0	1.0	ug/L	50.00	ND	99.9	70-130			08/21/2016	
tertiary Butyl Alcohol	217	50	ug/L	250.0	ND	86.6	70-130			08/21/2016	
tertiaryAmylmethylether	46.2	5.0	ug/L	50.00	ND	92.5	70-130			08/21/2016	
Tetrachloroethylene	48.5	1.0	ug/L	50.00	ND	96.9	70-130			08/21/2016	
Tetrahydrofuran	55.0	5.0	ug/L	50.00	ND	110	70-130			08/21/2016	
Toluene	51.8	1.0	ug/L	50.00	ND	104	70-130			08/21/2016	
trans-1,2-Dichloroethylene	55.3	1.0	ug/L	50.00	0.956	109	70-130			08/21/2016	
trans-1,3-Dichloropropylene	49.1	1.0	ug/L	50.00	ND	98.3	70-130			08/21/2016	
trans-1,4-Dichloro-2-butene	45.8	5.0	ug/L	50.00	ND	91.6	70-130			08/21/2016	
Trichloroethylene	92.7	1.0	ug/L	50.00	44.8	95.9	70-130			08/21/2016	
Trichlorofluoromethane	56.9	1.0	ug/L	50.00	ND	114	70-130			08/21/2016	
Vinyl chloride	101	1.0	ug/L	50.00	42.5	117	70-130			08/21/2016	
Surrogate: Bromofluorobenzene	*51.0*		ug/L	*50.00*		*102*	*85-115*			08/21/2016	
Surrogate: Dibromofluoromethane	*50.5*		ug/L	*50.00*		*101*	*82.7-115*			08/21/2016	
Surrogate: Toluene-d8	*50.4*		ug/L	*50.00*		*101*	*85-115*			08/21/2016	
Matrix Spike Dup (B6H2101-MSD1)	**Source: 1608256-11**										
1,1,1,2-Tetrachloroethane	48.9	1.0	ug/L	50.00	ND	97.8	70-130	2.63	30	08/21/2016	
1,1,1-Trichloroethane	45.3	1.0	ug/L	50.00	ND	90.6	70-130	5.35	30	08/21/2016	
1,1,2,2-Tetrachloroethane	54.3	1.0	ug/L	50.00	ND	109	70-130	2.46	30	08/21/2016	
1,1,2-Trichloroethane	50.9	1.0	ug/L	50.00	ND	102	70-130	0.0432	30	08/21/2016	
1,1-Dichloroethane	48.3	1.0	ug/L	50.00	ND	96.6	70-130	4.49	30	08/21/2016	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B6H2101 - Method: 5030				**Prepared: 08/21/2016**							
Matrix Spike Dup (B6H2101-MSD1)	**Source: 1608256-11**										
1,1-Dichloroethylene	47.2	1.0	ug/L	50.00	ND	94.4	70-130	8.18	30	08/21/2016	
1,2,3-Trichlorobenzene	52.5	5.0	ug/L	50.00	ND	105	70-130	0.702	30	08/21/2016	
1,2,3-Trichloropropane	46.3	1.0	ug/L	50.00	ND	92.7	70-130	0.938	30	08/21/2016	
1,2,3-Trimethylbenzene	49.8	1.0	ug/L	50.00	ND	99.7	70-130	5.19	30	08/21/2016	
1,2,4-Trichlorobenzene	53.6	5.0	ug/L	50.00	ND	107	70-130	3.49	30	08/21/2016	
1,2,4-Trimethylbenzene	49.4	1.0	ug/L	50.00	ND	98.8	70-130	3.00	30	08/21/2016	
1,2-Dibromo-3-chloropropane	47.4	5.0	ug/L	50.00	ND	94.8	70-130	3.01	30	08/21/2016	
1,2-Dibromoethane	51.4	1.0	ug/L	50.00	ND	103	70-130	2.04	30	08/21/2016	
1,2-Dichlorobenzene	50.9	1.0	ug/L	50.00	ND	102	70-130	2.32	30	08/21/2016	
1,2-Dichloroethane	53.0	1.0	ug/L	50.00	ND	106	70-130	0.605	30	08/21/2016	
1,2-Dichloropropane	49.4	1.0	ug/L	50.00	ND	98.8	70-130	1.82	30	08/21/2016	
1,3,5-Trimethylbenzene	51.1	1.0	ug/L	50.00	ND	102	70-130	4.42	30	08/21/2016	
1,3-Dichlorobenzene	49.9	1.0	ug/L	50.00	ND	99.8	70-130	4.31	30	08/21/2016	
1,4-Dichlorobenzene	50.0	1.0	ug/L	50.00	ND	100	70-130	4.91	30	08/21/2016	
2-Butanone (MEK)	47.5	5.0	ug/L	50.00	ND	95.0	70-130	6.71	30	08/21/2016	
2-Hexanone	47.8	5.0	ug/L	50.00	ND	95.7	70-130	5.96	30	08/21/2016	
2-Methylnaphthalene	46.0	5.0	ug/L	50.00	ND	91.9	70-130	11.0	30	08/21/2016	X
2-Propanone (acetone)	30.3	20	ug/L	50.00	ND	60.5	70-130	1.46	30	08/21/2016	A03
4-Methyl-2-pentanone (MIBK)	54.9	5.0	ug/L	50.00	ND	110	70-130	5.34	30	08/21/2016	
Acrylonitrile	55.0	5.0	ug/L	50.00	ND	110	70-130	4.62	30	08/21/2016	
Benzene	49.7	1.0	ug/L	50.00	ND	99.5	70-130	3.56	30	08/21/2016	
Bromobenzene	50.0	1.0	ug/L	50.00	ND	100	70-130	8.06	30	08/21/2016	
Bromochloromethane	48.2	1.0	ug/L	50.00	ND	96.4	70-130	1.14	30	08/21/2016	
Bromodichloromethane	49.6	1.0	ug/L	50.00	ND	99.2	70-130	2.50	30	08/21/2016	
Bromoform	45.4	1.0	ug/L	50.00	ND	90.7	70-130	2.31	30	08/21/2016	
Bromomethane	53.5	5.0	ug/L	50.00	ND	107	70-130	1.11	30	08/21/2016	
Carbon disulfide	45.6	1.0	ug/L	50.00	ND	91.2	70-130	7.61	30	08/21/2016	
Carbon tetrachloride	45.7	1.0	ug/L	50.00	ND	91.4	70-130	6.60	30	08/21/2016	
Chlorobenzene	50.1	1.0	ug/L	50.00	ND	100	70-130	4.39	30	08/21/2016	
Chloroethane	55.8	5.0	ug/L	50.00	26.2	59.2	70-130	7.37	30	08/21/2016	A03
Chloroform	48.9	1.0	ug/L	50.00	ND	97.8	70-130	5.64	30	08/21/2016	
Chloromethane	76.6	5.0	ug/L	50.00	ND	153	70-130	3.38	30	08/21/2016	A04, A06, A11
cis-1,2-Dichloroethylene	192	1.0	ug/L	50.00	153	77.2	70-130	4.28	30	08/21/2016	
cis-1,3-Dichloropropylene	49.4	1.0	ug/L	50.00	ND	98.8	70-130	2.51	30	08/21/2016	
Cyclohexane	47.5	5.0	ug/L	50.00	ND	95.0	70-130	6.69	30	08/21/2016	
Dibromochloromethane	50.4	1.0	ug/L	50.00	ND	101	70-130	1.37	30	08/21/2016	
Dibromomethane	50.0	1.0	ug/L	50.00	ND	99.9	70-130	2.00	30	08/21/2016	
Dichlorodifluoromethane	67.1	5.0	ug/L	50.00	ND	134	70-130	6.41	30	08/21/2016	A04, A06, A11
Diethyl ether	55.2	5.0	ug/L	50.00	ND	110	70-130	0.387	30	08/21/2016	
Diisopropyl Ether	53.7	5.0	ug/L	50.00	ND	107	70-130	4.96	30	08/21/2016	
Ethylbenzene	49.4	1.0	ug/L	50.00	ND	98.9	70-130	5.32	30	08/21/2016	
Ethyltertiarybutylether	47.7	5.0	ug/L	50.00	ND	95.5	70-130	0.534	30	08/21/2016	
Hexachloroethane	45.2	5.0	ug/L	50.00	ND	90.3	70-130	5.89	30	08/21/2016	
Isopropylbenzene	51.6	1.0	ug/L	50.00	ND	103	70-130	5.38	30	08/21/2016	
m & p - Xylene	98.4	2.0	ug/L	100.0	ND	98.4	70-130	3.27	30	08/21/2016	
Methyl iodide	39.8	1.0	ug/L	50.00	ND	79.7	70-130	4.01	30	08/21/2016	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B6H2101 - Method: 5030				**Prepared: 08/21/2016**							
Matrix Spike Dup (B6H2101-MSD1)	**Source: 1608256-11**										
Methylene chloride	54.3	5.0	ug/L	50.00	ND	109	70-130	3.25	30	08/21/2016	
Methyltertiarybutylether	49.6	1.0	ug/L	50.00	ND	99.3	70-130	1.30	30	08/21/2016	
Naphthalene	56.2	5.0	ug/L	50.00	ND	112	70-130	3.12	30	08/21/2016	X
n-Butylbenzene	50.5	1.0	ug/L	50.00	ND	101	70-130	4.15	30	08/21/2016	
n-Propylbenzene	51.9	1.0	ug/L	50.00	ND	104	70-130	5.14	30	08/21/2016	
o-Xylene	49.8	1.0	ug/L	50.00	ND	99.7	70-130	2.94	30	08/21/2016	
p-Isopropyl toluene	48.8	1.0	ug/L	50.00	ND	97.7	70-130	4.05	30	08/21/2016	
sec-Butylbenzene	50.1	1.0	ug/L	50.00	ND	100	70-130	4.12	30	08/21/2016	
Styrene	49.8	1.0	ug/L	50.00	ND	99.5	70-130	3.08	30	08/21/2016	
tert-Butylbenzene	48.1	1.0	ug/L	50.00	ND	96.2	70-130	3.85	30	08/21/2016	
tertiary Butyl Alcohol	255	50	ug/L	250.0	ND	102	70-130	16.2	30	08/21/2016	
tertiaryAmylmethylether	46.3	5.0	ug/L	50.00	ND	92.7	70-130	0.262	30	08/21/2016	
Tetrachloroethylene	46.2	1.0	ug/L	50.00	ND	92.5	70-130	4.70	30	08/21/2016	
Tetrahydrofuran	56.1	5.0	ug/L	50.00	ND	112	70-130	2.03	30	08/21/2016	
Toluene	49.6	1.0	ug/L	50.00	ND	99.1	70-130	4.37	30	08/21/2016	
trans-1,2-Dichloroethylene	52.0	1.0	ug/L	50.00	0.956	102	70-130	6.13	30	08/21/2016	
trans-1,3-Dichloropropylene	48.3	1.0	ug/L	50.00	ND	96.5	70-130	1.77	30	08/21/2016	
trans-1,4-Dichloro-2-butene	46.8	5.0	ug/L	50.00	ND	93.6	70-130	2.15	30	08/21/2016	
Trichloroethylene	87.8	1.0	ug/L	50.00	44.8	86.0	70-130	5.48	30	08/21/2016	
Trichlorofluoromethane	54.0	1.0	ug/L	50.00	ND	108	70-130	5.29	30	08/21/2016	
Vinyl chloride	96.9	1.0	ug/L	50.00	42.5	109	70-130	4.31	30	08/21/2016	
Surrogate: Bromofluorobenzene	*50.1*		ug/L	*50.00*		*100*	*85-115*			08/21/2016	
Surrogate: Dibromofluoromethane	*49.7*		ug/L	*50.00*		*99.5*	*82.7-115*			08/21/2016	
Surrogate: Toluene-d8	*49.9*		ug/L	*50.00*		*99.8*	*85-115*			08/21/2016	

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Organics-Dioxane - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B6H2316 - Method: 5030				**Prepared: 08/23/2016**							
Blank (B6H2316-BLK1)											
1,4-dioxane	ND	1.0	ug/L							08/23/2016	
LCS (B6H2316-BS1)											
1,4-dioxane	8.78	1.0	ug/L	10.00		87.8	70-130			08/23/2016	
Matrix Spike (B6H2316-MS1)	**Source: 1608224-01**										
1,4-dioxane	9.58	1.0	ug/L	10.00	ND	95.8	70-130			08/23/2016	
Matrix Spike Dup (B6H2316-MSD1)	**Source: 1608224-01**										
1,4-dioxane	9.58	1.0	ug/L	10.00	ND	95.8	70-130	0.00	30	08/23/2016	

Michigan Department of Environmental Quality
Laboratory Services Section

Analysis Request Sheet

Lab Work Order Number	Project Name	Matrix
1608255	Gelman Sciences	WATER

Site Code/Project Number	AY	CC Email 1	Project TAT Days	Sample Collector
81000018	16	adelmanm@michigan.gov		KEVIN LUND
Dept-Division-District	**Index**	**CC Email 2**	**Project Due Date**	**Sample Collector Phone**
DEQ-RRD-Jackson	44410			734-417-2579
State Project Manager	**PCA**	**CC Email 3**		**Contract Firm**
Dan Hamel	30740			DEQ
State Project Manager Email	**Project**	**Overflow Lab Choice 1**	**Accept Analysis hold time codes**	**Contract Firm Primary Contact**
hameld@michigan.gov	451586			
State Project Manager Phone	**Phase**	**Overflow Lab Choice 2**		**Primary Contact Phone**
517-780-7832	00			

	Lab Use Only	Field Sample Identification	Collection Date	Collection Time	Container Count	Comments
1		RL-3	8-16-16	1530	6	4°C Low flow Sample
2		RL-2	8-16-16	1615	6	PLEASE INCLUDE QA/QC INFORMATION IN THE ANALYTICAL REPORTS.
3		RL-7	8-16-16	1800	6	
4		RL-12	8-17-16	10:15	6	
5		RL-11	8-17-16	11:00	6	
6		RL-10	8-17-16	11:50	6	
7		RL-13	8-17-16	12:45	6	
8		RL-22	8-17-16	1500	6	
9						
10						

ORGANIC CHEMISTRY

VOA - Volatile Organic Acidic	
Volatiles - Full List	1 2 3 4 5 6 7 8 9 10
BTEX/MTBE/TMB only	1 2 3 4 5 6 7 8 9 10
Chlorinated only	1 2 3 4 5 6 7 8 9 10
GRO	1 2 3 4 5 6 7 8 9 10
1,4 Dioxane	1 2 3 4 5 6 7 8 9 10
METH - Methane, Ethane, Ethene	
Methane, Ethane, Ethene	1 2 3 4 5 6 7 8 9 10
ON - Pesticides, PCBs	
Pesticides & PCBs	1 2 3 4 5 6 7 8 9 10
Pesticides only	1 2 3 4 5 6 7 8 9 10
PCBs only	1 2 3 4 5 6 7 8 9 10
Toxaphene	1 2 3 4 5 6 7 8 9 10
Chlordane	1 2 3 4 5 6 7 8 9 10
BNA - Base Neutral Acids	
BNAs	1 2 3 4 5 6 7 8 9 10
Benzidines	1 2 3 4 5 6 7 8 9 10
PNAs only	1 2 3 4 5 6 7 8 9 10
BNs only	1 2 3 4 5 6 7 8 9 10
Acids only	1 2 3 4 5 6 7 8 9 10
Organic Specialty Requests	
Library search - Volatiles	1 2 3 4 5 6 7 8 9 10
Library search - SemiVols	1 2 3 4 5 6 7 8 9 10
Finger Print	1 2 3 4 5 6 7 8 9 10
DRO / ORO	1 2 3 4 5 6 7 8 9 10

METALS CHEMISTRY PACKAGES

OpMemo2 - Total	1 2 3 4 5 6 7 8 9 10
OpMemo2 - Dissolved (Sb,As,Ba,Be,Cd,Cr,Cu,Co,Fe,Pb,Mn,Hg,Mo,Ni,Se,Ag,Tl,V,Zn)	1 2 3 4 5 6 7 8 9 10
Michigan10 - Total	1 2 3 4 5 6 7 8 9 10
Michigan10 - Dissolved (As,Ba,Cd,Cr,Cu,Pb,Hg,Se,Ag,Zn)	1 2 3 4 5 6 7 8 9 10

MAD - DISSOLVED METALS

Diss - Silver - Ag	1 2 3 4 5 6 7 8 9 10
Diss - Aluminum - Al	1 2 3 4 5 6 7 8 9 10
Diss - Arsenic - As	1 2 3 4 5 6 7 8 9 10
Diss - Boron - B	1 2 3 4 5 6 7 8 9 10
Diss - Barium - Ba	1 2 3 4 5 6 7 8 9 10
Diss - Beryllium - Be	1 2 3 4 5 6 7 8 9 10
Diss - Cadmium - Cd	1 2 3 4 5 6 7 8 9 10
Diss - Cobalt - Co	1 2 3 4 5 6 7 8 9 10
Diss - Chromium - Cr	1 2 3 4 5 6 7 8 9 10
Diss - Copper - Cu	1 2 3 4 5 6 7 8 9 10
Diss - Iron - Fe	1 2 3 4 5 6 7 8 9 10
Diss - Mercury - Hg	1 2 3 4 5 6 7 8 9 10
Diss - Lithium - Li	1 2 3 4 5 6 7 8 9 10
Diss - Manganese - Mn	1 2 3 4 5 6 7 8 9 10
Diss - Molybdenum - Mo	1 2 3 4 5 6 7 8 9 10
Diss - Nickel - Ni	1 2 3 4 5 6 7 8 9 10
Diss - Lead - Pb	1 2 3 4 5 6 7 8 9 10
Diss - Antimony - Sb	1 2 3 4 5 6 7 8 9 10
Diss - Selenium - Se	1 2 3 4 5 6 7 8 9 10
Diss - Strontium - Sr	1 2 3 4 5 6 7 8 9 10
Diss - Titanium - Ti	1 2 3 4 5 6 7 8 9 10
Diss - Thallium - Tl	1 2 3 4 5 6 7 8 9 10
Diss - Uranium - U	1 2 3 4 5 6 7 8 9 10
Diss - Vanadium - V	1 2 3 4 5 6 7 8 9 10
Diss - Zinc - Zn	1 2 3 4 5 6 7 8 9 10
Diss - Calcium - Ca	1 2 3 4 5 6 7 8 9 10
Diss - Potassium - K	1 2 3 4 5 6 7 8 9 10
Diss - Magnesium - Mg	1 2 3 4 5 6 7 8 9 10
Diss - Sodium - Na	1 2 3 4 5 6 7 8 9 10
Diss - Hardness - Ca, Mg	1 2 3 4 5 6 7 8 9 10
MD - Metals Dissolved	
Lab Filtration	1 2 3 4 5 6 7 8 9 10

MA - TOTAL METALS

Silver - Ag	1 2 3 4 5 6 7 8 9 10
Aluminum - Al	1 2 3 4 5 6 7 8 9 10
Arsenic - As	1 2 3 4 5 6 7 8 9 10
Boron - B	1 2 3 4 5 6 7 8 9 10
Barium - Ba	1 2 3 4 5 6 7 8 9 10
Beryllium - Be	1 2 3 4 5 6 7 8 9 10
Cadmium - Cd	1 2 3 4 5 6 7 8 9 10
Cobalt - Co	1 2 3 4 5 6 7 8 9 10
Chromium - Cr	1 2 3 4 5 6 7 8 9 10
Copper - Cu	1 2 3 4 5 6 7 8 9 10
Iron - Fe	1 2 3 4 5 6 7 8 9 10
Mercury - Hg	1 2 3 4 5 6 7 8 9 10
Lithium - Li	1 2 3 4 5 6 7 8 9 10
Manganese - Mn	1 2 3 4 5 6 7 8 9 10
Molybdenum - Mo	1 2 3 4 5 6 7 8 9 10
Nickel - Ni	1 2 3 4 5 6 7 8 9 10
Lead - Pb	1 2 3 4 5 6 7 8 9 10
Antimony - Sb	1 2 3 4 5 6 7 8 9 10
Selenium - Se	1 2 3 4 5 6 7 8 9 10
Strontium - Sr	1 2 3 4 5 6 7 8 9 10
Titanium - Ti	1 2 3 4 5 6 7 8 9 10
Thallium - Tl	1 2 3 4 5 6 7 8 9 10
Uranium - U	1 2 3 4 5 6 7 8 9 10
Vanadium - V	1 2 3 4 5 6 7 8 9 10
Zinc - Zn	1 2 3 4 5 6 7 8 9 10
Calcium - Ca	1 2 3 4 5 6 7 8 9 10
Potassium - K	1 2 3 4 5 6 7 8 9 10
Magnesium - Mg	1 2 3 4 5 6 7 8 9 10
Sodium - Na	1 2 3 4 5 6 7 8 9 10
Hardness - Ca, Mg	1 2 3 4 5 6 7 8 9 10
LHG - Low Level Mercury	
Mercury Low Level - Hg	1 2 3 4 5 6 7 8 9 10

GENERAL CHEMISTRY

GB	Total Cyanide - CN	1 2 3 4 5 6 7 8 9 10
GCN	Available Cyanide - CN (Amenable / Weak Acid Dissociable)	1 2 3 4 5 6 7 8 9 10
CA	Chlorophyll	1 2 3 4 5 6 7 8 9 10
GN	Ortho Phosphate - OP	1 2 3 4 5 6 7 8 9 10
GN	Nitrite - NO_2	1 2 3 4 5 6 7 8 9 10
GN	Nitrate - NO_3 (Calc.)	1 2 3 4 5 6 7 8 9 10
GN	Suspended Solids - SS	1 2 3 4 5 6 7 8 9 10
GN	Dissolved Solids - TDS	1 2 3 4 5 6 7 8 9 10
MN	Diss Solids - TDS (Calc.)	1 2 3 4 5 6 7 8 9 10
GN	Turbidity	1 2 3 4 5 6 7 8 9 10
MN	Total Alkalinity	1 2 3 4 5 6 7 8 9 10
MN	Bicarb/Carb Alkalinity (includes Total Alkalinity)	1 2 3 4 5 6 7 8 9 10
MN	Chloride - Cl	1 2 3 4 5 6 7 8 9 10
MN	Fluoride - F	1 2 3 4 5 6 7 8 9 10
MN	Sulfate - SO4	1 2 3 4 5 6 7 8 9 10
MN	Chromium 6 - Cr+6	1 2 3 4 5 6 7 8 9 10
MN	Conductivity	1 2 3 4 5 6 7 8 9 10
MN	pH	1 2 3 4 5 6 7 8 9 10
GA	Chem Oxyg Dem - COD	1 2 3 4 5 6 7 8 9 10
GA	Diss Org Carbon - DOC (FF) (Field - Filtered & Preserved)	1 2 3 4 5 6 7 8 9 10
GN	Diss Org Carbon - DOC (LF) (Lab - Filtered & Preserved)	1 2 3 4 5 6 7 8 9 10
GA	Total Org Carbon - TOC	1 2 3 4 5 6 7 8 9 10
GA	Ammonia - NH3	1 2 3 4 5 6 7 8 9 10
GA	Nitrate+Nitrite - NO3+NO2	1 2 3 4 5 6 7 8 9 10
GA	Kjeldahl Nitrogen - KN	1 2 3 4 5 6 7 8 9 10
GA	Total Phosphorus - TP	1 2 3 4 5 6 7 8 9 10

Chain of Custody

	Relinquished by	Received By	Date / Time
Print Name & Org.	KEVIN LUND DEQ	MARY MILLER DEQ	8-18-16 / 8:30 AM
Signature:			
Print Name & Org.	MARY MILLER DEQ	DAN HAMEL DEQ	8/18/16 / 09:20AM
Signature:			
Print Name & Org.	DAN HAMEL DEQ	Jordan Handley MDEQ	8/18/16 1606
Signature:			

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

16 September 2016

Work Order: 1608224

Price: $1,960.00

Dan Hamel
MDEQ-RRD-JACKSON
301 E. Louis Glick Highway
Jackson, MI 49201-1556

RE: GELMAN SCIENCES, INC

I certify that the analyses performed by the MDEQ Environmental Laboratory were conducted by methods approved by the U.S. Environmental Protection Agency and other appropriate regulatory agencies.

Sincerely,

George Krisztian
Laboratory Director

STATE OF MICHIGAN
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MDEQ-RRD-JACKSON
301 E. Louis Glick Highway
Jackson MI, 49201-1556

Project: GELMAN SCIENCES, INC
Site Code: 81000018
Project Manager: Dan Hamel

Reported:
09/16/2016

Analytical Report for Samples

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Qualifier
RL-17	1608224-01	Water	08/15/2016	08/17/2016	
RL-21	1608224-02	Water	08/15/2016	08/17/2016	
RL-19	1608224-03	Water	08/15/2016	08/17/2016	
RL-1	1608224-04	Water	08/16/2016	08/17/2016	
Dup-1	1608224-05	Water	08/16/2016	08/17/2016	
RL-4	1608224-06	Water	08/16/2016	08/17/2016	
RL-5	1608224-07	Water	08/16/2016	08/17/2016	
RL-6	1608224-08	Water	08/16/2016	08/17/2016	

Notes and Definitions

Y28	1,4-dioxane analysis is performed using selective ion monitoring (SIM). Results reported below 5 ug/L (aqueous) or 1000 ug/Kg (solids) are estimated.
X	Methods 8260 & 624 are used to analyze volatile organics that have boiling points below 200 ºC. 2-Methylnaphthalene & naphthalene have boiling points above 200 ºC and are better suited to analysis by methods 8270 & 625 as semivolatile organics.
A11	Result is estimated due to high initial verification standard criteria failure.
A09	Result is estimated due to high recovery of batch quality control.
A08	Result(s) and reporting limits(s) are estimated due to low recovery of batch QC.
A07	Result(s) and reporting limit(s) are estimated due to poor precision.
A06	Result is estimated due to high continuing calibration standard criteria failure.
A05	Result and reporting limit are estimated due to low continuing calibration standard criteria failure.
A04	Result is estimated due to high matrix spike recovery.
A03	Result(s) and reporting limit(s) are estimated due to low matrix spike recovery.
ND	Indicates compound analyzed for but not detected
RL	Reporting Limit
NA	Not Applicable

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TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-17

Lab ID: 1608224-01

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
96-18-4	1,2,3-Trichloropropane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
526-73-8	1,2,3-Trimethylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
591-78-6	2-Hexanone	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	X
67-64-1	2-Propanone (acetone)	ND	20	ug/L	1	08/19/16	B6H1905	8260	A05
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
107-13-1	Acrylonitrile	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
71-43-2	Benzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
108-86-1	Bromobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
74-97-5	Bromochloromethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-27-4	Bromodichloromethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-25-2	Bromoform	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
74-83-9	Bromomethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
75-15-0	Carbon disulfide	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
56-23-5	Carbon tetrachloride	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
108-90-7	Chlorobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-00-3	Chloroethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
67-66-3	Chloroform	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
74-87-3	Chloromethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
110-82-7	Cyclohexane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
124-48-1	Dibromochloromethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	

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TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-17

Lab ID: 1608224-01

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
74-95-3	Dibromomethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-71-8	Dichlorodifluoromethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
60-29-7	Diethyl ether	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
108-20-3	Diisopropyl Ether	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
100-41-4	Ethylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
637-92-3	Ethyltertiarybutylether	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
67-72-1	Hexachloroethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
98-82-8	Isopropylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
1330-20-7	m & p - Xylene	ND	2.0	ug/L	1	08/19/16	B6H1905	8260	
74-88-4	Methyl iodide	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	A05
75-09-2	Methylene chloride	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
1634-04-4	Methyltertiarybutylether	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
91-20-3	Naphthalene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	X
104-51-8	n-Butylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
103-65-1	n-Propylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
95-47-6	o-Xylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
99-87-6	p-Isopropyl toluene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
135-98-8	sec-Butylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
100-42-5	Styrene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
98-06-6	tert-Butylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-65-0	tertiary Butyl Alcohol	ND	50	ug/L	1	08/19/16	B6H1905	8260	
994-05-8	tertiaryAmylmethylether	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
127-18-4	Tetrachloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
109-99-9	Tetrahydrofuran	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
108-88-3	Toluene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
110-57-6	trans-1,4-Dichloro-2-butene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
79-01-6	Trichloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-01-4	Vinyl chloride	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
Surrogate: Bromofluorobenzene			*98.7 %*	*85-115*		*08/19/16*	B6H1905	*8260*	
Surrogate: Dibromofluoromethane			*102 %*	*82.7-115*		*08/19/16*	B6H1905	*8260*	
Surrogate: Toluene-d8			*101 %*	*85-115*		*08/19/16*	B6H1905	*8260*	

Lab Work Order # 1608224

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Client ID: RL-17

Lab ID: 1608224-01

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									**See note Y28**
123-91-1	1,4-dioxane	ND	1.0	ug/L	1	08/23/16	B6H2316	8260 Modified	

Lab Work Order # 1608224

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TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-21

Lab ID: 1608224-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
96-18-4	1,2,3-Trichloropropane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
526-73-8	1,2,3-Trimethylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
591-78-6	2-Hexanone	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	X
67-64-1	2-Propanone (acetone)	ND	20	ug/L	1	08/19/16	B6H1905	8260	A05
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
107-13-1	Acrylonitrile	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
71-43-2	Benzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
108-86-1	Bromobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
74-97-5	Bromochloromethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-27-4	Bromodichloromethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-25-2	Bromoform	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
74-83-9	Bromomethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
75-15-0	Carbon disulfide	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
56-23-5	Carbon tetrachloride	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
108-90-7	Chlorobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-00-3	Chloroethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
67-66-3	Chloroform	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
74-87-3	Chloromethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
110-82-7	Cyclohexane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
124-48-1	Dibromochloromethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-21

Lab ID: 1608224-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
74-95-3	Dibromomethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-71-8	Dichlorodifluoromethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
60-29-7	Diethyl ether	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
108-20-3	Diisopropyl Ether	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
100-41-4	Ethylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
637-92-3	Ethyltertiarybutylether	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
67-72-1	Hexachloroethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
98-82-8	Isopropylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
1330-20-7	m & p - Xylene	ND	2.0	ug/L	1	08/19/16	B6H1905	8260	
74-88-4	Methyl iodide	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	A05
75-09-2	Methylene chloride	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
1634-04-4	Methyltertiarybutylether	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
91-20-3	Naphthalene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	X
104-51-8	n-Butylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
103-65-1	n-Propylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
95-47-6	o-Xylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
99-87-6	p-Isopropyl toluene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
135-98-8	sec-Butylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
100-42-5	Styrene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
98-06-6	tert-Butylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-65-0	tertiary Butyl Alcohol	ND	50	ug/L	1	08/19/16	B6H1905	8260	
994-05-8	tertiaryAmylmethylether	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
127-18-4	Tetrachloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
109-99-9	Tetrahydrofuran	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
108-88-3	Toluene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
110-57-6	trans-1,4-Dichloro-2-butene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
79-01-6	Trichloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-01-4	Vinyl chloride	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
Surrogate: Bromofluorobenzene			*97.4 %*	*85-115*		*08/19/16*	B6H1905	*8260*	
Surrogate: Dibromofluoromethane			*101 %*	*82.7-115*		*08/19/16*	B6H1905	*8260*	
Surrogate: Toluene-d8			*102 %*	*85-115*		*08/19/16*	B6H1905	*8260*	

STATE OF MICHIGAN
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ENVIRONMENTAL LABORATORY

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Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-21

Lab ID: 1608224-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									**See note Y28**
123-91-1	1,4-dioxane	ND	1.0	ug/L	1	08/23/16	B6H2316	8260 Modified	

Lab Work Order # 1608224

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Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-19

Lab ID: 1608224-03

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
96-18-4	1,2,3-Trichloropropane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
526-73-8	1,2,3-Trimethylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
591-78-6	2-Hexanone	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	X
67-64-1	2-Propanone (acetone)	ND	20	ug/L	1	08/19/16	B6H1905	8260	A05
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
107-13-1	Acrylonitrile	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
71-43-2	Benzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
108-86-1	Bromobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
74-97-5	Bromochloromethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-27-4	Bromodichloromethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-25-2	Bromoform	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
74-83-9	Bromomethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
75-15-0	Carbon disulfide	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
56-23-5	Carbon tetrachloride	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
108-90-7	Chlorobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-00-3	Chloroethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
67-66-3	Chloroform	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
74-87-3	Chloromethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
110-82-7	Cyclohexane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
124-48-1	Dibromochloromethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	

STATE OF MICHIGAN
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ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-19

Lab ID: 1608224-03

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
74-95-3	Dibromomethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-71-8	Dichlorodifluoromethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
60-29-7	Diethyl ether	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
108-20-3	Diisopropyl Ether	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
100-41-4	Ethylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
637-92-3	Ethyltertiarybutylether	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
67-72-1	Hexachloroethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
98-82-8	Isopropylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
1330-20-7	m & p - Xylene	ND	2.0	ug/L	1	08/19/16	B6H1905	8260	
74-88-4	Methyl iodide	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	A05
75-09-2	Methylene chloride	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
1634-04-4	Methyltertiarybutylether	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
91-20-3	Naphthalene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	X
104-51-8	n-Butylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
103-65-1	n-Propylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
95-47-6	o-Xylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
99-87-6	p-Isopropyl toluene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
135-98-8	sec-Butylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
100-42-5	Styrene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
98-06-6	tert-Butylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-65-0	tertiary Butyl Alcohol	ND	50	ug/L	1	08/19/16	B6H1905	8260	
994-05-8	tertiaryAmylmethylether	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
127-18-4	Tetrachloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
109-99-9	Tetrahydrofuran	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
108-88-3	Toluene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
110-57-6	trans-1,4-Dichloro-2-butene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
79-01-6	Trichloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-01-4	Vinyl chloride	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
Surrogate: Bromofluorobenzene			*96.9 %*	*85-115*		*08/19/16*	B6H1905	*8260*	
Surrogate: Dibromofluoromethane			*101 %*	*82.7-115*		*08/19/16*	B6H1905	*8260*	
Surrogate: Toluene-d8			*102 %*	*85-115*		*08/19/16*	B6H1905	*8260*	

STATE OF MICHIGAN
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ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-19

Lab ID: 1608224-03

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									**See note Y28**
123-91-1	1,4-dioxane	ND	1.0	ug/L	1	08/23/16	B6H2316	8260 Modified	

Lab Work Order # 1608224

STATE OF MICHIGAN
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P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-1

Lab ID: 1608224-04

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
96-18-4	1,2,3-Trichloropropane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
526-73-8	1,2,3-Trimethylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
591-78-6	2-Hexanone	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	X
67-64-1	2-Propanone (acetone)	ND	20	ug/L	1	08/19/16	B6H1905	8260	A05
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
107-13-1	Acrylonitrile	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
71-43-2	Benzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
108-86-1	Bromobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
74-97-5	Bromochloromethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-27-4	Bromodichloromethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-25-2	Bromoform	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
74-83-9	Bromomethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
75-15-0	Carbon disulfide	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
56-23-5	Carbon tetrachloride	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
108-90-7	Chlorobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-00-3	Chloroethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
67-66-3	Chloroform	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
74-87-3	Chloromethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
110-82-7	Cyclohexane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
124-48-1	Dibromochloromethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	

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ENVIRONMENTAL LABORATORY

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Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-1

Lab ID: 1608224-04

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
74-95-3	Dibromomethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-71-8	Dichlorodifluoromethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
60-29-7	Diethyl ether	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
108-20-3	Diisopropyl Ether	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
100-41-4	Ethylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
637-92-3	Ethyltertiarybutylether	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
67-72-1	Hexachloroethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
98-82-8	Isopropylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
1330-20-7	m & p - Xylene	ND	2.0	ug/L	1	08/19/16	B6H1905	8260	
74-88-4	Methyl iodide	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	A05
75-09-2	Methylene chloride	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
1634-04-4	Methyltertiarybutylether	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
91-20-3	Naphthalene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	X
104-51-8	n-Butylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
103-65-1	n-Propylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
95-47-6	o-Xylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
99-87-6	p-Isopropyl toluene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
135-98-8	sec-Butylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
100-42-5	Styrene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
98-06-6	tert-Butylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-65-0	tertiary Butyl Alcohol	ND	50	ug/L	1	08/19/16	B6H1905	8260	
994-05-8	tertiaryAmylmethylether	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
127-18-4	Tetrachloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
109-99-9	Tetrahydrofuran	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
108-88-3	Toluene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
110-57-6	trans-1,4-Dichloro-2-butene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
79-01-6	Trichloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-01-4	Vinyl chloride	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
Surrogate: Bromofluorobenzene			*98.9 %*	*85-115*		*08/19/16*	B6H1905	*8260*	
Surrogate: Dibromofluoromethane			*103 %*	*82.7-115*		*08/19/16*	B6H1905	*8260*	
Surrogate: Toluene-d8			*104 %*	*85-115*		*08/19/16*	B6H1905	*8260*	

STATE OF MICHIGAN
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MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-1

Lab ID: 1608224-04

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									**See note Y28**
123-91-1	1,4-dioxane	ND	1.0	ug/L	1	08/23/16	B6H2316	8260 Modified	

Lab Work Order # 1608224

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Client ID: Dup-1

Lab ID: 1608224-05

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
96-18-4	1,2,3-Trichloropropane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
526-73-8	1,2,3-Trimethylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
591-78-6	2-Hexanone	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	X
67-64-1	2-Propanone (acetone)	ND	20	ug/L	1	08/19/16	B6H1905	8260	A05
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
107-13-1	Acrylonitrile	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
71-43-2	Benzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
108-86-1	Bromobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
74-97-5	Bromochloromethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-27-4	Bromodichloromethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-25-2	Bromoform	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
74-83-9	Bromomethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
75-15-0	Carbon disulfide	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
56-23-5	Carbon tetrachloride	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
108-90-7	Chlorobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-00-3	Chloroethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
67-66-3	Chloroform	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
74-87-3	Chloromethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
110-82-7	Cyclohexane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
124-48-1	Dibromochloromethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	

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ENVIRONMENTAL LABORATORY

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TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: Dup-1

Lab ID: 1608224-05

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
74-95-3	Dibromomethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-71-8	Dichlorodifluoromethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
60-29-7	Diethyl ether	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
108-20-3	Diisopropyl Ether	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
100-41-4	Ethylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
637-92-3	Ethyltertiarybutylether	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
67-72-1	Hexachloroethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
98-82-8	Isopropylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
1330-20-7	m & p - Xylene	ND	2.0	ug/L	1	08/19/16	B6H1905	8260	
74-88-4	Methyl iodide	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	A05
75-09-2	Methylene chloride	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
1634-04-4	Methyltertiarybutylether	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
91-20-3	Naphthalene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	X
104-51-8	n-Butylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
103-65-1	n-Propylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
95-47-6	o-Xylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
99-87-6	p-Isopropyl toluene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
135-98-8	sec-Butylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
100-42-5	Styrene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
98-06-6	tert-Butylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-65-0	tertiary Butyl Alcohol	ND	50	ug/L	1	08/19/16	B6H1905	8260	
994-05-8	tertiaryAmylmethylether	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
127-18-4	Tetrachloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
109-99-9	Tetrahydrofuran	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
108-88-3	Toluene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
110-57-6	trans-1,4-Dichloro-2-butene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
79-01-6	Trichloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-01-4	Vinyl chloride	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
Surrogate: Bromofluorobenzene			*100 %*	*85-115*		*08/19/16*	B6H1905	*8260*	
Surrogate: Dibromofluoromethane			*102 %*	*82.7-115*		*08/19/16*	B6H1905	*8260*	
Surrogate: Toluene-d8			*104 %*	*85-115*		*08/19/16*	B6H1905	*8260*	

STATE OF MICHIGAN
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ENVIRONMENTAL LABORATORY

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TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: Dup-1

Lab ID: 1608224-05

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									**See note Y28**
123-91-1	1,4-dioxane	ND	1.0	ug/L	1	08/23/16	B6H2316	8260 Modified	

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TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-4

Lab ID: 1608224-06

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
96-18-4	1,2,3-Trichloropropane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
526-73-8	1,2,3-Trimethylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
591-78-6	2-Hexanone	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	X
67-64-1	2-Propanone (acetone)	ND	20	ug/L	1	08/19/16	B6H1905	8260	A05
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
107-13-1	Acrylonitrile	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
71-43-2	Benzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
108-86-1	Bromobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
74-97-5	Bromochloromethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-27-4	Bromodichloromethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-25-2	Bromoform	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
74-83-9	Bromomethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
75-15-0	Carbon disulfide	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
56-23-5	Carbon tetrachloride	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
108-90-7	Chlorobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-00-3	Chloroethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
67-66-3	Chloroform	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
74-87-3	Chloromethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
110-82-7	Cyclohexane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
124-48-1	Dibromochloromethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	

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ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-4

Lab ID: 1608224-06

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
74-95-3	Dibromomethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-71-8	Dichlorodifluoromethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
60-29-7	Diethyl ether	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
108-20-3	Diisopropyl Ether	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
100-41-4	Ethylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
637-92-3	Ethyltertiarybutylether	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
67-72-1	Hexachloroethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
98-82-8	Isopropylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
1330-20-7	m & p - Xylene	ND	2.0	ug/L	1	08/19/16	B6H1905	8260	
74-88-4	Methyl iodide	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	A05
75-09-2	Methylene chloride	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
1634-04-4	Methyltertiarybutylether	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
91-20-3	Naphthalene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	X
104-51-8	n-Butylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
103-65-1	n-Propylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
95-47-6	o-Xylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
99-87-6	p-Isopropyl toluene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
135-98-8	sec-Butylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
100-42-5	Styrene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
98-06-6	tert-Butylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-65-0	tertiary Butyl Alcohol	ND	50	ug/L	1	08/19/16	B6H1905	8260	
994-05-8	tertiaryAmylmethylether	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
127-18-4	Tetrachloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
109-99-9	Tetrahydrofuran	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
108-88-3	Toluene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
110-57-6	trans-1,4-Dichloro-2-butene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
79-01-6	Trichloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-01-4	Vinyl chloride	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
Surrogate: Bromofluorobenzene			*99.7 %*	*85-115*		*08/19/16*	B6H1905	*8260*	
Surrogate: Dibromofluoromethane			*102 %*	*82.7-115*		*08/19/16*	B6H1905	*8260*	
Surrogate: Toluene-d8			*105 %*	*85-115*		*08/19/16*	B6H1905	*8260*	

STATE OF MICHIGAN
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MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-4

Lab ID: 1608224-06

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									**See note Y28**
123-91-1	1,4-dioxane	ND	1.0	ug/L	1	08/23/16	B6H2316	8260 Modified	

Lab Work Order # 1608224

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P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-5

Lab ID: 1608224-07

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
96-18-4	1,2,3-Trichloropropane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
526-73-8	1,2,3-Trimethylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
591-78-6	2-Hexanone	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	X
67-64-1	2-Propanone (acetone)	ND	20	ug/L	1	08/19/16	B6H1905	8260	A05
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
107-13-1	Acrylonitrile	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
71-43-2	Benzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
108-86-1	Bromobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
74-97-5	Bromochloromethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-27-4	Bromodichloromethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-25-2	Bromoform	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
74-83-9	Bromomethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
75-15-0	Carbon disulfide	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
56-23-5	Carbon tetrachloride	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
108-90-7	Chlorobenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-00-3	Chloroethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
67-66-3	Chloroform	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
74-87-3	Chloromethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
110-82-7	Cyclohexane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
124-48-1	Dibromochloromethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	

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ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-5

Lab ID: 1608224-07

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
74-95-3	Dibromomethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-71-8	Dichlorodifluoromethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
60-29-7	Diethyl ether	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
108-20-3	Diisopropyl Ether	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
100-41-4	Ethylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
637-92-3	Ethyltertiarybutylether	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
67-72-1	Hexachloroethane	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
98-82-8	Isopropylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
1330-20-7	m & p - Xylene	ND	2.0	ug/L	1	08/19/16	B6H1905	8260	
74-88-4	Methyl iodide	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	A05
75-09-2	Methylene chloride	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
1634-04-4	Methyltertiarybutylether	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
91-20-3	Naphthalene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	X
104-51-8	n-Butylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
103-65-1	n-Propylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
95-47-6	o-Xylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
99-87-6	p-Isopropyl toluene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
135-98-8	sec-Butylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
100-42-5	Styrene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
98-06-6	tert-Butylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-65-0	tertiary Butyl Alcohol	ND	50	ug/L	1	08/19/16	B6H1905	8260	
994-05-8	tertiaryAmylmethylether	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
127-18-4	Tetrachloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
109-99-9	Tetrahydrofuran	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
108-88-3	Toluene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
110-57-6	trans-1,4-Dichloro-2-butene	ND	5.0	ug/L	1	08/19/16	B6H1905	8260	
79-01-6	Trichloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
75-01-4	Vinyl chloride	ND	1.0	ug/L	1	08/19/16	B6H1905	8260	
Surrogate: Bromofluorobenzene			*101 %*	*85-115*		*08/19/16*	B6H1905	*8260*	
Surrogate: Dibromofluoromethane			*103 %*	*82.7-115*		*08/19/16*	B6H1905	*8260*	
Surrogate: Toluene-d8			*104 %*	*85-115*		*08/19/16*	B6H1905	*8260*	

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ENVIRONMENTAL LABORATORY

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TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-5

Lab ID: 1608224-07

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									**See note Y28**
123-91-1	1,4-dioxane	ND	1.0	ug/L	1	08/23/16	B6H2316	8260 Modified	

Lab Work Order # 1608224

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P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-6

Lab ID: 1608224-08

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/L	1	08/19/16	B6H1904	8260	
96-18-4	1,2,3-Trichloropropane	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
526-73-8	1,2,3-Trimethylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/L	1	08/19/16	B6H1904	8260	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	1	08/19/16	B6H1904	8260	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/L	1	08/19/16	B6H1904	8260	
591-78-6	2-Hexanone	ND	5.0	ug/L	1	08/19/16	B6H1904	8260	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/L	1	08/19/16	B6H1904	8260	X
67-64-1	2-Propanone (acetone)	ND	20	ug/L	1	08/19/16	B6H1904	8260	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	1	08/19/16	B6H1904	8260	
107-13-1	Acrylonitrile	ND	5.0	ug/L	1	08/19/16	B6H1904	8260	
71-43-2	Benzene	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
108-86-1	Bromobenzene	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
74-97-5	Bromochloromethane	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
75-27-4	Bromodichloromethane	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
75-25-2	Bromoform	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
74-83-9	Bromomethane	ND	5.0	ug/L	1	08/19/16	B6H1904	8260	A05, A08
75-15-0	Carbon disulfide	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
56-23-5	Carbon tetrachloride	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
108-90-7	Chlorobenzene	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
75-00-3	Chloroethane	ND	5.0	ug/L	1	08/19/16	B6H1904	8260	
67-66-3	Chloroform	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
74-87-3	Chloromethane	ND	5.0	ug/L	1	08/19/16	B6H1904	8260	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
110-82-7	Cyclohexane	ND	5.0	ug/L	1	08/19/16	B6H1904	8260	
124-48-1	Dibromochloromethane	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	

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ENVIRONMENTAL LABORATORY

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Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-6

Lab ID: 1608224-08

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
74-95-3	Dibromomethane	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
75-71-8	Dichlorodifluoromethane	ND	5.0	ug/L	1	08/19/16	B6H1904	8260	
60-29-7	Diethyl ether	ND	5.0	ug/L	1	08/19/16	B6H1904	8260	
108-20-3	Diisopropyl Ether	ND	5.0	ug/L	1	08/19/16	B6H1904	8260	
100-41-4	Ethylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
637-92-3	Ethyltertiarybutylether	ND	5.0	ug/L	1	08/19/16	B6H1904	8260	
67-72-1	Hexachloroethane	ND	5.0	ug/L	1	08/19/16	B6H1904	8260	
98-82-8	Isopropylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
1330-20-7	m & p - Xylene	ND	2.0	ug/L	1	08/19/16	B6H1904	8260	
74-88-4	Methyl iodide	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	A07
75-09-2	Methylene chloride	ND	5.0	ug/L	1	08/19/16	B6H1904	8260	
1634-04-4	Methyltertiarybutylether	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
91-20-3	Naphthalene	ND	5.0	ug/L	1	08/19/16	B6H1904	8260	X
104-51-8	n-Butylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
103-65-1	n-Propylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
95-47-6	o-Xylene	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
99-87-6	p-Isopropyl toluene	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
135-98-8	sec-Butylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
100-42-5	Styrene	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
98-06-6	tert-Butylbenzene	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
75-65-0	tertiary Butyl Alcohol	ND	50	ug/L	1	08/19/16	B6H1904	8260	
994-05-8	tertiaryAmylmethylether	ND	5.0	ug/L	1	08/19/16	B6H1904	8260	
127-18-4	Tetrachloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
109-99-9	Tetrahydrofuran	ND	5.0	ug/L	1	08/19/16	B6H1904	8260	
108-88-3	Toluene	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
110-57-6	trans-1,4-Dichloro-2-butene	ND	5.0	ug/L	1	08/19/16	B6H1904	8260	
79-01-6	Trichloroethylene	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
75-01-4	Vinyl chloride	ND	1.0	ug/L	1	08/19/16	B6H1904	8260	
Surrogate: Bromofluorobenzene			*108 %*	*85-115*		*08/19/16*	B6H1904	*8260*	
Surrogate: Dibromofluoromethane			*105 %*	*82.7-115*		*08/19/16*	B6H1904	*8260*	
Surrogate: Toluene-d8			*102 %*	*85-115*		*08/19/16*	B6H1904	*8260*	

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Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: RL-6

Lab ID: 1608224-08

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									**See note Y28**
123-91-1	1,4-dioxane	ND	1.0	ug/L	1	08/23/16	B6H2316	8260 Modified	

Lab Work Order # 1608224

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B6H1904 - Method: 5030				**Prepared: 08/19/2016**							
Blank (B6H1904-BLK1)											
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L							08/19/2016	
1,1,1-Trichloroethane	ND	1.0	ug/L							08/19/2016	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L							08/19/2016	
1,1,2-Trichloroethane	ND	1.0	ug/L							08/19/2016	
1,1-Dichloroethane	ND	1.0	ug/L							08/19/2016	
1,1-Dichloroethylene	ND	1.0	ug/L							08/19/2016	
1,2,3-Trichlorobenzene	ND	5.0	ug/L							08/19/2016	
1,2,3-Trichloropropane	ND	1.0	ug/L							08/19/2016	
1,2,3-Trimethylbenzene	ND	1.0	ug/L							08/19/2016	
1,2,4-Trichlorobenzene	ND	5.0	ug/L							08/19/2016	
1,2,4-Trimethylbenzene	ND	1.0	ug/L							08/19/2016	
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L							08/19/2016	
1,2-Dibromoethane	ND	1.0	ug/L							08/19/2016	
1,2-Dichlorobenzene	ND	1.0	ug/L							08/19/2016	
1,2-Dichloroethane	ND	1.0	ug/L							08/19/2016	
1,2-Dichloropropane	ND	1.0	ug/L							08/19/2016	
1,3,5-Trimethylbenzene	ND	1.0	ug/L							08/19/2016	
1,3-Dichlorobenzene	ND	1.0	ug/L							08/19/2016	
1,4-Dichlorobenzene	ND	1.0	ug/L							08/19/2016	
2-Butanone (MEK)	ND	5.0	ug/L							08/19/2016	
2-Hexanone	ND	5.0	ug/L							08/19/2016	
2-Methylnaphthalene	ND	5.0	ug/L							08/19/2016	X
2-Propanone (acetone)	ND	20	ug/L							08/19/2016	
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L							08/19/2016	
Acrylonitrile	ND	5.0	ug/L							08/19/2016	
Benzene	ND	1.0	ug/L							08/19/2016	
Bromobenzene	ND	1.0	ug/L							08/19/2016	
Bromochloromethane	ND	1.0	ug/L							08/19/2016	
Bromodichloromethane	ND	1.0	ug/L							08/19/2016	
Bromoform	ND	1.0	ug/L							08/19/2016	
Bromomethane	ND	5.0	ug/L							08/19/2016	A05, A08
Carbon disulfide	ND	1.0	ug/L							08/19/2016	
Carbon tetrachloride	ND	1.0	ug/L							08/19/2016	
Chlorobenzene	ND	1.0	ug/L							08/19/2016	
Chloroethane	ND	5.0	ug/L							08/19/2016	
Chloroform	ND	1.0	ug/L							08/19/2016	
Chloromethane	ND	5.0	ug/L							08/19/2016	
cis-1,2-Dichloroethylene	ND	1.0	ug/L							08/19/2016	
cis-1,3-Dichloropropylene	ND	1.0	ug/L							08/19/2016	
Cyclohexane	ND	5.0	ug/L							08/19/2016	
Dibromochloromethane	ND	1.0	ug/L							08/19/2016	
Dibromomethane	ND	1.0	ug/L							08/19/2016	
Dichlorodifluoromethane	ND	5.0	ug/L							08/19/2016	
Diethyl ether	ND	5.0	ug/L							08/19/2016	
Diisopropyl Ether	ND	5.0	ug/L							08/19/2016	
Ethylbenzene	ND	1.0	ug/L							08/19/2016	
Ethyltertiarybutylether	ND	5.0	ug/L							08/19/2016	
Hexachloroethane	ND	5.0	ug/L							08/19/2016	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B6H1904 - Method: 5030				**Prepared: 08/19/2016**							
Blank (B6H1904-BLK1)											
Isopropylbenzene	ND	1.0	ug/L							08/19/2016	
m & p - Xylene	ND	2.0	ug/L							08/19/2016	
Methyl iodide	ND	1.0	ug/L							08/19/2016	A07
Methylene chloride	ND	5.0	ug/L							08/19/2016	
Methyltertiarybutylether	ND	1.0	ug/L							08/19/2016	
Naphthalene	ND	5.0	ug/L							08/19/2016	X
n-Butylbenzene	ND	1.0	ug/L							08/19/2016	
n-Propylbenzene	ND	1.0	ug/L							08/19/2016	
o-Xylene	ND	1.0	ug/L							08/19/2016	
p-Isopropyl toluene	ND	1.0	ug/L							08/19/2016	
sec-Butylbenzene	ND	1.0	ug/L							08/19/2016	
Styrene	ND	1.0	ug/L							08/19/2016	
tert-Butylbenzene	ND	1.0	ug/L							08/19/2016	
tertiary Butyl Alcohol	ND	50	ug/L							08/19/2016	
tertiaryAmylmethylether	ND	5.0	ug/L							08/19/2016	
Tetrachloroethylene	ND	1.0	ug/L							08/19/2016	
Tetrahydrofuran	ND	5.0	ug/L							08/19/2016	
Toluene	ND	1.0	ug/L							08/19/2016	
trans-1,2-Dichloroethylene	ND	1.0	ug/L							08/19/2016	
trans-1,3-Dichloropropylene	ND	1.0	ug/L							08/19/2016	
trans-1,4-Dichloro-2-butene	ND	5.0	ug/L							08/19/2016	
Trichloroethylene	ND	1.0	ug/L							08/19/2016	
Trichlorofluoromethane	ND	1.0	ug/L							08/19/2016	
Vinyl chloride	ND	1.0	ug/L							08/19/2016	
Surrogate: Bromofluorobenzene	*54.6*		ug/L	*50.00*		*109*	*85-115*			08/19/2016	
Surrogate: Dibromofluoromethane	*49.7*		ug/L	*50.00*		*99.3*	*82.7-115*			08/19/2016	
Surrogate: Toluene-d8	*51.4*		ug/L	*50.00*		*103*	*85-115*			08/19/2016	
LCS (B6H1904-BS1)											
1,1,1,2-Tetrachloroethane	44.3	1.0	ug/L	50.00		88.7	70-130			08/19/2016	
1,1,1-Trichloroethane	52.5	1.0	ug/L	50.00		105	70-130			08/19/2016	
1,1,2,2-Tetrachloroethane	50.5	1.0	ug/L	50.00		101	70-130			08/19/2016	
1,1,2-Trichloroethane	44.9	1.0	ug/L	50.00		89.9	70-130			08/19/2016	
1,1-Dichloroethane	47.2	1.0	ug/L	50.00		94.3	70-130			08/19/2016	
1,1-Dichloroethylene	46.3	1.0	ug/L	50.00		92.5	70-130			08/19/2016	
1,2,3-Trichlorobenzene	41.5	5.0	ug/L	50.00		82.9	70-130			08/19/2016	
1,2,3-Trichloropropane	42.9	1.0	ug/L	50.00		85.9	70-130			08/19/2016	
1,2,3-Trimethylbenzene	48.4	1.0	ug/L	50.00		96.8	70-130			08/19/2016	
1,2,4-Trichlorobenzene	43.2	5.0	ug/L	50.00		86.4	70-130			08/19/2016	
1,2,4-Trimethylbenzene	49.4	1.0	ug/L	50.00		98.8	70-130			08/19/2016	
1,2-Dibromo-3-chloropropane	40.1	5.0	ug/L	50.00		80.2	70-130			08/19/2016	
1,2-Dibromoethane	52.2	1.0	ug/L	50.00		104	70-130			08/19/2016	
1,2-Dichlorobenzene	45.8	1.0	ug/L	50.00		91.5	70-130			08/19/2016	
1,2-Dichloroethane	47.0	1.0	ug/L	50.00		94.0	70-130			08/19/2016	
1,2-Dichloropropane	44.8	1.0	ug/L	50.00		89.6	70-130			08/19/2016	
1,3,5-Trimethylbenzene	50.2	1.0	ug/L	50.00		100	70-130			08/19/2016	
1,3-Dichlorobenzene	45.2	1.0	ug/L	50.00		90.5	70-130			08/19/2016	
1,4-Dichlorobenzene	44.1	1.0	ug/L	50.00		88.2	70-130			08/19/2016	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B6H1904 - Method: 5030				**Prepared: 08/19/2016**							
LCS (B6H1904-BS1)											
2-Butanone (MEK)	44.3	5.0	ug/L	50.00		88.5	70-130			08/19/2016	
2-Hexanone	39.9	5.0	ug/L	50.00		79.9	70-130			08/19/2016	
2-Methylnaphthalene	40.5	5.0	ug/L	50.00		81.0	70-130			08/19/2016	X
2-Propanone (acetone)	38.7	20	ug/L	50.00		77.4	70-130			08/19/2016	
4-Methyl-2-pentanone (MIBK)	41.4	5.0	ug/L	50.00		82.8	70-130			08/19/2016	
Acrylonitrile	43.0	5.0	ug/L	50.00		86.0	70-130			08/19/2016	
Benzene	47.1	1.0	ug/L	50.00		94.1	70-130			08/19/2016	
Bromobenzene	47.4	1.0	ug/L	50.00		94.9	70-130			08/19/2016	
Bromochloromethane	43.6	1.0	ug/L	50.00		87.2	70-130			08/19/2016	
Bromodichloromethane	48.0	1.0	ug/L	50.00		96.0	70-130			08/19/2016	
Bromoform	41.7	1.0	ug/L	50.00		83.4	70-130			08/19/2016	
Bromomethane	30.9	5.0	ug/L	50.00		61.8	70-130			08/19/2016	A05, A08
Carbon disulfide	50.9	1.0	ug/L	50.00		102	70-130			08/19/2016	
Carbon tetrachloride	52.6	1.0	ug/L	50.00		105	70-130			08/19/2016	
Chlorobenzene	45.8	1.0	ug/L	50.00		91.5	70-130			08/19/2016	
Chloroethane	51.5	5.0	ug/L	50.00		103	70-130			08/19/2016	
Chloroform	46.9	1.0	ug/L	50.00		93.9	70-130			08/19/2016	
Chloromethane	46.4	5.0	ug/L	50.00		92.7	70-130			08/19/2016	A11
cis-1,2-Dichloroethylene	47.6	1.0	ug/L	50.00		95.1	70-130			08/19/2016	
cis-1,3-Dichloropropylene	47.5	1.0	ug/L	50.00		95.0	70-130			08/19/2016	
Cyclohexane	45.7	5.0	ug/L	50.00		91.4	70-130			08/19/2016	
Dibromochloromethane	42.4	1.0	ug/L	50.00		84.7	70-130			08/19/2016	
Dibromomethane	44.3	1.0	ug/L	50.00		88.7	70-130			08/19/2016	
Dichlorodifluoromethane	64.7	5.0	ug/L	50.00		129	70-130			08/19/2016	A06, A11
Diethyl ether	47.9	5.0	ug/L	50.00		95.8	70-130			08/19/2016	
Diisopropyl Ether	50.4	5.0	ug/L	50.00		101	70-130			08/19/2016	
Ethylbenzene	49.0	1.0	ug/L	50.00		97.9	70-130			08/19/2016	
Ethyltertiarybutylether	57.0	5.0	ug/L	50.00		114	70-130			08/19/2016	
Hexachloroethane	54.6	5.0	ug/L	50.00		109	70-130			08/19/2016	
Isopropylbenzene	52.8	1.0	ug/L	50.00		106	70-130			08/19/2016	
m & p - Xylene	99.0	2.0	ug/L	100.0		99.0	70-130			08/19/2016	
Methyl iodide	41.0	1.0	ug/L	50.00		82.0	70-130			08/19/2016	A07
Methylene chloride	47.9	5.0	ug/L	50.00		95.8	70-130			08/19/2016	
Methyltertiarybutylether	50.8	1.0	ug/L	50.00		102	70-130			08/19/2016	
Naphthalene	45.6	5.0	ug/L	50.00		91.2	70-130			08/19/2016	X
n-Butylbenzene	50.1	1.0	ug/L	50.00		100	70-130			08/19/2016	
n-Propylbenzene	52.9	1.0	ug/L	50.00		106	70-130			08/19/2016	
o-Xylene	50.3	1.0	ug/L	50.00		101	70-130			08/19/2016	
p-Isopropyl toluene	49.3	1.0	ug/L	50.00		98.6	70-130			08/19/2016	
sec-Butylbenzene	51.0	1.0	ug/L	50.00		102	70-130			08/19/2016	
Styrene	47.5	1.0	ug/L	50.00		94.9	70-130			08/19/2016	
tert-Butylbenzene	49.2	1.0	ug/L	50.00		98.3	70-130			08/19/2016	
tertiary Butyl Alcohol	220	50	ug/L	250.0		87.8	70-130			08/19/2016	
tertiaryAmylmethylether	51.4	5.0	ug/L	50.00		103	70-130			08/19/2016	
Tetrachloroethylene	40.3	1.0	ug/L	50.00		80.6	70-130			08/19/2016	
Tetrahydrofuran	41.8	5.0	ug/L	50.00		83.5	70-130			08/19/2016	
Toluene	47.7	1.0	ug/L	50.00		95.5	70-130			08/19/2016	
trans-1,2-Dichloroethylene	48.3	1.0	ug/L	50.00		96.6	70-130			08/19/2016	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B6H1904 - Method: 5030				**Prepared: 08/19/2016**							
LCS (B6H1904-BS1)											
trans-1,3-Dichloropropylene	52.2	1.0	ug/L	50.00		104	70-130			08/19/2016	
trans-1,4-Dichloro-2-butene	38.4	5.0	ug/L	50.00		76.9	70-130			08/19/2016	
Trichloroethylene	42.0	1.0	ug/L	50.00		84.0	70-130			08/19/2016	
Trichlorofluoromethane	48.1	1.0	ug/L	50.00		96.2	70-130			08/19/2016	
Vinyl chloride	54.2	1.0	ug/L	50.00		108	70-130			08/19/2016	
Surrogate: Bromofluorobenzene	*53.2*		ug/L	*50.00*		*106*	*85-115*			08/19/2016	
Surrogate: Dibromofluoromethane	*51.6*		ug/L	*50.00*		*103*	*82.7-115*			08/19/2016	
Surrogate: Toluene-d8	*51.5*		ug/L	*50.00*		*103*	*85-115*			08/19/2016	
Matrix Spike (B6H1904-MS1)	**Source: 1608237-09**										
1,1,1,2-Tetrachloroethane	45.6	1.0	ug/L	50.00	ND	91.2	70-130			08/20/2016	
1,1,1-Trichloroethane	55.1	1.0	ug/L	50.00	ND	110	70-130			08/20/2016	
1,1,2,2-Tetrachloroethane	54.6	1.0	ug/L	50.00	ND	109	70-130			08/20/2016	
1,1,2-Trichloroethane	48.1	1.0	ug/L	50.00	ND	96.2	70-130			08/20/2016	
1,1-Dichloroethane	49.5	1.0	ug/L	50.00	ND	98.9	70-130			08/20/2016	
1,1-Dichloroethylene	50.1	1.0	ug/L	50.00	ND	100	70-130			08/20/2016	
1,2,3-Trichlorobenzene	42.2	5.0	ug/L	50.00	ND	84.4	70-130			08/20/2016	
1,2,3-Trichloropropane	46.2	1.0	ug/L	50.00	ND	92.3	70-130			08/20/2016	
1,2,3-Trimethylbenzene	52.3	1.0	ug/L	50.00	ND	105	70-130			08/20/2016	
1,2,4-Trichlorobenzene	43.0	5.0	ug/L	50.00	ND	86.1	70-130			08/20/2016	
1,2,4-Trimethylbenzene	53.2	1.0	ug/L	50.00	ND	106	70-130			08/20/2016	
1,2-Dibromo-3-chloropropane	39.2	5.0	ug/L	50.00	ND	78.4	70-130			08/20/2016	
1,2-Dibromoethane	52.6	1.0	ug/L	50.00	ND	105	70-130			08/20/2016	
1,2-Dichlorobenzene	49.1	1.0	ug/L	50.00	ND	98.1	70-130			08/20/2016	
1,2-Dichloroethane	50.5	1.0	ug/L	50.00	ND	101	70-130			08/20/2016	
1,2-Dichloropropane	50.6	1.0	ug/L	50.00	ND	101	70-130			08/20/2016	
1,3,5-Trimethylbenzene	54.8	1.0	ug/L	50.00	ND	110	70-130			08/20/2016	
1,3-Dichlorobenzene	47.8	1.0	ug/L	50.00	ND	95.7	70-130			08/20/2016	
1,4-Dichlorobenzene	46.5	1.0	ug/L	50.00	ND	93.0	70-130			08/20/2016	
2-Butanone (MEK)	45.1	5.0	ug/L	50.00	ND	90.2	70-130			08/20/2016	
2-Hexanone	43.0	5.0	ug/L	50.00	ND	86.0	70-130			08/20/2016	
2-Methylnaphthalene	33.7	5.0	ug/L	50.00	ND	67.4	70-130			08/20/2016	A03, X
2-Propanone (acetone)	42.4	20	ug/L	50.00	ND	84.7	70-130			08/20/2016	
4-Methyl-2-pentanone (MIBK)	43.8	5.0	ug/L	50.00	ND	87.5	70-130			08/20/2016	
Acrylonitrile	43.1	5.0	ug/L	50.00	ND	86.2	70-130			08/20/2016	
Benzene	51.7	1.0	ug/L	50.00	ND	103	70-130			08/20/2016	
Bromobenzene	51.7	1.0	ug/L	50.00	ND	103	70-130			08/20/2016	
Bromochloromethane	45.3	1.0	ug/L	50.00	ND	90.5	70-130			08/20/2016	
Bromodichloromethane	52.2	1.0	ug/L	50.00	ND	104	70-130			08/20/2016	
Bromoform	41.5	1.0	ug/L	50.00	ND	83.1	70-130			08/20/2016	
Bromomethane	22.1	5.0	ug/L	50.00	ND	44.2	70-130			08/20/2016	A03, A05
Carbon disulfide	55.0	1.0	ug/L	50.00	ND	110	70-130			08/20/2016	
Carbon tetrachloride	54.0	1.0	ug/L	50.00	ND	108	70-130			08/20/2016	
Chlorobenzene	48.5	1.0	ug/L	50.00	ND	96.9	70-130			08/20/2016	
Chloroethane	56.3	5.0	ug/L	50.00	ND	113	70-130			08/20/2016	
Chloroform	51.4	1.0	ug/L	50.00	ND	103	70-130			08/20/2016	
Chloromethane	24.6	5.0	ug/L	50.00	ND	49.2	70-130			08/20/2016	A03, A11
cis-1,2-Dichloroethylene	51.9	1.0	ug/L	50.00	ND	104	70-130			08/20/2016	

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P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B6H1904 - Method: 5030				**Prepared: 08/20/2016**							
Matrix Spike (B6H1904-MS1)	**Source: 1608237-09**										
cis-1,3-Dichloropropylene	49.4	1.0	ug/L	50.00	ND	98.7	70-130			08/20/2016	
Cyclohexane	50.6	5.0	ug/L	50.00	ND	101	70-130			08/20/2016	
Dibromochloromethane	43.1	1.0	ug/L	50.00	ND	86.1	70-130			08/20/2016	
Dibromomethane	49.8	1.0	ug/L	50.00	ND	99.6	70-130			08/20/2016	
Dichlorodifluoromethane	69.7	5.0	ug/L	50.00	ND	139	70-130			08/20/2016	A04, A06, A11
Diethyl ether	50.8	5.0	ug/L	50.00	ND	102	70-130			08/20/2016	
Diisopropyl Ether	54.5	5.0	ug/L	50.00	ND	109	70-130			08/20/2016	
Ethylbenzene	51.8	1.0	ug/L	50.00	ND	104	70-130			08/20/2016	
Ethyltertiarybutylether	56.7	5.0	ug/L	50.00	ND	113	70-130			08/20/2016	
Hexachloroethane	54.6	5.0	ug/L	50.00	ND	109	70-130			08/20/2016	
Isopropylbenzene	58.2	1.0	ug/L	50.00	ND	116	70-130			08/20/2016	
m & p - Xylene	106	2.0	ug/L	100.0	ND	106	70-130			08/20/2016	
Methyl iodide	29.9	1.0	ug/L	50.00	ND	59.8	70-130			08/20/2016	A03, A07
Methylene chloride	50.9	5.0	ug/L	50.00	ND	102	70-130			08/20/2016	
Methyltertiarybutylether	52.9	1.0	ug/L	50.00	ND	106	70-130			08/20/2016	
Naphthalene	46.0	5.0	ug/L	50.00	ND	92.1	70-130			08/20/2016	X
n-Butylbenzene	51.8	1.0	ug/L	50.00	ND	104	70-130			08/20/2016	
n-Propylbenzene	57.2	1.0	ug/L	50.00	ND	114	70-130			08/20/2016	
o-Xylene	52.5	1.0	ug/L	50.00	ND	105	70-130			08/20/2016	
p-Isopropyl toluene	52.1	1.0	ug/L	50.00	ND	104	70-130			08/20/2016	
sec-Butylbenzene	55.0	1.0	ug/L	50.00	ND	110	70-130			08/20/2016	
Styrene	50.9	1.0	ug/L	50.00	ND	102	70-130			08/20/2016	
tert-Butylbenzene	52.7	1.0	ug/L	50.00	ND	105	70-130			08/20/2016	
tertiary Butyl Alcohol	208	50	ug/L	250.0	ND	83.3	70-130			08/20/2016	
tertiaryAmylmethylether	51.7	5.0	ug/L	50.00	ND	103	70-130			08/20/2016	
Tetrachloroethylene	41.5	1.0	ug/L	50.00	ND	83.0	70-130			08/20/2016	
Tetrahydrofuran	43.7	5.0	ug/L	50.00	ND	87.4	70-130			08/20/2016	
Toluene	50.8	1.0	ug/L	50.00	ND	102	70-130			08/20/2016	
trans-1,2-Dichloroethylene	51.5	1.0	ug/L	50.00	ND	103	70-130			08/20/2016	
trans-1,3-Dichloropropylene	52.2	1.0	ug/L	50.00	ND	104	70-130			08/20/2016	
trans-1,4-Dichloro-2-butene	34.2	5.0	ug/L	50.00	ND	68.4	70-130			08/20/2016	A03
Trichloroethylene	44.9	1.0	ug/L	50.00	ND	89.8	70-130			08/20/2016	
Trichlorofluoromethane	50.4	1.0	ug/L	50.00	ND	101	70-130			08/20/2016	
Vinyl chloride	46.6	1.0	ug/L	50.00	ND	93.2	70-130			08/20/2016	
Surrogate: Bromofluorobenzene	*55.7*		ug/L	*50.00*		*111*	*85-115*			08/20/2016	
Surrogate: Dibromofluoromethane	*52.1*		ug/L	*50.00*		*104*	*82.7-115*			08/20/2016	
Surrogate: Toluene-d8	*50.9*		ug/L	*50.00*		*102*	*85-115*			08/20/2016	
Matrix Spike Dup (B6H1904-MSD1)	**Source: 1608237-09**										
1,1,1,2-Tetrachloroethane	48.6	1.0	ug/L	50.00	ND	97.1	70-130	6.26	30	08/20/2016	
1,1,1-Trichloroethane	58.2	1.0	ug/L	50.00	ND	116	70-130	5.47	30	08/20/2016	
1,1,2,2-Tetrachloroethane	54.5	1.0	ug/L	50.00	ND	109	70-130	0.178	30	08/20/2016	
1,1,2-Trichloroethane	49.2	1.0	ug/L	50.00	ND	98.3	70-130	2.11	30	08/20/2016	
1,1-Dichloroethane	51.8	1.0	ug/L	50.00	ND	104	70-130	4.63	30	08/20/2016	
1,1-Dichloroethylene	49.4	1.0	ug/L	50.00	ND	98.9	70-130	1.24	30	08/20/2016	
1,2,3-Trichlorobenzene	44.7	5.0	ug/L	50.00	ND	89.4	70-130	5.76	30	08/20/2016	
1,2,3-Trichloropropane	44.8	1.0	ug/L	50.00	ND	89.5	70-130	3.03	30	08/20/2016	

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Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B6H1904 - Method: 5030				**Prepared: 08/20/2016**							
Matrix Spike Dup (B6H1904-MSD1)	**Source: 1608237-09**										
1,2,3-Trimethylbenzene	54.9	1.0	ug/L	50.00	ND	110	70-130	4.93	30	08/20/2016	
1,2,4-Trichlorobenzene	45.4	5.0	ug/L	50.00	ND	90.9	70-130	5.39	30	08/20/2016	
1,2,4-Trimethylbenzene	56.5	1.0	ug/L	50.00	ND	113	70-130	6.08	30	08/20/2016	
1,2-Dibromo-3-chloropropane	40.7	5.0	ug/L	50.00	ND	81.4	70-130	3.77	30	08/20/2016	
1,2-Dibromoethane	54.9	1.0	ug/L	50.00	ND	110	70-130	4.30	30	08/20/2016	
1,2-Dichlorobenzene	51.3	1.0	ug/L	50.00	ND	103	70-130	4.38	30	08/20/2016	
1,2-Dichloroethane	51.3	1.0	ug/L	50.00	ND	103	70-130	1.51	30	08/20/2016	
1,2-Dichloropropane	51.4	1.0	ug/L	50.00	ND	103	70-130	1.39	30	08/20/2016	
1,3,5-Trimethylbenzene	56.8	1.0	ug/L	50.00	ND	114	70-130	3.63	30	08/20/2016	
1,3-Dichlorobenzene	50.4	1.0	ug/L	50.00	ND	101	70-130	5.29	30	08/20/2016	
1,4-Dichlorobenzene	49.3	1.0	ug/L	50.00	ND	98.6	70-130	5.86	30	08/20/2016	
2-Butanone (MEK)	41.3	5.0	ug/L	50.00	ND	82.7	70-130	8.74	30	08/20/2016	
2-Hexanone	42.1	5.0	ug/L	50.00	ND	84.1	70-130	2.19	30	08/20/2016	
2-Methylnaphthalene	38.2	5.0	ug/L	50.00	ND	76.3	70-130	12.5	30	08/20/2016	X
2-Propanone (acetone)	38.0	20	ug/L	50.00	ND	76.1	70-130	10.8	30	08/20/2016	
4-Methyl-2-pentanone (MIBK)	44.6	5.0	ug/L	50.00	ND	89.2	70-130	1.94	30	08/20/2016	
Acrylonitrile	41.1	5.0	ug/L	50.00	ND	82.3	70-130	4.61	30	08/20/2016	
Benzene	52.2	1.0	ug/L	50.00	ND	104	70-130	0.943	30	08/20/2016	
Bromobenzene	54.3	1.0	ug/L	50.00	ND	109	70-130	4.84	30	08/20/2016	
Bromochloromethane	47.0	1.0	ug/L	50.00	ND	94.0	70-130	3.73	30	08/20/2016	
Bromodichloromethane	53.4	1.0	ug/L	50.00	ND	107	70-130	2.28	30	08/20/2016	
Bromoform	42.7	1.0	ug/L	50.00	ND	85.4	70-130	2.69	30	08/20/2016	
Bromomethane	17.9	5.0	ug/L	50.00	ND	35.8	70-130	20.9	30	08/20/2016	A03, A05
Carbon disulfide	55.8	1.0	ug/L	50.00	ND	112	70-130	1.51	30	08/20/2016	
Carbon tetrachloride	59.1	1.0	ug/L	50.00	ND	118	70-130	9.12	30	08/20/2016	
Chlorobenzene	50.0	1.0	ug/L	50.00	ND	100	70-130	3.09	30	08/20/2016	
Chloroethane	56.5	5.0	ug/L	50.00	ND	113	70-130	0.442	30	08/20/2016	
Chloroform	53.3	1.0	ug/L	50.00	ND	107	70-130	3.67	30	08/20/2016	
Chloromethane	29.3	5.0	ug/L	50.00	ND	58.5	70-130	17.3	30	08/20/2016	A03, A11
cis-1,2-Dichloroethylene	53.1	1.0	ug/L	50.00	ND	106	70-130	2.32	30	08/20/2016	
cis-1,3-Dichloropropylene	52.4	1.0	ug/L	50.00	ND	105	70-130	5.91	30	08/20/2016	
Cyclohexane	49.1	5.0	ug/L	50.00	ND	98.2	70-130	3.10	30	08/20/2016	
Dibromochloromethane	46.5	1.0	ug/L	50.00	ND	92.9	70-130	7.58	30	08/20/2016	
Dibromomethane	50.0	1.0	ug/L	50.00	ND	100	70-130	0.403	30	08/20/2016	
Dichlorodifluoromethane	70.9	5.0	ug/L	50.00	ND	142	70-130	1.67	30	08/20/2016	A04, A06, A11
Diethyl ether	52.8	5.0	ug/L	50.00	ND	106	70-130	3.72	30	08/20/2016	
Diisopropyl Ether	57.2	5.0	ug/L	50.00	ND	114	70-130	4.84	30	08/20/2016	
Ethylbenzene	53.7	1.0	ug/L	50.00	ND	107	70-130	3.60	30	08/20/2016	
Ethyltertiarybutylether	60.9	5.0	ug/L	50.00	ND	122	70-130	7.01	30	08/20/2016	
Hexachloroethane	58.5	5.0	ug/L	50.00	ND	117	70-130	6.95	30	08/20/2016	
Isopropylbenzene	60.2	1.0	ug/L	50.00	ND	120	70-130	3.44	30	08/20/2016	
m & p - Xylene	110	2.0	ug/L	100.0	ND	110	70-130	3.88	30	08/20/2016	
Methyl iodide	42.8	1.0	ug/L	50.00	ND	85.7	70-130	35.5	30	08/20/2016	A07
Methylene chloride	53.1	5.0	ug/L	50.00	ND	106	70-130	4.23	30	08/20/2016	
Methyltertiarybutylether	54.4	1.0	ug/L	50.00	ND	109	70-130	2.88	30	08/20/2016	
Naphthalene	47.0	5.0	ug/L	50.00	ND	94.0	70-130	2.02	30	08/20/2016	X
n-Butylbenzene	55.0	1.0	ug/L	50.00	ND	110	70-130	6.10	30	08/20/2016	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B6H1904 - Method: 5030				**Prepared: 08/20/2016**							
Matrix Spike Dup (B6H1904-MSD1)	**Source: 1608237-09**										
n-Propylbenzene	59.6	1.0	ug/L	50.00	ND	119	70-130	4.17	30	08/20/2016	
o-Xylene	55.1	1.0	ug/L	50.00	ND	110	70-130	4.81	30	08/20/2016	
p-Isopropyl toluene	54.2	1.0	ug/L	50.00	ND	108	70-130	3.87	30	08/20/2016	
sec-Butylbenzene	56.8	1.0	ug/L	50.00	ND	114	70-130	3.29	30	08/20/2016	
Styrene	53.6	1.0	ug/L	50.00	ND	107	70-130	5.14	30	08/20/2016	
tert-Butylbenzene	55.4	1.0	ug/L	50.00	ND	111	70-130	5.11	30	08/20/2016	
tertiary Butyl Alcohol	203	50	ug/L	250.0	ND	81.0	70-130	2.75	30	08/20/2016	
tertiaryAmylmethylether	55.4	5.0	ug/L	50.00	ND	111	70-130	6.87	30	08/20/2016	
Tetrachloroethylene	43.0	1.0	ug/L	50.00	ND	86.1	70-130	3.69	30	08/20/2016	
Tetrahydrofuran	42.5	5.0	ug/L	50.00	ND	84.9	70-130	2.82	30	08/20/2016	
Toluene	52.6	1.0	ug/L	50.00	ND	105	70-130	3.48	30	08/20/2016	
trans-1,2-Dichloroethylene	53.9	1.0	ug/L	50.00	ND	108	70-130	4.42	30	08/20/2016	
trans-1,3-Dichloropropylene	57.4	1.0	ug/L	50.00	ND	115	70-130	9.51	30	08/20/2016	
trans-1,4-Dichloro-2-butene	34.1	5.0	ug/L	50.00	ND	68.1	70-130	0.443	30	08/20/2016	A03
Trichloroethylene	47.3	1.0	ug/L	50.00	ND	94.6	70-130	5.13	30	08/20/2016	
Trichlorofluoromethane	51.7	1.0	ug/L	50.00	ND	103	70-130	2.43	30	08/20/2016	
Vinyl chloride	48.7	1.0	ug/L	50.00	ND	97.5	70-130	4.47	30	08/20/2016	
Surrogate: Bromofluorobenzene	*55.6*		ug/L	*50.00*		*111*	*85-115*			08/20/2016	
Surrogate: Dibromofluoromethane	*51.8*		ug/L	*50.00*		*104*	*82.7-115*			08/20/2016	
Surrogate: Toluene-d8	*51.7*		ug/L	*50.00*		*103*	*85-115*			08/20/2016	
Batch B6H1905 - Method: 5030				**Prepared: 08/19/2016**							
Blank (B6H1905-BLK1)											
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L							08/19/2016	
1,1,1-Trichloroethane	ND	1.0	ug/L							08/19/2016	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L							08/19/2016	
1,1,2-Trichloroethane	ND	1.0	ug/L							08/19/2016	
1,1-Dichloroethane	ND	1.0	ug/L							08/19/2016	
1,1-Dichloroethylene	ND	1.0	ug/L							08/19/2016	
1,2,3-Trichlorobenzene	ND	5.0	ug/L							08/19/2016	
1,2,3-Trichloropropane	ND	1.0	ug/L							08/19/2016	
1,2,3-Trimethylbenzene	ND	1.0	ug/L							08/19/2016	
1,2,4-Trichlorobenzene	ND	5.0	ug/L							08/19/2016	
1,2,4-Trimethylbenzene	ND	1.0	ug/L							08/19/2016	
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L							08/19/2016	
1,2-Dibromoethane	ND	1.0	ug/L							08/19/2016	
1,2-Dichlorobenzene	ND	1.0	ug/L							08/19/2016	
1,2-Dichloroethane	ND	1.0	ug/L							08/19/2016	
1,2-Dichloropropane	ND	1.0	ug/L							08/19/2016	
1,3,5-Trimethylbenzene	ND	1.0	ug/L							08/19/2016	
1,3-Dichlorobenzene	ND	1.0	ug/L							08/19/2016	
1,4-Dichlorobenzene	ND	1.0	ug/L							08/19/2016	
2-Butanone (MEK)	ND	5.0	ug/L							08/19/2016	
2-Hexanone	ND	5.0	ug/L							08/19/2016	
2-Methylnaphthalene	ND	5.0	ug/L							08/19/2016	X

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B6H1905 - Method: 5030				**Prepared: 08/19/2016**							
Blank (B6H1905-BLK1)											
2-Propanone (acetone)	ND	20	ug/L							08/19/2016	A05
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L							08/19/2016	
Acrylonitrile	ND	5.0	ug/L							08/19/2016	
Benzene	ND	1.0	ug/L							08/19/2016	
Bromobenzene	ND	1.0	ug/L							08/19/2016	
Bromochloromethane	ND	1.0	ug/L							08/19/2016	
Bromodichloromethane	ND	1.0	ug/L							08/19/2016	
Bromoform	ND	1.0	ug/L							08/19/2016	
Bromomethane	ND	5.0	ug/L							08/19/2016	
Carbon disulfide	ND	1.0	ug/L							08/19/2016	
Carbon tetrachloride	ND	1.0	ug/L							08/19/2016	
Chlorobenzene	ND	1.0	ug/L							08/19/2016	
Chloroethane	ND	5.0	ug/L							08/19/2016	
Chloroform	ND	1.0	ug/L							08/19/2016	
Chloromethane	ND	5.0	ug/L							08/19/2016	
cis-1,2-Dichloroethylene	ND	1.0	ug/L							08/19/2016	
cis-1,3-Dichloropropylene	ND	1.0	ug/L							08/19/2016	
Cyclohexane	ND	5.0	ug/L							08/19/2016	
Dibromochloromethane	ND	1.0	ug/L							08/19/2016	
Dibromomethane	ND	1.0	ug/L							08/19/2016	
Dichlorodifluoromethane	ND	5.0	ug/L							08/19/2016	
Diethyl ether	ND	5.0	ug/L							08/19/2016	
Diisopropyl Ether	ND	5.0	ug/L							08/19/2016	
Ethylbenzene	ND	1.0	ug/L							08/19/2016	
Ethyltertiarybutylether	ND	5.0	ug/L							08/19/2016	
Hexachloroethane	ND	5.0	ug/L							08/19/2016	
Isopropylbenzene	ND	1.0	ug/L							08/19/2016	
m & p - Xylene	ND	2.0	ug/L							08/19/2016	
Methyl iodide	ND	1.0	ug/L							08/19/2016	A05
Methylene chloride	ND	5.0	ug/L							08/19/2016	
Methyltertiarybutylether	ND	1.0	ug/L							08/19/2016	
Naphthalene	ND	5.0	ug/L							08/19/2016	X
n-Butylbenzene	ND	1.0	ug/L							08/19/2016	
n-Propylbenzene	ND	1.0	ug/L							08/19/2016	
o-Xylene	ND	1.0	ug/L							08/19/2016	
p-Isopropyl toluene	ND	1.0	ug/L							08/19/2016	
sec-Butylbenzene	ND	1.0	ug/L							08/19/2016	
Styrene	ND	1.0	ug/L							08/19/2016	
tert-Butylbenzene	ND	1.0	ug/L							08/19/2016	
tertiary Butyl Alcohol	ND	50	ug/L							08/19/2016	
tertiaryAmylmethylether	ND	5.0	ug/L							08/19/2016	
Tetrachloroethylene	ND	1.0	ug/L							08/19/2016	
Tetrahydrofuran	ND	5.0	ug/L							08/19/2016	
Toluene	ND	1.0	ug/L							08/19/2016	
trans-1,2-Dichloroethylene	ND	1.0	ug/L							08/19/2016	
trans-1,3-Dichloropropylene	ND	1.0	ug/L							08/19/2016	
trans-1,4-Dichloro-2-butene	ND	5.0	ug/L							08/19/2016	
Trichloroethylene	ND	1.0	ug/L							08/19/2016	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B6H1905 - Method: 5030				**Prepared: 08/19/2016**							
Blank (B6H1905-BLK1)											
Trichlorofluoromethane	ND	1.0	ug/L							08/19/2016	
Vinyl chloride	ND	1.0	ug/L							08/19/2016	
Surrogate: Bromofluorobenzene	*49.7*		ug/L	*50.00*		*99.3*	*85-115*			08/19/2016	
Surrogate: Dibromofluoromethane	*51.0*		ug/L	*50.00*		*102*	*82.7-115*			08/19/2016	
Surrogate: Toluene-d8	*51.4*		ug/L	*50.00*		*103*	*85-115*			08/19/2016	
LCS (B6H1905-BS1)											
1,1,1,2-Tetrachloroethane	52.2	1.0	ug/L	50.00		104	70-130			08/19/2016	
1,1,1-Trichloroethane	48.2	1.0	ug/L	50.00		96.4	70-130			08/19/2016	
1,1,2,2-Tetrachloroethane	56.5	1.0	ug/L	50.00		113	70-130			08/19/2016	
1,1,2-Trichloroethane	54.0	1.0	ug/L	50.00		108	70-130			08/19/2016	
1,1-Dichloroethane	51.6	1.0	ug/L	50.00		103	70-130			08/19/2016	
1,1-Dichloroethylene	49.6	1.0	ug/L	50.00		99.2	70-130			08/19/2016	
1,2,3-Trichlorobenzene	57.7	5.0	ug/L	50.00		115	70-130			08/19/2016	
1,2,3-Trichloropropane	48.1	1.0	ug/L	50.00		96.2	70-130			08/19/2016	
1,2,3-Trimethylbenzene	54.7	1.0	ug/L	50.00		109	70-130			08/19/2016	
1,2,4-Trichlorobenzene	59.2	5.0	ug/L	50.00		118	70-130			08/19/2016	
1,2,4-Trimethylbenzene	54.1	1.0	ug/L	50.00		108	70-130			08/19/2016	
1,2-Dibromo-3-chloropropane	53.3	5.0	ug/L	50.00		107	70-130			08/19/2016	
1,2-Dibromoethane	54.7	1.0	ug/L	50.00		109	70-130			08/19/2016	
1,2-Dichlorobenzene	54.9	1.0	ug/L	50.00		110	70-130			08/19/2016	
1,2-Dichloroethane	53.9	1.0	ug/L	50.00		108	70-130			08/19/2016	
1,2-Dichloropropane	51.1	1.0	ug/L	50.00		102	70-130			08/19/2016	
1,3,5-Trimethylbenzene	55.7	1.0	ug/L	50.00		111	70-130			08/19/2016	
1,3-Dichlorobenzene	55.1	1.0	ug/L	50.00		110	70-130			08/19/2016	
1,4-Dichlorobenzene	54.4	1.0	ug/L	50.00		109	70-130			08/19/2016	
2-Butanone (MEK)	53.7	5.0	ug/L	50.00		107	70-130			08/19/2016	
2-Hexanone	54.9	5.0	ug/L	50.00		110	70-130			08/19/2016	
2-Methylnaphthalene	53.2	5.0	ug/L	50.00		106	70-130			08/19/2016	X
2-Propanone (acetone)	37.1	20	ug/L	50.00		74.3	70-130			08/19/2016	A05
4-Methyl-2-pentanone (MIBK)	60.1	5.0	ug/L	50.00		120	70-130			08/19/2016	
Acrylonitrile	59.2	5.0	ug/L	50.00		118	70-130			08/19/2016	
Benzene	52.7	1.0	ug/L	50.00		105	70-130			08/19/2016	
Bromobenzene	54.5	1.0	ug/L	50.00		109	70-130			08/19/2016	
Bromochloromethane	50.3	1.0	ug/L	50.00		101	70-130			08/19/2016	
Bromodichloromethane	52.8	1.0	ug/L	50.00		106	70-130			08/19/2016	
Bromoform	49.1	1.0	ug/L	50.00		98.1	70-130			08/19/2016	
Bromomethane	61.7	5.0	ug/L	50.00		123	70-130			08/19/2016	
Carbon disulfide	49.9	1.0	ug/L	50.00		99.9	70-130			08/19/2016	
Carbon tetrachloride	50.2	1.0	ug/L	50.00		100	70-130			08/19/2016	
Chlorobenzene	54.4	1.0	ug/L	50.00		109	70-130			08/19/2016	
Chloroethane	58.1	5.0	ug/L	50.00		116	70-130			08/19/2016	
Chloroform	51.6	1.0	ug/L	50.00		103	70-130			08/19/2016	
Chloromethane	78.9	5.0	ug/L	50.00		158	70-130			08/19/2016	A06, A09, A11
cis-1,2-Dichloroethylene	54.3	1.0	ug/L	50.00		109	70-130			08/19/2016	
cis-1,3-Dichloropropylene	52.5	1.0	ug/L	50.00		105	70-130			08/19/2016	
Cyclohexane	54.1	5.0	ug/L	50.00		108	70-130			08/19/2016	

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P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B6H1905 - Method: 5030				**Prepared: 08/19/2016**							
LCS (B6H1905-BS1)											
Dibromochloromethane	53.4	1.0	ug/L	50.00		107	70-130			08/19/2016	
Dibromomethane	52.9	1.0	ug/L	50.00		106	70-130			08/19/2016	
Dichlorodifluoromethane	73.5	5.0	ug/L	50.00		147	70-130			08/19/2016	A06, A09, A11
Diethyl ether	53.9	5.0	ug/L	50.00		108	70-130			08/19/2016	
Diisopropyl Ether	50.3	5.0	ug/L	50.00		101	70-130			08/19/2016	
Ethylbenzene	53.9	1.0	ug/L	50.00		108	70-130			08/19/2016	
Ethyltertiarybutylether	49.4	5.0	ug/L	50.00		98.7	70-130			08/19/2016	
Hexachloroethane	51.4	5.0	ug/L	50.00		103	70-130			08/19/2016	
Isopropylbenzene	57.0	1.0	ug/L	50.00		114	70-130			08/19/2016	
m & p - Xylene	106	2.0	ug/L	100.0		106	70-130			08/19/2016	
Methyl iodide	40.6	1.0	ug/L	50.00		81.3	70-130			08/19/2016	A05
Methylene chloride	56.0	5.0	ug/L	50.00		112	70-130			08/19/2016	
Methyltertiarybutylether	51.2	1.0	ug/L	50.00		102	70-130			08/19/2016	
Naphthalene	63.6	5.0	ug/L	50.00		127	70-130			08/19/2016	X
n-Butylbenzene	56.7	1.0	ug/L	50.00		113	70-130			08/19/2016	
n-Propylbenzene	57.3	1.0	ug/L	50.00		115	70-130			08/19/2016	
o-Xylene	52.8	1.0	ug/L	50.00		106	70-130			08/19/2016	
p-Isopropyl toluene	53.8	1.0	ug/L	50.00		108	70-130			08/19/2016	
sec-Butylbenzene	55.5	1.0	ug/L	50.00		111	70-130			08/19/2016	
Styrene	53.3	1.0	ug/L	50.00		107	70-130			08/19/2016	
tert-Butylbenzene	58.5	1.0	ug/L	50.00		117	70-130			08/19/2016	
tertiary Butyl Alcohol	314	50	ug/L	250.0		125	70-130			08/19/2016	
tertiaryAmylmethylether	48.6	5.0	ug/L	50.00		97.3	70-130			08/19/2016	
Tetrachloroethylene	50.5	1.0	ug/L	50.00		101	70-130			08/19/2016	
Tetrahydrofuran	63.4	5.0	ug/L	50.00		127	70-130			08/19/2016	A06
Toluene	53.1	1.0	ug/L	50.00		106	70-130			08/19/2016	
trans-1,2-Dichloroethylene	53.7	1.0	ug/L	50.00		107	70-130			08/19/2016	
trans-1,3-Dichloropropylene	51.1	1.0	ug/L	50.00		102	70-130			08/19/2016	
trans-1,4-Dichloro-2-butene	54.3	5.0	ug/L	50.00		109	70-130			08/19/2016	
Trichloroethylene	50.7	1.0	ug/L	50.00		101	70-130			08/19/2016	
Trichlorofluoromethane	55.9	1.0	ug/L	50.00		112	70-130			08/19/2016	
Vinyl chloride	62.4	1.0	ug/L	50.00		125	70-130			08/19/2016	
Surrogate: Bromofluorobenzene	*51.8*		ug/L	*50.00*		*104*	*85-115*			08/19/2016	
Surrogate: Dibromofluoromethane	*49.7*		ug/L	*50.00*		*99.4*	*82.7-115*			08/19/2016	
Surrogate: Toluene-d8	*50.9*		ug/L	*50.00*		*102*	*85-115*			08/19/2016	
Matrix Spike (B6H1905-MS1)	**Source: 1608219-04**										
1,1,1,2-Tetrachloroethane	51.1	1.0	ug/L	50.00	ND	102	70-130			08/19/2016	
1,1,1-Trichloroethane	46.9	1.0	ug/L	50.00	ND	93.8	70-130			08/19/2016	
1,1,2,2-Tetrachloroethane	56.3	1.0	ug/L	50.00	ND	113	70-130			08/19/2016	
1,1,2-Trichloroethane	52.2	1.0	ug/L	50.00	ND	104	70-130			08/19/2016	
1,1-Dichloroethane	50.5	1.0	ug/L	50.00	ND	101	70-130			08/19/2016	
1,1-Dichloroethylene	49.4	1.0	ug/L	50.00	ND	98.8	70-130			08/19/2016	
1,2,3-Trichlorobenzene	49.7	5.0	ug/L	50.00	ND	99.4	70-130			08/19/2016	
1,2,3-Trichloropropane	49.3	1.0	ug/L	50.00	ND	98.5	70-130			08/19/2016	
1,2,3-Trimethylbenzene	51.7	1.0	ug/L	50.00	ND	103	70-130			08/19/2016	
1,2,4-Trichlorobenzene	50.8	5.0	ug/L	50.00	ND	102	70-130			08/19/2016	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B6H1905 - Method: 5030				**Prepared: 08/19/2016**							
Matrix Spike (B6H1905-MS1)	**Source: 1608219-04**										
1,2,4-Trimethylbenzene	53.0	1.0	ug/L	50.00	1.97	102	70-130			08/19/2016	
1,2-Dibromo-3-chloropropane	49.8	5.0	ug/L	50.00	ND	99.7	70-130			08/19/2016	
1,2-Dibromoethane	53.9	1.0	ug/L	50.00	ND	108	70-130			08/19/2016	
1,2-Dichlorobenzene	51.2	1.0	ug/L	50.00	ND	102	70-130			08/19/2016	
1,2-Dichloroethane	53.6	1.0	ug/L	50.00	ND	107	70-130			08/19/2016	
1,2-Dichloropropane	51.3	1.0	ug/L	50.00	ND	103	70-130			08/19/2016	
1,3,5-Trimethylbenzene	52.4	1.0	ug/L	50.00	ND	105	70-130			08/19/2016	
1,3-Dichlorobenzene	50.7	1.0	ug/L	50.00	ND	101	70-130			08/19/2016	
1,4-Dichlorobenzene	50.8	1.0	ug/L	50.00	ND	102	70-130			08/19/2016	
2-Butanone (MEK)	51.7	5.0	ug/L	50.00	ND	103	70-130			08/19/2016	
2-Hexanone	52.5	5.0	ug/L	50.00	ND	105	70-130			08/19/2016	
2-Methylnaphthalene	40.6	5.0	ug/L	50.00	ND	81.1	70-130			08/19/2016	X
2-Propanone (acetone)	37.8	20	ug/L	50.00	ND	75.6	70-130			08/19/2016	A05
4-Methyl-2-pentanone (MIBK)	58.8	5.0	ug/L	50.00	ND	118	70-130			08/19/2016	
Acrylonitrile	58.6	5.0	ug/L	50.00	ND	117	70-130			08/19/2016	
Benzene	52.2	1.0	ug/L	50.00	ND	104	70-130			08/19/2016	
Bromobenzene	51.0	1.0	ug/L	50.00	ND	102	70-130			08/19/2016	
Bromochloromethane	49.6	1.0	ug/L	50.00	ND	99.3	70-130			08/19/2016	
Bromodichloromethane	51.3	1.0	ug/L	50.00	ND	103	70-130			08/19/2016	
Bromoform	47.1	1.0	ug/L	50.00	ND	94.2	70-130			08/19/2016	
Bromomethane	60.3	5.0	ug/L	50.00	ND	121	70-130			08/19/2016	
Carbon disulfide	48.5	1.0	ug/L	50.00	ND	97.0	70-130			08/19/2016	
Carbon tetrachloride	47.8	1.0	ug/L	50.00	ND	95.6	70-130			08/19/2016	
Chlorobenzene	52.6	1.0	ug/L	50.00	ND	105	70-130			08/19/2016	
Chloroethane	58.8	5.0	ug/L	50.00	ND	118	70-130			08/19/2016	
Chloroform	51.0	1.0	ug/L	50.00	ND	102	70-130			08/19/2016	
Chloromethane	79.3	5.0	ug/L	50.00	ND	159	70-130			08/19/2016	A04, A06, A11
cis-1,2-Dichloroethylene	54.3	1.0	ug/L	50.00	ND	109	70-130			08/19/2016	
cis-1,3-Dichloropropylene	50.2	1.0	ug/L	50.00	ND	100	70-130			08/19/2016	
Cyclohexane	49.4	5.0	ug/L	50.00	ND	98.8	70-130			08/19/2016	
Dibromochloromethane	52.3	1.0	ug/L	50.00	ND	105	70-130			08/19/2016	
Dibromomethane	51.1	1.0	ug/L	50.00	ND	102	70-130			08/19/2016	
Dichlorodifluoromethane	67.0	5.0	ug/L	50.00	ND	134	70-130			08/19/2016	A06, A11, A04
Diethyl ether	53.9	5.0	ug/L	50.00	ND	108	70-130			08/19/2016	
Diisopropyl Ether	49.6	5.0	ug/L	50.00	ND	99.2	70-130			08/19/2016	
Ethylbenzene	51.9	1.0	ug/L	50.00	ND	104	70-130			08/19/2016	
Ethyltertiarybutylether	48.5	5.0	ug/L	50.00	ND	97.0	70-130			08/19/2016	
Hexachloroethane	46.1	5.0	ug/L	50.00	ND	92.3	70-130			08/19/2016	
Isopropylbenzene	53.9	1.0	ug/L	50.00	ND	108	70-130			08/19/2016	
m & p - Xylene	102	2.0	ug/L	100.0	ND	102	70-130			08/19/2016	
Methyl iodide	41.3	1.0	ug/L	50.00	ND	82.6	70-130			08/19/2016	A05
Methylene chloride	55.6	5.0	ug/L	50.00	ND	111	70-130			08/19/2016	
Methyltertiarybutylether	50.3	1.0	ug/L	50.00	ND	101	70-130			08/19/2016	
Naphthalene	56.9	5.0	ug/L	50.00	ND	114	70-130			08/19/2016	X
n-Butylbenzene	49.2	1.0	ug/L	50.00	ND	98.3	70-130			08/19/2016	
n-Propylbenzene	53.3	1.0	ug/L	50.00	ND	107	70-130			08/19/2016	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B6H1905 - Method: 5030				**Prepared: 08/19/2016**							
Matrix Spike (B6H1905-MS1)	**Source: 1608219-04**										
o-Xylene	51.3	1.0	ug/L	50.00	ND	103	70-130			08/19/2016	
p-Isopropyl toluene	48.2	1.0	ug/L	50.00	ND	96.4	70-130			08/19/2016	
sec-Butylbenzene	49.9	1.0	ug/L	50.00	ND	99.7	70-130			08/19/2016	
Styrene	51.2	1.0	ug/L	50.00	ND	102	70-130			08/19/2016	
tert-Butylbenzene	48.7	1.0	ug/L	50.00	ND	97.4	70-130			08/19/2016	
tertiary Butyl Alcohol	340	50	ug/L	250.0	ND	136	70-130			08/19/2016	A04
tertiaryAmylmethylether	47.6	5.0	ug/L	50.00	ND	95.3	70-130			08/19/2016	
Tetrachloroethylene	47.3	1.0	ug/L	50.00	ND	94.5	70-130			08/19/2016	
Tetrahydrofuran	62.5	5.0	ug/L	50.00	ND	125	70-130			08/19/2016	A06
Toluene	52.5	1.0	ug/L	50.00	ND	105	70-130			08/19/2016	
trans-1,2-Dichloroethylene	53.3	1.0	ug/L	50.00	ND	107	70-130			08/19/2016	
trans-1,3-Dichloropropylene	49.0	1.0	ug/L	50.00	ND	97.9	70-130			08/19/2016	
trans-1,4-Dichloro-2-butene	50.8	5.0	ug/L	50.00	ND	102	70-130			08/19/2016	
Trichloroethylene	47.8	1.0	ug/L	50.00	ND	95.7	70-130			08/19/2016	
Trichlorofluoromethane	54.2	1.0	ug/L	50.00	ND	108	70-130			08/19/2016	
Vinyl chloride	61.7	1.0	ug/L	50.00	ND	123	70-130			08/19/2016	
Surrogate: Bromofluorobenzene	*51.0*		ug/L	*50.00*		*102*	*85-115*			08/19/2016	
Surrogate: Dibromofluoromethane	*49.1*		ug/L	*50.00*		*98.2*	*82.7-115*			08/19/2016	
Surrogate: Toluene-d8	*50.3*		ug/L	*50.00*		*101*	*85-115*			08/19/2016	
Matrix Spike Dup (B6H1905-MSD1)	**Source: 1608219-04**										
1,1,1,2-Tetrachloroethane	49.6	1.0	ug/L	50.00	ND	99.2	70-130	3.10	30	08/19/2016	
1,1,1-Trichloroethane	45.3	1.0	ug/L	50.00	ND	90.7	70-130	3.36	30	08/19/2016	
1,1,2,2-Tetrachloroethane	55.6	1.0	ug/L	50.00	ND	111	70-130	1.27	30	08/19/2016	
1,1,2-Trichloroethane	51.9	1.0	ug/L	50.00	ND	104	70-130	0.534	30	08/19/2016	
1,1-Dichloroethane	48.9	1.0	ug/L	50.00	ND	97.8	70-130	3.23	30	08/19/2016	
1,1-Dichloroethylene	47.2	1.0	ug/L	50.00	ND	94.3	70-130	4.65	30	08/19/2016	
1,2,3-Trichlorobenzene	49.2	5.0	ug/L	50.00	ND	98.3	70-130	1.05	30	08/19/2016	
1,2,3-Trichloropropane	49.1	1.0	ug/L	50.00	ND	98.3	70-130	0.250	30	08/19/2016	
1,2,3-Trimethylbenzene	51.2	1.0	ug/L	50.00	ND	102	70-130	1.01	30	08/19/2016	
1,2,4-Trichlorobenzene	51.3	5.0	ug/L	50.00	ND	103	70-130	1.00	30	08/19/2016	
1,2,4-Trimethylbenzene	51.7	1.0	ug/L	50.00	1.97	99.5	70-130	2.45	30	08/19/2016	
1,2-Dibromo-3-chloropropane	51.8	5.0	ug/L	50.00	ND	104	70-130	3.90	30	08/19/2016	
1,2-Dibromoethane	52.7	1.0	ug/L	50.00	ND	105	70-130	2.16	30	08/19/2016	
1,2-Dichlorobenzene	50.8	1.0	ug/L	50.00	ND	102	70-130	0.939	30	08/19/2016	
1,2-Dichloroethane	52.9	1.0	ug/L	50.00	ND	106	70-130	1.25	30	08/19/2016	
1,2-Dichloropropane	51.1	1.0	ug/L	50.00	ND	102	70-130	0.344	30	08/19/2016	
1,3,5-Trimethylbenzene	52.2	1.0	ug/L	50.00	ND	104	70-130	0.433	30	08/19/2016	
1,3-Dichlorobenzene	49.8	1.0	ug/L	50.00	ND	99.6	70-130	1.79	30	08/19/2016	
1,4-Dichlorobenzene	50.3	1.0	ug/L	50.00	ND	101	70-130	0.960	30	08/19/2016	
2-Butanone (MEK)	50.4	5.0	ug/L	50.00	ND	101	70-130	2.46	30	08/19/2016	
2-Hexanone	51.5	5.0	ug/L	50.00	ND	103	70-130	1.92	30	08/19/2016	
2-Methylnaphthalene	44.2	5.0	ug/L	50.00	ND	88.3	70-130	8.48	30	08/19/2016	X
2-Propanone (acetone)	36.1	20	ug/L	50.00	ND	72.1	70-130	4.67	30	08/19/2016	A05
4-Methyl-2-pentanone (MIBK)	57.6	5.0	ug/L	50.00	ND	115	70-130	2.23	30	08/19/2016	
Acrylonitrile	56.7	5.0	ug/L	50.00	ND	113	70-130	3.15	30	08/19/2016	
Benzene	50.6	1.0	ug/L	50.00	ND	101	70-130	3.23	30	08/19/2016	
Bromobenzene	52.2	1.0	ug/L	50.00	ND	104	70-130	2.32	30	08/19/2016	

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TEL: (517) 335-9800
FAX: (517) 335-9600

Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B6H1905 - Method: 5030				**Prepared: 08/19/2016**							
Matrix Spike Dup (B6H1905-MSD1)	**Source: 1608219-04**										
Bromochloromethane	49.0	1.0	ug/L	50.00	ND	98.0	70-130	1.31	30	08/19/2016	
Bromodichloromethane	50.6	1.0	ug/L	50.00	ND	101	70-130	1.36	30	08/19/2016	
Bromoform	46.6	1.0	ug/L	50.00	ND	93.3	70-130	0.999	30	08/19/2016	
Bromomethane	60.7	5.0	ug/L	50.00	ND	121	70-130	0.536	30	08/19/2016	
Carbon disulfide	47.0	1.0	ug/L	50.00	ND	94.1	70-130	3.05	30	08/19/2016	
Carbon tetrachloride	45.9	1.0	ug/L	50.00	ND	91.8	70-130	4.11	30	08/19/2016	
Chlorobenzene	50.5	1.0	ug/L	50.00	ND	101	70-130	4.06	30	08/19/2016	
Chloroethane	56.8	5.0	ug/L	50.00	ND	114	70-130	3.39	30	08/19/2016	
Chloroform	50.0	1.0	ug/L	50.00	ND	100	70-130	1.94	30	08/19/2016	
Chloromethane	74.8	5.0	ug/L	50.00	ND	150	70-130	5.88	30	08/19/2016	A04, A06, A11
cis-1,2-Dichloroethylene	52.6	1.0	ug/L	50.00	ND	105	70-130	3.17	30	08/19/2016	
cis-1,3-Dichloropropylene	50.4	1.0	ug/L	50.00	ND	101	70-130	0.543	30	08/19/2016	
Cyclohexane	49.6	5.0	ug/L	50.00	ND	99.1	70-130	0.368	30	08/19/2016	
Dibromochloromethane	51.5	1.0	ug/L	50.00	ND	103	70-130	1.46	30	08/19/2016	
Dibromomethane	51.1	1.0	ug/L	50.00	ND	102	70-130	0.0528	30	08/19/2016	
Dichlorodifluoromethane	62.1	5.0	ug/L	50.00	ND	124	70-130	7.58	30	08/19/2016	A06, A11
Diethyl ether	53.3	5.0	ug/L	50.00	ND	107	70-130	0.978	30	08/19/2016	
Diisopropyl Ether	48.9	5.0	ug/L	50.00	ND	97.8	70-130	1.35	30	08/19/2016	
Ethylbenzene	50.8	1.0	ug/L	50.00	ND	102	70-130	2.24	30	08/19/2016	
Ethyltertiarybutylether	48.1	5.0	ug/L	50.00	ND	96.1	70-130	0.924	30	08/19/2016	
Hexachloroethane	45.3	5.0	ug/L	50.00	ND	90.7	70-130	1.77	30	08/19/2016	
Isopropylbenzene	52.9	1.0	ug/L	50.00	ND	106	70-130	1.87	30	08/19/2016	
m & p - Xylene	100	2.0	ug/L	100.0	ND	100	70-130	2.31	30	08/19/2016	
Methyl iodide	41.7	1.0	ug/L	50.00	ND	83.4	70-130	1.03	30	08/19/2016	A05
Methylene chloride	54.9	5.0	ug/L	50.00	ND	110	70-130	1.20	30	08/19/2016	
Methyltertiarybutylether	50.0	1.0	ug/L	50.00	ND	100	70-130	0.566	30	08/19/2016	
Naphthalene	57.3	5.0	ug/L	50.00	ND	115	70-130	0.579	30	08/19/2016	X
n-Butylbenzene	48.7	1.0	ug/L	50.00	ND	97.5	70-130	0.898	30	08/19/2016	
n-Propylbenzene	52.5	1.0	ug/L	50.00	ND	105	70-130	1.68	30	08/19/2016	
o-Xylene	49.7	1.0	ug/L	50.00	ND	99.5	70-130	3.21	30	08/19/2016	
p-Isopropyl toluene	47.4	1.0	ug/L	50.00	ND	94.8	70-130	1.69	30	08/19/2016	
sec-Butylbenzene	49.1	1.0	ug/L	50.00	ND	98.1	70-130	1.62	30	08/19/2016	
Styrene	49.8	1.0	ug/L	50.00	ND	99.6	70-130	2.65	30	08/19/2016	
tert-Butylbenzene	53.4	1.0	ug/L	50.00	ND	107	70-130	9.18	30	08/19/2016	
tertiary Butyl Alcohol	286	50	ug/L	250.0	ND	115	70-130	17.2	30	08/19/2016	
tertiaryAmylmethylether	48.3	5.0	ug/L	50.00	ND	96.5	70-130	1.33	30	08/19/2016	
Tetrachloroethylene	45.1	1.0	ug/L	50.00	ND	90.3	70-130	4.61	30	08/19/2016	
Tetrahydrofuran	60.4	5.0	ug/L	50.00	ND	121	70-130	3.51	30	08/19/2016	A06
Toluene	50.1	1.0	ug/L	50.00	ND	100	70-130	4.83	30	08/19/2016	
trans-1,2-Dichloroethylene	51.4	1.0	ug/L	50.00	ND	103	70-130	3.66	30	08/19/2016	
trans-1,3-Dichloropropylene	48.7	1.0	ug/L	50.00	ND	97.3	70-130	0.632	30	08/19/2016	
trans-1,4-Dichloro-2-butene	50.6	5.0	ug/L	50.00	ND	101	70-130	0.552	30	08/19/2016	
Trichloroethylene	46.8	1.0	ug/L	50.00	ND	93.7	70-130	2.10	30	08/19/2016	
Trichlorofluoromethane	52.0	1.0	ug/L	50.00	ND	104	70-130	4.12	30	08/19/2016	
Vinyl chloride	56.9	1.0	ug/L	50.00	ND	114	70-130	8.20	30	08/19/2016	
Surrogate: Bromofluorobenzene	*51.8*		ug/L	*50.00*		*104*	*85-115*			08/19/2016	
Surrogate: Dibromofluoromethane	*50.4*		ug/L	*50.00*		*101*	*82.7-115*			08/19/2016	

Lab Work Order # 1608224

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B6H1905 - Method: 5030				**Prepared: 08/19/2016**							
Matrix Spike Dup (B6H1905-MSD1)	**Source: 1608219-04**										
Surrogate: Toluene-d8	*50.5*		ug/L	*50.00*		*101*	*85-115*			08/19/2016	

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Organics-Dioxane - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B6H2316 - Method: 5030				**Prepared: 08/23/2016**							
Blank (B6H2316-BLK1)											
1,4-dioxane	ND	1.0	ug/L							08/23/2016	
LCS (B6H2316-BS1)											
1,4-dioxane	8.78	1.0	ug/L	10.00		87.8	70-130			08/23/2016	
Matrix Spike (B6H2316-MS1)	**Source: 1608224-01**										
1,4-dioxane	9.58	1.0	ug/L	10.00	ND	95.8	70-130			08/23/2016	
Matrix Spike Dup (B6H2316-MSD1)	**Source: 1608224-01**										
1,4-dioxane	9.58	1.0	ug/L	10.00	ND	95.8	70-130	0.00	30	08/23/2016	

Michigan Department of Environmental Quality
Laboratory Services Section

Analysis Request Sheet

Lab Work Order Number	Project Name	Matrix
16082224	Gelman Sciences - Shallow GW	WATER

Site Code/Project Number	AY	CC Email 1	Project TAT Days	Sample Collector
81000018	16	adelmanm@michigan.gov		Kevin Lund (KDL)
Dept-Division-District	**Index**	**CC Email 2**	**Project Due Date**	**Sample Collector Phone**
DEQ-RRD-Jackson	44410			734-417-2579
State Project Manager	**PCA**	**CC Email 3**		**Contract Firm**
Dan Hamel	30740		Accept Analysis hold time codes	MDEQ/NA
State Project Manager Email	**Project**	**Overflow Lab Choice 1**		**Contract Firm Primary Contact**
hameld@michigan.gov	451586			NA
State Project Manager Phone	**Phase**	**Overflow Lab Choice 2**		**Primary Contact Phone**
517-780-7832	00			NA

	Lab Use Only	Field Sample Identification	Collection Date	Collection Time	Container Count	Comments
1	01	RL-17	8-15-16	10:57	6	Low Flow Sampled PF-1611
2	02	RL-21	8-15-16	11:51	6	" " " Exp 3-1-17
3	03	RL-19	8-15-16	13:00	6	" " " Split w/
4	04	RL-1	8-16-16	10:15	6	" " " Gelman
5	05	Dup-1	8-16-16	10:15	6	" " "
6	06	RL-4	8-16-16	11:15	6	" " "
7	07	RL-5	8-16-16	12:30	6	
8	08	RL-6	8-16-16	14:35	6	Low Flow PF-1611
9						
10						

ORGANIC CHEMISTRY

VOA - Volatile Organic Acidic	
Volatiles - Full List	(1) (2) (3) (4) (5) (6) (7) (8) 9 10
BTEX/MTBE/TMB only	1 2 3 4 5 6 7 8 9 10
Chlorinated only	1 2 3 4 5 6 7 8 9 10
GRO	1 2 3 4 5 6 7 8 9 10
1,4 Dioxane	(1) (2) (3) (4) (5) (6) (7) (8) 9 10
METH - Methane, Ethane, Ethene	
Methane, Ethane, Ethene	1 2 3 4 5 6 7 8 9 10
ON - Pesticides, PCBs	
Pesticides & PCBs	1 2 3 4 5 6 7 8 9 10
Pesticides only	1 2 3 4 5 6 7 8 9 10
PCBs only	1 2 3 4 5 6 7 8 9 10
Toxaphene	1 2 3 4 5 6 7 8 9 10
Chlordane	1 2 3 4 5 6 7 8 9 10
BNA - Base Neutral Acids	
BNAs	1 2 3 4 5 6 7 8 9 10
Benzidines	1 2 3 4 5 6 7 8 9 10
PNAs only	1 2 3 4 5 6 7 8 9 10
BNs only	1 2 3 4 5 6 7 8 9 10
Acids only	1 2 3 4 5 6 7 8 9 10
Organic Specialty Requests	
Library search - Volatiles	1 2 3 4 5 6 7 8 9 10
Library search - SemiVols	1 2 3 4 5 6 7 8 9 10
Finger Print	1 2 3 4 5 6 7 8 9 10
DRO / ORO	1 2 3 4 5 6 7 8 9 10

METALS CHEMISTRY PACKAGES

OpMemo2 - Total	1 2 3 4 5 6 7 8 9 10
OpMemo2 - Dissolved (Sb,As,Ba,Be,Cd,Cr,Cu,Co,Fe,Pb,Mn,Hg,Mo,Ni,Se,Ag,Tl,V,Zn)	1 2 3 4 5 6 7 8 9 10
Michigan10 - Total	1 2 3 4 5 6 7 8 9 10
Michigan10 - Dissolved (As,Ba,Cd,Cr,Cu,Pb,Hg,Se,Ag,Zn)	1 2 3 4 5 6 7 8 9 10

MAD - DISSOLVED METALS

Diss - Silver - Ag	1 2 3 4 5 6 7 8 9 10
Diss - Aluminum - Al	1 2 3 4 5 6 7 8 9 10
Diss - Arsenic - As	1 2 3 4 5 6 7 8 9 10
Diss - Boron - B	1 2 3 4 5 6 7 8 9 10
Diss - Barium - Ba	1 2 3 4 5 6 7 8 9 10
Diss - Beryllium - Be	1 2 3 4 5 6 7 8 9 10
Diss - Cadmium - Cd	1 2 3 4 5 6 7 8 9 10
Diss - Cobalt - Co	1 2 3 4 5 6 7 8 9 10
Diss - Chromium - Cr	1 2 3 4 5 6 7 8 9 10
Diss - Copper - Cu	1 2 3 4 5 6 7 8 9 10
Diss - Iron - Fe	1 2 3 4 5 6 7 8 9 10
Diss - Mercury - Hg	1 2 3 4 5 6 7 8 9 10
Diss - Lithium - Li	1 2 3 4 5 6 7 8 9 10
Diss - Manganese - Mn	1 2 3 4 5 6 7 8 9 10
Diss - Molybdenum - Mo	1 2 3 4 5 6 7 8 9 10
Diss - Nickel - Ni	1 2 3 4 5 6 7 8 9 10
Diss - Lead - Pb	1 2 3 4 5 6 7 8 9 10
Diss - Antimony - Sb	1 2 3 4 5 6 7 8 9 10
Diss - Selenium - Se	1 2 3 4 5 6 7 8 9 10
Diss - Strontium - Sr	1 2 3 4 5 6 7 8 9 10
Diss - Titanium - Ti	1 2 3 4 5 6 7 8 9 10
Diss - Thallium - Tl	1 2 3 4 5 6 7 8 9 10
Diss - Uranium - U	1 2 3 4 5 6 7 8 9 10
Diss - Vanadium - V	1 2 3 4 5 6 7 8 9 10
Diss - Zinc - Zn	1 2 3 4 5 6 7 8 9 10
Diss - Calcium - Ca	1 2 3 4 5 6 7 8 9 10
Diss - Potassium - K	1 2 3 4 5 6 7 8 9 10
Diss - Magnesium - Mg	1 2 3 4 5 6 7 8 9 10
Diss - Sodium - Na	1 2 3 4 5 6 7 8 9 10
Diss - Hardness - Ca, Mg	1 2 3 4 5 6 7 8 9 10
MD - Metals Dissolved	
Lab Filtration	1 2 3 4 5 6 7 8 9 10

MA - TOTAL METALS

Silver - Ag	1 2 3 4 5 6 7 8 9 10
Aluminum - Al	1 2 3 4 5 6 7 8 9 10
Arsenic - As	1 2 3 4 5 6 7 8 9 10
Boron - B	1 2 3 4 5 6 7 8 9 10
Barium - Ba	1 2 3 4 5 6 7 8 9 10
Beryllium - Be	1 2 3 4 5 6 7 8 9 10
Cadmium - Cd	1 2 3 4 5 6 7 8 9 10
Cobalt - Co	1 2 3 4 5 6 7 8 9 10
Chromium - Cr	1 2 3 4 5 6 7 8 9 10
Copper - Cu	1 2 3 4 5 6 7 8 9 10
Iron - Fe	1 2 3 4 5 6 7 8 9 10
Mercury - Hg	1 2 3 4 5 6 7 8 9 10
Lithium - Li	1 2 3 4 5 6 7 8 9 10
Manganese - Mn	1 2 3 4 5 6 7 8 9 10
Molybdenum - Mo	1 2 3 4 5 6 7 8 9 10
Nickel - Ni	1 2 3 4 5 6 7 8 9 10
Lead - Pb	1 2 3 4 5 6 7 8 9 10
Antimony - Sb	1 2 3 4 5 6 7 8 9 10
Selenium - Se	1 2 3 4 5 6 7 8 9 10
Strontium - Sr	1 2 3 4 5 6 7 8 9 10
Titanium - Ti	1 2 3 4 5 6 7 8 9 10
Thallium - Tl	1 2 3 4 5 6 7 8 9 10
Uranium - U	1 2 3 4 5 6 7 8 9 10
Vanadium - V	1 2 3 4 5 6 7 8 9 10
Zinc - Zn	1 2 3 4 5 6 7 8 9 10
Calcium - Ca	1 2 3 4 5 6 7 8 9 10
Potassium - K	1 2 3 4 5 6 7 8 9 10
Magnesium - Mg	1 2 3 4 5 6 7 8 9 10
Sodium - Na	1 2 3 4 5 6 7 8 9 10
Hardness - Ca, Mg	1 2 3 4 5 6 7 8 9 10
LHG - Low Level Mercury	
Mercury Low Level - Hg	1 2 3 4 5 6 7 8 9 10

GENERAL CHEMISTRY

GB	Total Cyanide - CN	1 2 3 4 5 6 7 8 9 10
GCN	Available Cyanide - CN (Amenable / Weak Acid Dissociable)	1 2 3 4 5 6 7 8 9 10
CA	Chlorophyll	1 2 3 4 5 6 7 8 9 10
GN	Ortho Phosphate - OP	1 2 3 4 5 6 7 8 9 10
GN	Nitrate - NO_3	1 2 3 4 5 6 7 8 9 10
GN	Nitrate - NO_3 (Calc.)	1 2 3 4 5 6 7 8 9 10
GN	Suspended Solids - SS	1 2 3 4 5 6 7 8 9 10
GN	Dissolved Solids - TDS	1 2 3 4 5 6 7 8 9 10
MN	Diss Solids - TDS (Calc.)	1 2 3 4 5 6 7 8 9 10
GN	Turbidity	1 2 3 4 5 6 7 8 9 10
MN	Total Alkalinity	1 2 3 4 5 6 7 8 9 10
MN	Bicarb/Carb Alkalinity (includes Total Alkalinity)	1 2 3 4 5 6 7 8 9 10
MN	Chloride - Cl	1 2 3 4 5 6 7 8 9 10
MN	Fluoride - F	1 2 3 4 5 6 7 8 9 10
MN	Sulfate - SO4	1 2 3 4 5 6 7 8 9 10
MN	Chromium 6 - Cr+6	1 2 3 4 5 6 7 8 9 10
MN	Conductivity	1 2 3 4 5 6 7 8 9 10
MN	pH	1 2 3 4 5 6 7 8 9 10
GA	Chem Oxyg Dem - COD	1 2 3 4 5 6 7 8 9 10
GA	Diss Org Carbon - DOC (FF) (Field - Filtered & Preserved)	1 2 3 4 5 6 7 8 9 10
GN	Diss Org Carbon - DOC (LF) (Lab - Filtered & Preserved)	1 2 3 4 5 6 7 8 9 10
GA	Total Org Carbon - TOC	1 2 3 4 5 6 7 8 9 10
GA	Ammonia - NH3	1 2 3 4 5 6 7 8 9 10
GA	Nitrate+Nitrite - NO3+NO2	1 2 3 4 5 6 7 8 9 10
GA	Kjeldahl Nitrogen - KN	1 2 3 4 5 6 7 8 9 10
GA	Total Phosphorus - TP	1 2 3 4 5 6 7 8 9 10

Chain of Custody

	Relinquished by	Received By	Date / Time
Print Name & Org.	Kevin Lund MDEQ	Dan Hamel MDEQ	8/16/16 14:50
Signature:	Kevin Lund	Dan Hamel	
Print Name & Org.	Dan Hamel MDEQ	Terry Kish MDEQ-RRD	8/16/ 16:30
Signature:	Dan Hamel	Terry Kish	
Print Name & Org.	Terry Kish DEQ-RRD		
Signature:	Terry Kish		8/17/16 825