



November 8, 2019

Reference No. 11198545

Mr. Ryan Groves
State Cleanup Section
Office of Land Quality
Indiana Department of Environmental Management
100 N. Senate Avenue
Indianapolis, Indiana 46204

Dear Mr. Groves:

**Re: Cline Avenue Oil Spill Site (#0000473)
Groundwater Investigation Summary
Gary, Indiana**

On behalf of Glenn Springs Holdings (GSH), a subsidiary of Occidental Petroleum Corporation, GHD Services Inc. (GHD) has prepared this Groundwater Investigation Summary. The following report provides details on groundwater investigation activities performed at the Cline Avenue Oil Spill Site (Site) in response to a request by the Indiana Department Environmental Management (IDEM) State Cleanup Program (Site #0000473) for investigation of potential groundwater impacts at the Site prior and subsequent to forthcoming re-engineering of the Cline Avenue ditch.

The following Figures, Tables, and Attachments were prepared in support of this Groundwater Investigation Summary:

Figure 1	Site Location
Figure 2	Site Plan
Figure 3	Groundwater Elevation Contours – September 2019
Figure 4	Groundwater Analytical Results Summary
Table 1	Sample Collection and Analysis Summary
Table 2	Gauging and Groundwater Elevation Data
Table 3	Soil Analytical Results Summary
Table 4	Groundwater Analytical Results Summary
Attachment A	Stratigraphic and Instrumentation Logs
Attachment B	Laboratory Analytical Reports
Attachment C	Low-flow Sampling Records



1. Site Background

The Site is located northeast of the intersection of Gary Avenue and Cline Avenue (Indiana Route 912) in Gary, Lake County, Indiana. The Site is bordered by a rail line and Gary International Airport property to the north and east, Gary Avenue to the south, and Cline Avenue to the west. The Site lies within the larger, heavily industrialized area west of the airport. The Site location is presented on Figure 1. The Site plan is presented on Figure 2.

The ditch is located along the western edge of the Site and was constructed in the 1960s to collect and carry surface water run-off from Cline Avenue and surrounding industrial areas. The ditch drains from north to south where it discharges into a culvert just south of the Site. The culvert conveys the stormwater approximately 2,200 feet to the Grand Calumet River. As of 2017, boom maintenance is being conducted by GSH in the Cline Avenue ditch.

On March 3, 2017, Oxy USA, Inc., entered into an Administrative Order on Consent (AOC) with the USEPA, to continue maintaining the absorbent boom materials controlling the sheen impacts in the ditch and to conduct investigations necessary to support the development of a feasibility assessment of potential remedial actions designed to mitigate ongoing sheen impacts to the ditch.

Per the groundwater investigation work plan previously submitted to IDEM on February 13, 2019, the investigative approach for groundwater consisted of the installation of 10 groundwater monitoring wells, gauging of new wells (10); existing wells (2); existing piezometers (12); and existing staff gauges (3); and groundwater sampling of the 10 new monitoring wells and 2 existing monitoring wells, as a baseline evaluation of potential groundwater impacts at the Site. A copy of the existing monitoring well logs and piezometer logs are provided in Attachment A.

2. Groundwater Investigation Work Plan Implementation

2.1 Monitoring Well Installation

Each monitoring well location was cleared for utilities prior to advancement. During the field mobilization on August 5 and 6, 2019, MW-09-19, MW-11-19, MW-13-19, and MW-14-19 were installed. Utility clearance by the Indiana 811 service was denied at the remaining locations due to ambiguity in documentation of utility corridor locations. In order to determine the locations of utilities at the Site and safely drill, a desktop review of utility lines was conducted. In the field, each monitoring well location was cleared using a hydrovac truck. During the second mobilization between August 27 and 29, 2019 MW-07-19, MW-08-19, MW-10-19, MW-12-19, MW-15-19, and MW-16-19 were installed. All boring locations were terminated between 13 and 15 feet below ground surface.

GHD field staff logged the soil recovered at each location for color, texture, and moisture content. Soil boring logs are included as Attachment A. Volatile organic vapor concentrations were measured from the soil cores via a photoionization detector (PID). One soil sample was collected per boring, except where the hydrovac method extended beyond the unsaturated zone, not allowing for soil sampling. All soil



samples were placed within laboratory-provided containers and immediately stored in a cooler on ice. The samples were submitted under proper chain-of-custody procedures to Pace Laboratories of Mt. Juliet, Tennessee (Pace) for volatile organic compound (VOC) analysis via USEPA Method 8260B, polychlorinated biphenyls (PCBs) by USEPA Method 8082, semi-volatile organic compounds (SVOCs) by USEPA Method 8270/8015, mercury by USEPA Method 7471, and metals by USEPA Method 6010. Laboratory reports are included in Attachment B. All soil samples are summarized in Table 1.

GHD completed the ten borings as monitoring wells. The monitoring wells were constructed with 2-inch outer diameter Schedule 40 polyvinyl chloride (PVC) riser and screen (0.010-inch slot). Flush-mounted covers or protective stick-up covers were installed at the surface. The new monitoring wells were developed via surging and purging with a submersible pump until clear water was produced.

Monitoring wells were surveyed in Indiana West State Plane (NAD83) horizontal datum and NAVD88 vertical datum to establish top of casing and ground surface elevations.

2.2 Gauging

All 10 new monitoring wells, 1 existing monitoring well, 12 existing piezometers, and 2 existing staff gauges were gauged September 4 through 6, 2019 with a dual phase probe to evaluate water table conditions. Previously installed monitoring well MW-03-07 was not gauged as it was unable to be located. Water levels and product levels (if present) were measured to the nearest hundredth of a foot. Where no LNAPL was present, depth to groundwater values were subtracted from the top of casing elevations to derive groundwater elevations. Where LNAPL was present, a corrected groundwater elevation was calculated. The gauging data and groundwater elevation data is summarized in Table 2.

2.3 Groundwater Monitoring

Upon completion of gauging, all monitoring wells, with the exception of MW-03-07 as it could not be located, were sampled using low-flow techniques. A submersible pump was deployed at each well, with new tubing for each location. Water quality readings were collected with a water quality meter and turbidity meter to determine stability. A groundwater sample was collected upon three consecutive stable readings (Attachment C). Groundwater samples were collected into clean laboratory-supplied containers and transferred into an ice-filled cooler. A summary of collected groundwater samples is included in Table 1. A duplicate sample and matrix spike/matrix spike duplicate (MS/MSD) samples were collected for quality assurance/quality control (QA/QC). Samples were transferred under standard chain of custody procedures to Pace for analysis. All samples were analyzed for the following: VOCs by USEPA Method 8260B, PCBs by USEPA Method 8082, SVOCs by USEPA Method 8270, and metals by USEPA Method 6020. Laboratory reports are included in Attachment B.



3. Results

3.1 Hydrogeologic Conditions

Soils encountered during this investigation were generally fill material underlain by fine sands. Fill material included mixed grain materials and debris at one boring location. Sands ranged from very fine to medium grained and were generally well sorted. Saturated soil was encountered between 3 and 5 feet below ground surface. Soil boring logs are included as Attachment A.

Groundwater elevations at the Site ranged from 583.20 (MW-08-09) to 590.28 (MW-15-19) feet above mean sea level in the monitoring wells and 580.89 (PZ-12-11) to 585.13 (PZ-07-11) feet above mean sea level in piezometers (Table 2). Figure 3 presents the groundwater elevation contours generated from the gauging event in September 2019. Groundwater flow is generally towards the Cline Avenue ditch. LNAPL was encountered at the following previously installed locations: PZ-03-11, PZ-05-11, PZ-06-11, PZ-07-11, PZ-09-11, and PZ-12-11, and ranged in thickness from 0.54 to 1.88 feet and was not reported in any monitoring wells.

3.2 Soil Analytical Results

Soil sampling analytical results are included in Table 3. Soil analytical data were compared against the IDEM Remediation Closure Guide (RCG) Migration to Groundwater Screening Levels, Residential Direct Contact Screening Levels, Commercial/Industrial Direct Contact Screening Levels, and Excavation Worker Soil Direct Contact Screening Levels.

3.3 Groundwater Analytical Results

Groundwater sampling results are summarized in Table 4 and on Figure 4. Groundwater analytical data were compared against the IDEM RCG Residential Groundwater Tap Screening Level (RGWTSL). Due to an unpreserved sample, the hold time for the groundwater sample from MW-13-19 was reduced from 14 to 7 days. The subsequent analysis by the laboratory after 9 days resulted in the VOC results being qualified as biased low, all of which were reported as non detect.

4. Conclusions

Ten water-table monitoring wells were successfully installed both on and off Site in the immediate area of the Cline Avenue ditch. The potentiometric surface characterized by the established well network confirms groundwater flows towards the Cline Avenue ditch from both the west and east sides of the ditch. Soil samples collected during well installation identified limited on-Site soil impacts, and confirms no soil exceedances off-Site. Groundwater sampling identified petroleum-related groundwater impacts are limited to on-Site monitoring wells, with no detectable VOCs or SVOCs in wells off-Site to the west and southwest.



Should you have any questions on the above, please do not hesitate to contact us.

Sincerely,

GHD

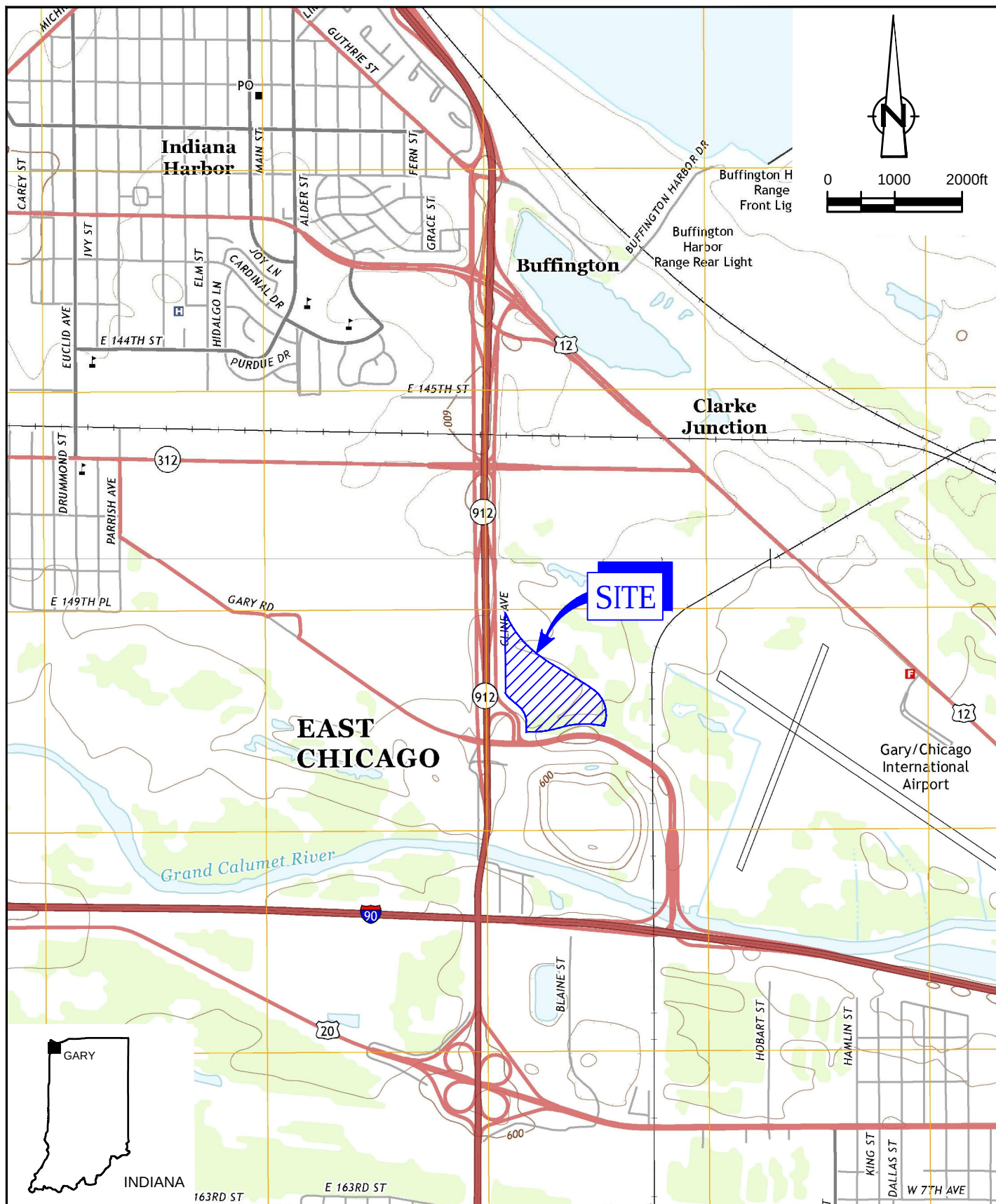
A handwritten signature in black ink, appearing to read "Chris Bonniwell", followed by a long horizontal line.

Chris Bonniwell

JEP/kf/1

Encl.

cc: (electronically)
David Sweeten, electronic
Rick Passmore, electronic
Jacob Hassan, USEPA Region V, electronic
Renee Wawczak, USEPA Region V, electronic
Michael Tomka, GHD, electronic



Source: USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE; HIGHLAND AND WHITING, INDIANA 2013



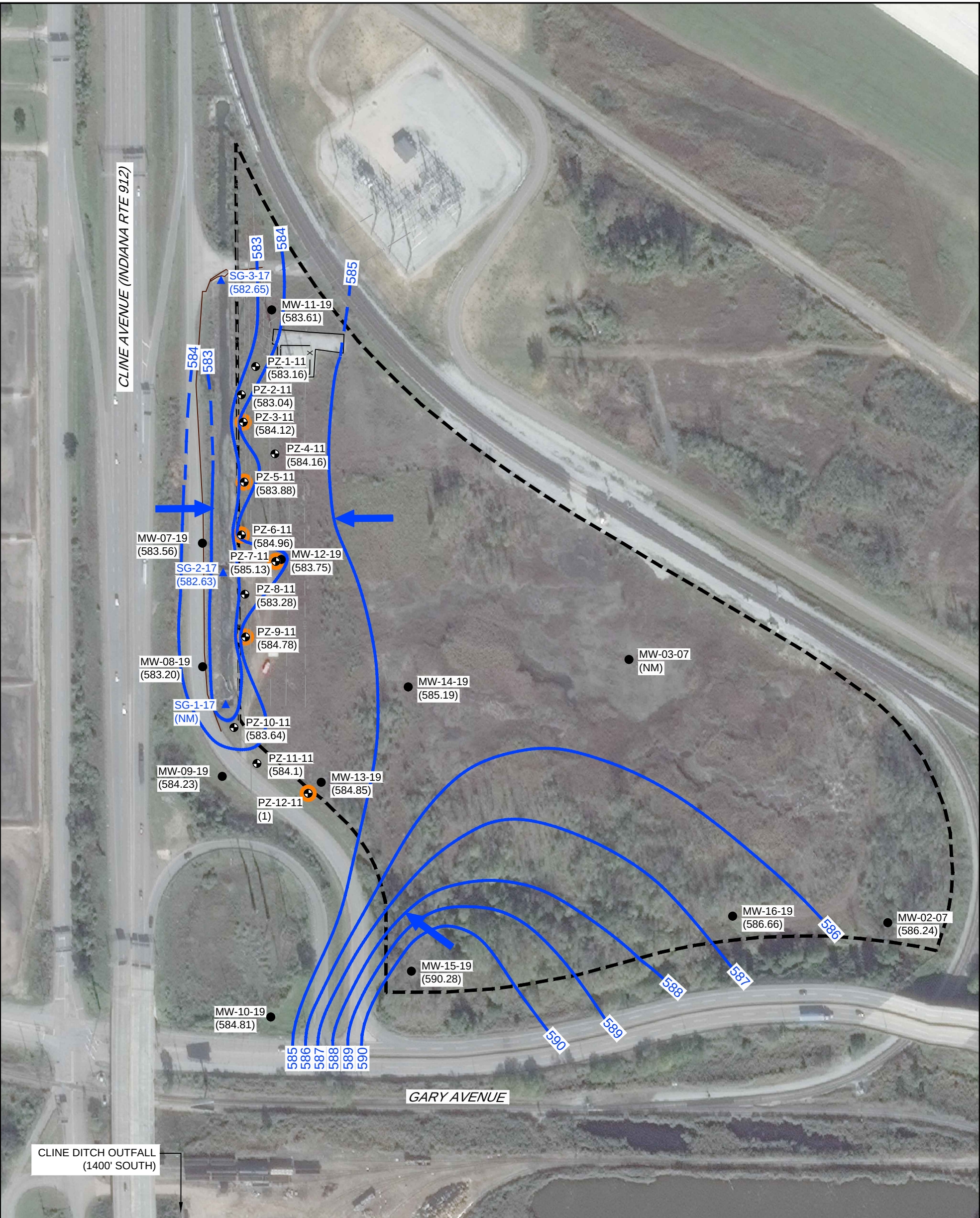
CLINE AVENUE OIL SPILL SITE
GARY, INDIANA

85886-00
Oct 29, 2019

SITE LOCATION

FIGURE 1





LEGEND

- | | | | |
|------------|---|------------|---|
| --- | SITE BOUNDARY | MW-10-19 ● | MONITORING WELL LOCATION (SURVEYED SEPTEMBER 5, 2019. NAVD88) |
| --- | SURVEYED UNDERGROUND ELECTRICAL LINE | SG-2-17 ▲ | STAFF GAUGE LOCATION (SURVEYED JUNE 2, 2017. NAVD88) |
| --- | SURVEYED OVERHEAD WIRE | 586 | SEPTEMBER 2019 GROUNDWATER CONTOUR (FT AMSL) |
| --- | SURVEYED NIPSCO UNDERGROUND UTILITY LINE | → | SEPTEMBER 2019 GENERAL GROUNDWATER FLOW DIRECTION |
| --- | SURVEYED BP UNDERGROUND UTILITY LINE | ● | INDICATES THAT LNAPL WAS PRESENT DURING GAUGING EVENT |
| --- | SURVEYED BUCKEYE UTILITY LINE | (1) | ELEVATION NOT USED IN DEVELOPING GROUNDWATER CONTOURS |
| PZ-12-11 ● | PIEZOMETER LOCATION (SURVEYED JUNE 2, 2017. NAVD88) | | |



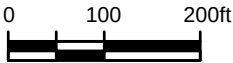
LEGEND

- SITE BOUNDARY
- SURVEYED UNDERGROUND ELECTRICAL LINE
- SURVEYED OVERHEAD WIRE
- G --- SURVEYED NIPSCO UNDERGROUND UTILITY LINE
- G --- SURVEYED BP UNDERGROUND UTILITY LINE
- G --- SURVEYED BUCKEYE UTILITY LINE
- PZ-12-11 ● PIEZOMETER LOCATION (SURVEYED JUNE 2, 2017. NAVD88)
- MW-10-19 ● MONITORING WELL LOCATION (SURVEYED SEPTEMBER 5, 2019. NAVD88)
- SG-2-17 ▲ STAFF GAUGE LOCATION (SURVEYED JUNE 2, 2017. NAVD88)
- 586--- SEPTEMBER 2019 GROUNDWATER CONTOUR (FT AMSL)
- SEPTEMBER 2019 GENERAL GROUNDWATER FLOW DIRECTION

- NOTES:
- SAMPLES WERE COLLECTED DURING THE SEPTEMBER 2019 GROUNDWATER MONITORING EVENT.
 - ALL CONCENTRATIONS ARE EXPRESSED IN MICROGRAMS PER LITER.
 - ONLY THOSE CONCENTRATIONS EXCEEDING THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT RESIDENTIAL GROUNDWATER TAP SCREENING LEVEL ARE INCLUDED.

Parameter	IDEM_2019_Tap
2-Methylnaphthalene	36
Arsenic (dissolved)	10
Benzene	5
Benzo(a)anthracene	0.3
Cobalt (dissolved)	6
Iron (dissolved)	14000
Lead (dissolved)	15
Manganese (dissolved)	430

Source: CM LAVOIE & ASSOCIATES, INC., SURVEY DATED JUNE 2, 2017, UPDATED JULY 27, 2017 (INDIANA WEST NAD83, NAVD88). AERIAL IMAGE BY TERRASERVER, 0.5m RESOLUTION, 2016-10-23.



Coordinate System:
INDIANA WEST STATE
PLANE NAD83



CLINE AVENUE OIL SPILL SITE
GARY, INDIANA

GROUNDWATER ANALYTICAL RESULTS SUMMARY

11198545
Oct 29, 2019

Table 1

**Sample Collection and Analysis Summary
Cline Avenue Oil Spill Site (#0000473)
Gary, Indiana**

Analysis/Parameters

Sample Identification	Location	Matrix	Initial Sample Depth (ft. bgs.)	Final Sample Depth (ft. bgs.)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	VOCs	SVOCs	PCBs	Metals	Comments
SO-11198545-080519-YY-001	MW-14-19	Soil	2.5	5	08/05/2019	11:25	X	X	X	X	MS/MSD
SO-11198585-080519-YY-002	MW-13-19	Soil	1.5	3	08/05/2019	14:30	X	X	X	X	
TB-11198545-080519-YY-01	-	Water	-	-	08/05/2019	08:00	X				TRIP BLANK
SO-11198545-080619-YY-003	MW-09-19	Soil	2.5	5	08/06/2019	11:45	X	X	X	X	MS/MSD
SO-11198545-080619-YY-004	MW-11-19	Soil	2.5	5	08/06/2019	13:45	X	X	X	X	
SO-11198545-080619-YY-005	MW-11-19	Soil	2.5	5	08/06/2019	14:00	X	X	X	X	FD(SO-11198545-080619-YY-004)
SO-11198545-082819-YY-006	MW-16-19	Soil	1	2	08/28/2019	10:35	X	X	X	X	
TRIP BLANK 8-28-19	-	Water	-	-	08/28/2019	-	X				TRIP BLANK
GW-11198545-090519-YY-001	MW-02-07	Water	-	-	09/05/2019	09:40	X	X	X	X	
GW-11198545-090519-YY-002	MW-13-19	Water	-	-	09/05/2019	11:22	X	X	X	X	
GW-11198545-090519-YY-003	MW-12-19	Water	-	-	09/05/2019	13:53	X	X	X	X	
GW-11198545-090519-YY-004	MW-12-19	Water	-	-	09/05/2019	13:55	X	X	X	X	FD(GW-11198545-090519-YY-003)
GW-11198545-090519-YY-005	MW-11-19	Water	-	-	09/05/2019	15:08	X	X	X	X	
GW-11198545-090519-YY-006	MW-14-19	Water	-	-	09/05/2019	16:18	X	X	X	X	
GW-11198545-090519-YY-007	MW-15-19	Water	-	-	09/05/2019	17:43	X	X	X	X	
TRIP BLANK-1	-	Water	-	-	09/05/2019	08:00	X				TRIP BLANK
GW-11198545-090519-YY-008	MW-16-19	Water	-	-	09/05/2019	18:45	X	X	X	X	
GW-11198545-090619-YY-009	MW-09-19	Water	-	-	09/06/2019	09:38	X	X	X	X	
GW-11198545-090619-YY-010	MW-08-19	Water	-	-	09/06/2019	10:50	X	X	X	X	
GW-11198545-090619-YY-011	MW-07-19	Water	-	-	09/06/2019	11:55	X	X	X	X	
GW-11198545-090619-YY-012	MW-10-19	Water	-	-	09/06/2019	13:53	X	X	X	X	MS/MSD
TRIP BLANK-2	-	Water	-	-	09/05/2019	-	X				TRIP BLANK

Notes:

- - Not Applicable
- DUP - Laboratory Duplicate
- FD - Field Duplicate of sample in parentheses
- ft. bgs. - Feet below ground surface
- MS/MSD - Matrix Spike/Matrix Spike Duplicate
- PCBs - Polychlorinated Biphenyls
- SVOCs - Semi-volatile Organic Compounds
- VOCs - Volatile Organic Compounds

Table 2

**Gauging and Groundwater Elevation Data
Cline Avenue Oil Spill Site (#0000473)
Gary, Indiana**

Well	Top of Casing	Depth to Groundwater	Depth To Product	Groundwater Elevation	Corrected Groundwater Elevation ⁽¹⁾
MW-02-07	592.34	6.10	ND	586.24	NA
MW-03-07	591.42	NM	NM	-	-
MW-07-19	589.78	6.22	ND	583.56	NA
MW-08-19	588.76	5.56	ND	583.20	NA
MW-09-19	587.63	3.40	ND	584.23	NA
MW-10-19	586.99	2.18	ND	584.81	NA
MW-11-19	592.09	8.48	ND	583.61	NA
MW-12-19	592.04	8.29	ND	583.75	NA
MW-13-19	594.30	9.45	ND	584.85	NA
MW-14-19	591.88	6.69	ND	585.19	NA
MW-15-19	597.34	7.06	ND	590.28	NA
MW-16-19	592.94	6.28	ND	586.66	NA
PZ-1-11	589.12	5.96	ND	583.16	NA
PZ-2-11	588.24	5.20	ND	583.04	NA
PZ-3-11	588.97	6.85	5.80	NA	584.12
PZ-4-11	590.86	6.70	ND	584.16	NA
PZ-5-11	589.24	6.92	6.10	NA	583.88
PZ-6-11	587.98	6.59	4.71	NA	584.96
PZ-7-11	588.43	6.21	4.68	NA	585.13
PZ-8-11	587.51	4.23	ND	583.28	NA
PZ-9-11	587.90	6.10	4.53	NA	584.78
PZ-10-11	587.14	3.50	ND	583.64	NA
PZ-11-11	586.42	2.32	ND	584.10	NA
PZ-12-11	587.94	8.08	7.54	NA	580.89
SG-1-17	586.49	NM	NM	-	-
SG-2-17	586.28	3.65	ND	582.63	NA
SG-3-17	585.56	2.91	ND	582.65	NA

Notes

All elevations are expressed in feet above mean sea level.

ND Not detected

NA Not applicable

(1) A corrected groundwater was calculated by subtracting the depth to product from the top of casing and adding the relative density of the LNAPL (0.9) multiplied by the thickness of the LNAPL

Table 3

**Soil Analytical Results Summary
Cline Avenue Spill Site (#0000473)
Gary, Indiana**

Sample Location:						MW-09-19	MW-11-19	MW-11-19	MW-13-19
Sample ID:						SO-11198545-080619-YY-003	SO-11198545-080619-YY-004	SO-11198545-080619-YY-005	SO-11198585-080519-YY-002
Sample Date:						8/6/2019	8/6/2019	8/6/2019	8/5/2019
Sample Depth:						(2.5-5) ft BGS	(2.5-5) ft BGS	(2.5-5) ft BGS (Duplicate)	(1.5-3) ft BGS
Parameters	Units	Soil MTG	Direct Contact						
			Residential	Com/Ind	Excavation				
Volatile Organic Compounds									
1,1,1-Trichloroethane	mg/kg	1.4	640	640	640	0.00314 U	0.00316 U	0.00281 U	0.0267 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0059	8.4	27	1900	0.00314 U	0.00316 U	0.00281 U	0.0267 U
1,1,2-Trichloroethane	mg/kg	0.032	2.1	6.3	35	0.00314 U	0.00316 U	0.00281 U	0.0267 U
1,1-Dichloroethane	mg/kg	0.16	50	160	1700	0.00314 U	0.00316 U	0.00281 U	0.0267 U
1,1-Dichloroethene	mg/kg	0.05	320	1000	1200	0.00314 U	0.00316 U	0.00281 U	0.0267 U
1,2,3-Trichlorobenzene	mg/kg	0.42	88	930	1600	0.00314 U	0.00316 U	0.00281 U	0.0267 U
1,2,4-Trichlorobenzene	mg/kg	4.1	81	260	400	0.0157 U	0.0158 U	0.0141 U	0.134 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.0017	0.074	0.64	86	0.0314 UJ	0.0316 UJ	0.0281 UJ	0.267 UJ
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.00028	0.5	1.6	180	0.00314 U	0.00316 U	0.00281 U	0.0267 U
1,2-Dichlorobenzene	mg/kg	12	380	380	380	0.00627 U	0.00632 U	0.00562 U	0.0535 U
1,2-Dichloroethane	mg/kg	0.028	6.4	20	730	0.00314 U	0.00316 U	0.00281 U	0.0267 U
1,2-Dichloropropane	mg/kg	0.033	22	66	360	0.00627 U	0.00632 U	0.00562 U	0.0535 U
1,3-Dichlorobenzene	mg/kg	-	-	-	-	0.00627 U	0.00632 U	0.00562 U	0.0535 U
1,4-Dichlorobenzene	mg/kg	1.4	36	110	16000	0.00627 U	0.00632 U	0.00562 U	0.0535 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	23	28000	28000	28000	0.0314 U	0.0316 U	0.0281 U	0.267 U
2-Hexanone	mg/kg	0.18	280	1300	3300	0.0314 U	0.0316 U	0.0281 U	0.267 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	28	3400	3400	3400	0.0314 U	0.0316 U	0.0281 U	0.267 U
Acetone	mg/kg	57	85000	100000	100000	0.153	0.0372	0.0425	2.36
Benzene	mg/kg	0.051	17	51	1800	0.00298	0.00126 U	0.00112 U	0.208
Bromodichloromethane	mg/kg	0.43	4.1	13	930	0.00314 U	0.00316 U	0.00281 U	0.0267 U
Bromoform	mg/kg	0.42	270	860	920	0.0314 U	0.0316 U	0.0281 U	0.267 U
Bromomethane (Methyl bromide)	mg/kg	0.038	9.5	30	160	0.0157 U	0.0158 U	0.0141 U	0.134 U
Carbon disulfide	mg/kg	4.8	740	740	740	0.0157 U	0.0158 U	0.0141 U	0.134 U
Carbon tetrachloride	mg/kg	0.039	9.1	29	460	0.00627 U	0.00632 U	0.00562 U	0.0535 U
Chlorobenzene	mg/kg	1.4	390	760	760	0.00314 U	0.00316 U	0.00281 U	0.0267 U
Chlorobromomethane	mg/kg	0.41	210	630	3500	0.00627 U	0.00632 U	0.00562 U	0.0535 U
Chloroethane	mg/kg	120	2100	2100	2100	0.00627 U	0.00632 U	0.00562 U	0.0535 U
Chloroform (Trichloromethane)	mg/kg	0.44	4.5	14	1900	0.00314 U	0.00316 U	0.00281 U	0.0267 U
Chloromethane (Methyl chloride)	mg/kg	0.98	150	460	1300	0.0157 U	0.0158 U	0.0141 U	0.134 U
cis-1,2-Dichloroethene	mg/kg	0.41	220	2300	2400	0.00314 U	0.00316 U	0.00281 U	0.0267 U
cis-1,3-Dichloropropene	mg/kg	-	-	-	-	0.00314 U	0.00316 U	0.00281 U	0.0267 U
Cyclohexane	mg/kg	270	120	120	120	0.00684	0.00523	0.00599	1.29
Dibromochloromethane	mg/kg	0.43	120	390	800	0.00314 U	0.00316 U	0.00281 U	0.0267 U
Dichlorodifluoromethane (CFC-12)	mg/kg	6	120	370	850	0.00314 U	0.00316 U	0.00281 U	0.0267 U
Ethylbenzene	mg/kg	16	81	250	480	0.00699	0.00316 U	0.00281 U	0.0624
Isopropyl benzene	mg/kg	15	270	270	270	0.00314 U	0.00316 U	0.00281 U	0.0828
Methyl acetate	mg/kg	83	29000	29000	29000	0.0682	0.00632 U	0.00961	0.404
Methyl cyclohexane	mg/kg	-	-	-	-	0.0110	0.00632 U	0.00562 U	5.75
Methyl tert butyl ether (MTBE)	mg/kg	0.63	660	2100	8900	0.00125 U	0.00126 U	0.00112 U	0.0107 U
Methylene chloride	mg/kg	0.025	490	3200	3300	0.0314 U	0.0316 U	0.0281 U	0.267 U
Styrene	mg/kg	2.2	870	870	870	0.0157 U	0.0158 U	0.0141 U	0.134 U
Tetrachloroethene	mg/kg	0.045	110	170	170	0.00314 U	0.00316 U	0.00281 U	0.0267 U
Toluene	mg/kg	14	820	820	820	0.0305	0.00638	0.00618	0.282
trans-1,2-Dichloroethene	mg/kg	0.62	1900	1900	1900	0.00627 U	0.00632 U	0.00562 U	0.0535 U
trans-1,3-Dichloropropene	mg/kg	-	-	-	-	0.00627 U	0.00632 U	0.00562 U	0.0535 U
Trichloroethene	mg/kg	0.036	5.7	19	95	0.00125 U	0.00126 U	0.00112 U	0.0107 U
Trichlorofluoromethane (CFC-11)	mg/kg	66	1200	1200	1200	0.00314 U	0.00316 U	0.00281 U	0.0267 U

Table 3

Soil Analytical Results Summary
Cline Avenue Spill Site (#0000473)
Gary, Indiana

Sample Location:						MW-09-19	MW-11-19	MW-11-19	MW-13-19
Sample ID:						SO-11198545-080619-YY-003	SO-11198545-080619-YY-004	SO-11198545-080619-YY-005	SO-11198585-080519-YY-002
Sample Date:						8/6/2019	8/6/2019	8/6/2019	8/5/2019
Sample Depth:						(2.5-5) ft BGS	(2.5-5) ft BGS	(2.5-5) ft BGS (Duplicate)	(1.5-3) ft BGS
Parameters						Direct Contact			
	Units	Soil MTG	Residential	Com/Ind	Excavation				
Trifluorotrichloroethane (CFC-113)	mg/kg	490	910	910	910	0.00314 U	0.00316 U	0.00281 U	0.0267 U
Vinyl chloride	mg/kg	0.014	0.83	17	1300	0.00314 U	0.00316 U	0.00281 U	0.0267 U
Xylenes (total)	mg/kg	200	260	260	260	0.0509	0.00822 U	0.00731 U	2.45
Semi-volatile Organic Compounds									
1,2,4,5-Tetrachlorobenzene	mg/kg	0.16	32	350	590	2.09 U	0.421 U	0.375 U	22.3 U
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	5.2	1000	1000	1000	2.09 U	0.421 U	0.375 U	22.3 U
2,4,5-Trichlorophenol	mg/kg	81	8800	82000	100000	2.09 U	0.421 U	0.375 U	22.3 U
2,4,6-Trichlorophenol	mg/kg	0.23	88	820	1800	2.09 U	0.421 U	0.375 U	22.3 U
2,4-Dichlorophenol	mg/kg	0.45	270	2500	5200	2.09 U	0.421 U	0.375 U	22.3 U
2,4-Dimethylphenol	mg/kg	8.5	1800	16000	34000	2.09 U	0.421 U	0.375 U	22.3 U
2,4-Dinitrophenol	mg/kg	0.87	180	1600	3400	2.09 U	0.421 U	0.375 U	22.3 U
2,4-Dinitrotoluene	mg/kg	0.065	24	74	3400	2.09 U	0.421 U	0.375 U	22.3 U
2,6-Dinitrotoluene	mg/kg	0.013	5	15	520	2.09 U	0.421 U	0.375 U	22.3 U
2-Chloronaphthalene	mg/kg	77	6700	60000	100000	0.209 U	0.0421 U	0.0375 U	2.23 U
2-Chlorophenol	mg/kg	1.8	550	5800	9800	2.09 U	0.421 U	0.375 U	22.3 U
2-Methylnaphthalene	mg/kg	3.7	340	3000	6800	0.154 J	0.0302 J	0.0375 U	6.83
2-Methylphenol	mg/kg	15	4500	41000	87000	2.09 U	0.421 U	0.375 U	22.3 U
2-Nitroaniline	mg/kg	1.6	880	8000	18000	2.09 U	0.421 U	0.375 U	22.3 U
2-Nitrophenol	mg/kg	-	-	-	-	2.09 U	0.421 U	0.375 U	22.3 U
3&4-Methylphenol	mg/kg	-	-	-	-	2.09 U	0.421 U	0.375 U	22.3 U
3,3'-Dichlorobenzidine	mg/kg	0.17	17	51	2700	2.09 U	0.421 U	0.375 U	22.3 U
3-Nitroaniline	mg/kg	-	-	-	-	2.09 U	0.421 U	0.375 U	22.3 U
4,6-Dinitro-2-methylphenol	mg/kg	0.051	7.1	66	140	2.09 U	0.421 U	0.375 U	22.3 U
4-Bromophenyl phenyl ether	mg/kg	-	-	-	-	2.09 U	0.421 U	0.375 U	22.3 U
4-Chloro-3-methylphenol	mg/kg	33	8800	82000	100000	2.09 U	0.421 U	0.375 U	22.3 U
4-Chloroaniline	mg/kg	0.031	38	110	6000	2.09 U	0.421 U	0.375 U	22.3 U
4-Chlorophenyl phenyl ether	mg/kg	-	-	-	-	2.09 U	0.421 U	0.375 U	22.3 U
4-Nitroaniline	mg/kg	0.32	350	1100	7000	2.09 U	0.421 U	0.375 U	22.3 U
4-Nitrophenol	mg/kg	-	-	-	-	2.09 U	0.421 U	0.375 U	22.3 U
Acenaphthene	mg/kg	110	5000	45000	100000	0.209 U	0.0421 U	0.0375 U	1.42 J
Acenaphthylene	mg/kg	-	-	-	-	0.209 U	0.0421 U	0.0375 U	2.23 U
Acetophenone	mg/kg	12	2500	2500	2500	2.09 U	0.421 U	0.375 U	22.3 U
Anthracene	mg/kg	1200	25000	100000	100000	0.209 U	0.0421 U	0.0375 U	1.39 J
Atrazine	mg/kg	0.039	34	100	5200	2.09 U	0.421 U	0.375 U	22.3 U
Benzaldehyde	mg/kg	0.84	1200	1200	1200	2.09 UJ	0.421 UJ	0.375 UJ	22.3 UJ
Benzo(a)anthracene	mg/kg	2.1	15	210	12000	0.118 J	0.0153 J	0.0154 J	6.11
Benzo(a)pyrene	mg/kg	4.7	1.5	21	500	0.138 J	0.0115 J	0.0124 J	4.85
Benzo(b)fluoranthene	mg/kg	60	15	210	12000	0.138 J	0.0159 J	0.0177 J	4.69
Benzo(g,h,i)perylene	mg/kg	-	-	-	-	0.772	0.0259 J	0.0304 J	4.00
Benzo(k)fluoranthene	mg/kg	590	150	2100	100000	0.209 U	0.0421 U	0.0375 U	0.713 J
Biphenyl (1,1-Biphenyl)	mg/kg	0.17	66	200	1100	2.09 U	0.421 U	0.375 U	22.3 U
bis(2-Chloroethoxy)methane	mg/kg	0.27	270	2500	5200	2.09 U	0.421 U	0.375 U	22.3 U
bis(2-Chloroethyl)ether	mg/kg	0.00074	3.2	10	810	2.09 U	0.421 U	0.375 U	22.3 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	29	550	1600	34000	2.09 U	0.421 U	0.375 U	22.3 U
Butyl benzylphthalate (BBP)	mg/kg	46	4100	12000	100000	2.09 U	0.421 U	0.375 U	22.3 U
Caprolactam	mg/kg	49	43000	100000	100000	2.09 U	0.421 U	0.375 U	22.3 U
Carbazole	mg/kg	-	-	-	-	2.09 U	0.421 U	0.375 U	0.725 J
Chrysene	mg/kg	1800	1500	21000	100000	0.403	0.0353 J	0.0301 J	12.6

Table 3

Soil Analytical Results Summary
Cline Avenue Spill Site (#0000473)
Gary, Indiana

Sample Location:

Sample ID:

Sample Date:

Sample Depth:

MW-09-19	MW-11-19	MW-11-19	MW-13-19
SO-11198545-080619-YY-003	SO-11198545-080619-YY-004	SO-11198545-080619-YY-005	SO-11198585-080519-YY-002
8/6/2019	8/6/2019	8/6/2019	8/5/2019
(2.5-5) ft BGS	(2.5-5) ft BGS	(2.5-5) ft BGS	(1.5-3) ft BGS

		Direct Contact						(Duplicate)			
Parameters	Units	Soil MTG	Residential	Com/Ind	Excavation						
Dibenz(a,h)anthracene	mg/kg	19	1.5	21	1200	0.120 J	0.0421 U	0.0375 U		2.59	
Dibenzofuran	mg/kg	2.9	100	1000	1900	2.09 U	0.421 U	0.375 U		22.3 U	
Diethyl phthalate	mg/kg	120	71000	100000	100000	2.09 U	0.421 U	0.375 U		22.3 U	
Dimethyl phthalate	mg/kg	-	-	-	-	2.09 U	0.421 U	0.375 U		22.3 U	
Di-n-butylphthalate (DBP)	mg/kg	45	8800	82000	100000	2.09 U	0.421 U	0.375 U		22.3 U	
Di-n-octyl phthalate (DnOP)	mg/kg	1100	880	8200	18000	2.09 U	0.421 U	0.375 U		22.3 U	
Fluoranthene	mg/kg	1800	3400	30000	68000	0.0761 J	0.00983 J	0.0107 J		3.20	
Fluorene	mg/kg	110	3400	30000	68000	0.209 U	0.0421 U	0.0375 U		1.83 J	
Hexachlorobenzene	mg/kg	0.25	2.9	9.6	630	2.09 U	0.421 U	0.375 U		22.3 U	
Hexachlorobutadiene	mg/kg	0.054	17	17	17	2.09 U	0.421 U	0.375 U		22.3 U	
Hexachlorocyclopentadiene	mg/kg	3.1	2.5	7.5	16	2.09 U	0.421 U	0.375 U		22.3 U	
Hexachloroethane	mg/kg	0.04	25	80	1100	2.09 U	0.421 U	0.375 U		22.3 U	
Indeno(1,2,3-cd)pyrene	mg/kg	200	15	210	12000	0.116 J	0.0421 U	0.00997 J		1.43 J	
Isophorone	mg/kg	5.2	8000	24000	100000	2.09 U	0.421 U	0.375 U		22.3 U	
Naphthalene	mg/kg	0.11	53	170	3100	0.0772 J	0.0421 U	0.0375 U		2.23 U	
Nitrobenzene	mg/kg	0.018	71	220	3100	2.09 U	0.421 U	0.375 U		22.3 U	
N-Nitrosodi-n-propylamine	mg/kg	0.0017	1.1	3.3	180	2.09 U	0.421 U	0.375 U		22.3 U	
N-Nitrosodiphenylamine	mg/kg	13	1500	4700	100000	2.09 U	0.421 U	0.375 U		22.3 U	
Pentachlorophenol	mg/kg	0.028	14	40	2600	2.09 U	0.421 U	0.375 U		22.3 U	
Phenanthrene	mg/kg	-	-	-	-	0.0927 J	0.0363 J	0.0331 J		9.84	
Phenol	mg/kg	67	27000	100000	100000	2.09 U	0.421 U	0.375 U		22.3 U	
Pyrene	mg/kg	260	2500	23000	51000	0.116 J	0.0259 J	0.0285 J		13.3	
Metals											
Aluminum	mg/kg	600000	100000	100000	100000	2270 J	1730 J	2120 J		2140 J	
Antimony	mg/kg	5.4	43	470	790	2.51 UJ	2.53 UJ	1.01 J		1.27 J	
Arsenic	mg/kg	5.9	9.5	30	920	1.63 J	1.38 J	1.83 J		5.06	
Barium	mg/kg	1700	21000	100000	100000	13.6 J	9.59 J	12.2 J		18.9 J	
Beryllium	mg/kg	63	220	2300	3800	0.122 J	0.253 UJ	0.134 J		0.0988 J	
Cadmium	mg/kg	7.5	-	-	-	0.317 J	0.231 J	0.339 J		0.565 J	
Calcium	mg/kg	-	-	-	-	28200 J	21600 J	32400 J		27900 J	
Chromium	mg/kg	1000000	-	-	-	5.74 J	3.35 J	4.82 J		6.66 J	
Cobalt	mg/kg	5.4	32	350	590	1.84	1.82	2.30		1.95	
Copper	mg/kg	920	4300	47000	79000	51.6 J	6.23 J	7.65 J		356 J	
Iron	mg/kg	7100	77000	100000	100000	4070 J	3650 J	4740 J		4550 J	
Lead	mg/kg	270	400	800	1000	150 J	21.7 J	27.8 J		2210 J	
Magnesium	mg/kg	-	-	-	-	14900 J	10400 J	11800 J		11600 J	
Manganese	mg/kg	560	2500	26000	46000	149 J	105 J	143 J		139 J	
Mercury	mg/kg	-	-	-	-	0.0744 J	0.00847 J	0.00325 J		1.26 J	
Nickel	mg/kg	510	2100	22000	38000	11.2 J	9.71 J	11.3 J		13.3 J	
Potassium	mg/kg	-	-	-	-	397 J	441 J	398 J		333 J	
Selenium	mg/kg	5.3	550	5800	9800	2.51 U	2.53 U	2.25 U		2.67 U	
Silver	mg/kg	16	550	5800	9800	1.25 U	1.26 U	1.12 U		1.34 U	
Sodium	mg/kg	-	-	-	-	201 J	195 J	161 J		191 J	
Thallium	mg/kg	2.9	1.1	12	20	2.51 U	2.53 U	2.25 U		2.67 U	
Vanadium	mg/kg	1700	550	5800	9900	7.04 J	6.69 J	9.03 J		13.0 J	
Zinc	mg/kg	7500	32000	100000	100000	70.9 J	54.8 J	67.3 J		101 J	

Table 3

Soil Analytical Results Summary
Cline Avenue Spill Site (#0000473)
Gary, Indiana

Sample Location:

Sample ID:

Sample Date:

Sample Depth:

	MW-09-19	MW-11-19	MW-11-19	MW-13-19
	SO-11198545-080619-YY-003	SO-11198545-080619-YY-004	SO-11198545-080619-YY-005	SO-11198545-080619-YY-002
	8/6/2019	8/6/2019	8/6/2019	8/5/2019
	(2.5-5) ft BGS	(2.5-5) ft BGS	(2.5-5) ft BGS	(1.5-3) ft BGS

Parameters**PCBs**

	Units	Soil MTG	Residential	Com/Ind	Excavation				
Aroclor-1016 (PCB-1016)	mg/kg	2.7	5.7	51	120	0.0213 U	0.0215 U	0.0191 U	0.0227 U
Aroclor-1221 (PCB-1221)	mg/kg	0.016	2.8	8.3	520	0.0213 U	0.0215 U	0.0191 U	0.0227 U
Aroclor-1232 (PCB-1232)	mg/kg	0.016	2.4	7.2	490	0.0213 U	0.0215 U	0.0191 U	0.0227 U
Aroclor-1242 (PCB-1242)	mg/kg	0.24	3.2	9.5	560	0.0213 U	0.0215 U	0.0191 U	0.0227 U
Aroclor-1248 (PCB-1248)	mg/kg	0.24	3.2	9.5	560	0.0213 U	0.0215 U	0.0191 U	0.0227 U
Aroclor-1254 (PCB-1254)	mg/kg	0.41	1.7	9.7	33	0.0213 U	0.0215 U	0.0191 U	0.0227 U
Aroclor-1260 (PCB-1260)	mg/kg	1.1	3.4	9.9	570	0.0213 U	0.0215 U	0.0191 U	0.0227 U

Petroleum Products

Gasoline	mg/kg	-	-	-	-	0.293	0.0280 J	0.0813 J	305
Total Petroleum Hydrocarbons (C10-C28) DRO	mg/kg	-	-	-	-	110 J	4.80 J	10.3	6950
Total Petroleum Hydrocarbons (C28-C40) ORO	mg/kg	-	-	-	-	473	12.1	27.3	4770

Notes:

J - Estimated concentration.

U - Not detected at the associated reporting limit.

UJ - Not detected; associated reporting limit is estimated.

PCBs - Polychlorinated Biphenyls

Soil MTG - Soil Migration to Groundwater Screening Level, denoted by bold

Residential - Residential Direct Contact Screening Level, denoted by *italics*

Com/Ind - Commercial/Industrial Direct Contact Screening Level, denoted by underline

Excavation - Excavation Direct Contact Screening Level, denoted by shading

"-" - no criteria has been established.

Table 3

Soil Analytical Results Summary
Cline Avenue Spill Site (#0000473)
Gary, Indiana

Sample Location:						MW-14-19	MW-16-19
Sample ID:						SO-11198545-080519-YY-001	SO-11198545-082819-YY-006
Sample Date:						8/5/2019	8/28/2019
Sample Depth:						(2.5-5) ft BGS	(1-2) ft BGS
Parameters	Units	Soil MTG	Residential	Direct Contact Com/Ind	Excavation		
Volatile Organic Compounds							
1,1,1-Trichloroethane	mg/kg	1.4	640	640	640	0.123 U	0.0252 U
1,1,2,2-Tetrachloroethane	mg/kg	0.0059	8.4	27	1900	0.123 U	0.0252 UJ
1,1,2-Trichloroethane	mg/kg	0.032	2.1	6.3	35	0.123 U	0.0252 U
1,1-Dichloroethane	mg/kg	0.16	50	160	1700	0.123 U	0.0252 U
1,1-Dichloroethene	mg/kg	0.05	320	1000	1200	0.123 U	0.0252 U
1,2,3-Trichlorobenzene	mg/kg	0.42	88	930	1600	0.123 U	0.0252 UJ
1,2,4-Trichlorobenzene	mg/kg	4.1	81	260	400	0.617 U	0.126 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.0017	0.074	0.64	86	1.23 UJ	0.252 UJ
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.00028	0.5	1.6	180	0.123 U	0.0252 U
1,2-Dichlorobenzene	mg/kg	12	380	380	380	0.247 U	0.0504 U
1,2-Dichloroethane	mg/kg	0.028	6.4	20	730	0.123 U	0.0252 U
1,2-Dichloropropane	mg/kg	0.033	22	66	360	0.247 U	0.0504 U
1,3-Dichlorobenzene	mg/kg	-	-	-	-	0.247 U	0.0504 U
1,4-Dichlorobenzene	mg/kg	1.4	36	110	16000	0.247 U	0.0504 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	23	28000	28000	28000	1.23 U	0.252 U
2-Hexanone	mg/kg	0.18	280	1300	3300	1.23 U	0.252 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	28	3400	3400	3400	1.23 U	0.252 U
Acetone	mg/kg	57	85000	100000	100000	60.1	0.252 U
Benzene	mg/kg	0.051	17	51	1800	5.64	0.00550 J
Bromodichloromethane	mg/kg	0.43	4.1	13	930	0.123 U	0.0252 U
Bromoform	mg/kg	0.42	270	860	920	1.23 U	0.252 U
Bromomethane (Methyl bromide)	mg/kg	0.038	9.5	30	160	0.617 U	0.126 U
Carbon disulfide	mg/kg	4.8	740	740	740	0.617 U	0.126 U
Carbon tetrachloride	mg/kg	0.039	9.1	29	460	0.247 U	0.0504 U
Chlorobenzene	mg/kg	1.4	390	760	760	0.123 U	0.0252 U
Chlorobromomethane	mg/kg	0.41	210	630	3500	0.247 U	0.0504 U
Chloroethane	mg/kg	120	2100	2100	2100	0.247 U	0.0504 U
Chloroform (Trichloromethane)	mg/kg	0.44	4.5	14	1900	0.123 U	0.00439 J
Chloromethane (Methyl chloride)	mg/kg	0.98	150	460	1300	0.617 U	0.126 U
cis-1,2-Dichloroethene	mg/kg	0.41	220	2300	2400	0.123 U	0.0252 U
cis-1,3-Dichloropropene	mg/kg	-	-	-	-	0.123 U	0.0252 U
Cyclohexane	mg/kg	270	120	120	120	32.4	0.0252 U
Dibromochloromethane	mg/kg	0.43	120	390	800	0.123 U	0.0252 U
Dichlorodifluoromethane (CFC-12)	mg/kg	6	120	370	850	0.123 U	0.0252 U
Ethylbenzene	mg/kg	16	81	250	480	19.7	0.0252 U
Isopropyl benzene	mg/kg	15	270	270	270	5.47	0.0252 U
Methyl acetate	mg/kg	83	29000	29000	29000	0.247 U	0.0649 J
Methyl cyclohexane	mg/kg	-	-	-	-	107	0.0504 U
Methyl tert butyl ether (MTBE)	mg/kg	0.63	660	2100	8900	0.0494 U	0.0101 U
Methylene chloride	mg/kg	0.025	490	3200	3300	1.23 U	0.252 U
Styrene	mg/kg	2.2	870	870	870	0.617 U	0.126 U
Tetrachloroethene	mg/kg	0.045	110	170	170	0.123 U	0.0252 U
Toluene	mg/kg	14	820	820	820	4.32	0.0182 J
trans-1,2-Dichloroethene	mg/kg	0.62	1900	1900	1900	0.247 U	0.0504 U
trans-1,3-Dichloropropene	mg/kg	-	-	-	-	0.247 U	0.0504 U
Trichloroethene	mg/kg	0.036	5.7	19	95	0.0494 U	0.0101 U
Trichlorofluoromethane (CFC-11)	mg/kg	66	1200	1200	1200	0.123 U	0.0252 U

Table 3

Soil Analytical Results Summary
Cline Avenue Spill Site (#0000473)
Gary, Indiana

Sample Location:					MW-14-19	MW-16-19
Sample ID:					SO-11198545-080519-YY-001	SO-11198545-082819-YY-006
Sample Date:					8/5/2019	8/28/2019
Sample Depth:					(2.5-5) ft BGS	(1-2) ft BGS
		Direct Contact				
Parameters	Units	Soil MTG	Residential	Com/Ind	Excavation	
Trifluorotrichloroethane (CFC-113)	mg/kg	490	910	910	910	0.123 U
Vinyl chloride	mg/kg	0.014	0.83	17	1300	0.123 U
Xylenes (total)	mg/kg	200	260	260	260	110
Semi-volatile Organic Compounds						
1,2,4,5-Tetrachlorobenzene	mg/kg	0.16	32	350	590	41.1 U
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	5.2	1000	1000	1000	41.1 U
2,4,5-Trichlorophenol	mg/kg	81	8800	82000	100000	41.1 U
2,4,6-Trichlorophenol	mg/kg	0.23	88	820	1800	41.1 U
2,4-Dichlorophenol	mg/kg	0.45	270	2500	5200	41.1 U
2,4-Dimethylphenol	mg/kg	8.5	1800	16000	34000	41.1 U
2,4-Dinitrophenol	mg/kg	0.87	180	1600	3400	41.1 U
2,4-Dinitrotoluene	mg/kg	0.065	24	74	3400	41.1 U
2,6-Dinitrotoluene	mg/kg	0.013	5	15	520	41.1 U
2-Chloronaphthalene	mg/kg	77	6700	60000	100000	41.1 U
2-Chlorophenol	mg/kg	1.8	550	5800	9800	41.1 U
2-Methylnaphthalene	mg/kg	3.7	340	3000	6800	400
2-Methylphenol	mg/kg	15	4500	41000	87000	41.1 U
2-Nitroaniline	mg/kg	1.6	880	8000	18000	41.1 U
2-Nitrophenol	mg/kg	-	-	-	-	41.1 U
3&4-Methylphenol	mg/kg	-	-	-	-	41.1 U
3,3'-Dichlorobenzidine	mg/kg	0.17	17	51	2700	41.1 U
3-Nitroaniline	mg/kg	-	-	-	-	41.1 U
4,6-Dinitro-2-methylphenol	mg/kg	0.051	7.1	66	140	41.1 U
4-Bromophenyl phenyl ether	mg/kg	-	-	-	-	41.1 U
4-Chloro-3-methylphenol	mg/kg	33	8800	82000	100000	41.1 U
4-Chloroaniline	mg/kg	0.031	38	110	6000	41.1 U
4-Chlorophenyl phenyl ether	mg/kg	-	-	-	-	41.1 U
4-Nitroaniline	mg/kg	0.32	350	1100	7000	41.1 U
4-Nitrophenol	mg/kg	-	-	-	-	41.1 U
Acenaphthene	mg/kg	110	5000	45000	100000	28.8
Acenaphthylene	mg/kg	-	-	-	-	41.1 U
Acetophenone	mg/kg	12	2500	2500	2500	41.1 U
Anthracene	mg/kg	1200	25000	100000	100000	33.8
Atrazine	mg/kg	0.039	34	100	5200	41.1 U
Benzaldehyde	mg/kg	0.84	1200	1200	1200	41.1 UJ
Benzo(a)anthracene	mg/kg	2.1	15	210	12000	121
Benzo(a)pyrene	mg/kg	4.7	1.5	21	500	77.9
Benzo(b)fluoranthene	mg/kg	60	15	210	12000	66.8
Benzo(g,h,i)perylene	mg/kg	-	-	-	-	45.5
Benzo(k)fluoranthene	mg/kg	590	150	2100	100000	9.69
Biphenyl (1,1-Biphenyl)	mg/kg	0.17	66	200	1100	41.1 U
bis(2-Chloroethoxy)methane	mg/kg	0.27	270	2500	5200	41.1 U
bis(2-Chloroethyl)ether	mg/kg	0.00074	3.2	10	810	41.1 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	29	550	1600	34000	41.1 U
Butyl benzylphthalate (BBP)	mg/kg	46	4100	12000	100000	41.1 U
Caprolactam	mg/kg	49	43000	100000	100000	41.1 U
Carbazole	mg/kg	-	-	-	-	10.2 J
Chrysene	mg/kg	1800	1500	21000	100000	274

Table 3

Soil Analytical Results Summary
Cline Avenue Spill Site (#0000473)
Gary, Indiana

Sample Location:

Sample ID:

Sample Date:

Sample Depth:

MW-14-19
SO-11198545-080519-YY-001
8/5/2019
(2.5-5) ft BGS

MW-16-19
SO-11198545-082819-YY-006
8/28/2019
(1-2) ft BGS

Parameters	Units	Soil MTG	Direct Contact			
			Residential	Com/Ind		
				Excavation		
Dibenz(a,h)anthracene	mg/kg	19	1.5	21	1200	38.1
Dibenzofuran	mg/kg	2.9	100	1000	1900	41.1 U
Diethyl phthalate	mg/kg	120	71000	100000	100000	41.1 U
Dimethyl phthalate	mg/kg	-	-	-	-	41.1 U
Di-n-butylphthalate (DBP)	mg/kg	45	8800	82000	100000	41.1 U
Di-n-octyl phthalate (DnOP)	mg/kg	1100	880	8200	18000	41.1 U
Fluoranthene	mg/kg	1800	3400	30000	68000	28.9
Fluorene	mg/kg	110	3400	30000	68000	41.5
Hexachlorobenzene	mg/kg	0.25	2.9	9.6	630	41.1 U
Hexachlorobutadiene	mg/kg	0.054	17	17	17	41.1 U
Hexachlorocyclopentadiene	mg/kg	3.1	2.5	7.5	16	41.1 U
Hexachloroethane	mg/kg	0.04	25	80	1100	41.1 U
Indeno(1,2,3-cd)pyrene	mg/kg	200	15	210	12000	13.6
Isophorone	mg/kg	5.2	8000	24000	100000	41.1 U
Naphthalene	mg/kg	0.11	53	170	3100	27.2
Nitrobenzene	mg/kg	0.018	71	220	3100	41.1 U
N-Nitrosodi-n-propylamine	mg/kg	0.0017	1.1	3.3	180	41.1 U
N-Nitrosodiphenylamine	mg/kg	13	1500	4700	100000	41.1 U
Pentachlorophenol	mg/kg	0.028	14	40	2600	41.1 U
Phenanthrene	mg/kg	-	-	-	-	167
Phenol	mg/kg	67	27000	100000	100000	41.1 U
Pyrene	mg/kg	260	2500	23000	51000	126
Metals						
Aluminum	mg/kg	600000	100000	100000	100000	3270 J
Antimony	mg/kg	5.4	43	470	790	1.67 J
Arsenic	mg/kg	5.9	9.5	30	920	24.3
Barium	mg/kg	1700	21000	100000	100000	199 J
Beryllium	mg/kg	63	220	2300	3800	0.247 UJ
Cadmium	mg/kg	7.5	-	-	-	1.47
Calcium	mg/kg	-	-	-	-	103000 J
Chromium	mg/kg	1000000	-	-	-	72.8 J
Cobalt	mg/kg	5.4	32	350	590	4.18
Copper	mg/kg	920	4300	47000	79000	1030 J
Iron	mg/kg	7100	77000	100000	100000	14000 J
Lead	mg/kg	270	400	800	1000	20500 J
Magnesium	mg/kg	-	-	-	-	8810 J
Manganese	mg/kg	560	2500	26000	46000	309 J
Mercury	mg/kg	-	-	-	-	0.0694 J
Nickel	mg/kg	510	2100	22000	38000	53.9 J
Potassium	mg/kg	-	-	-	-	520 J
Selenium	mg/kg	5.3	550	5800	9800	2.47 U
Silver	mg/kg	16	550	5800	9800	0.764 J
Sodium	mg/kg	-	-	-	-	456 J
Thallium	mg/kg	2.9	1.1	12	20	2.47 U
Vanadium	mg/kg	1700	550	5800	9900	39.8 J
Zinc	mg/kg	7500	32000	100000	100000	335 J

Table 3

**Soil Analytical Results Summary
Cline Avenue Spill Site (#0000473)
Gary, Indiana**

Sample Location:						MW-14-19	MW-16-19
Sample ID:						SO-11198545-080519-YY-001	SO-11198545-082819-YY-006
Sample Date:						8/5/2019	8/28/2019
Sample Depth:						(2.5-5) ft BGS	(1-2) ft BGS
Parameters			Direct Contact				
PCBs	Units	Soil MTG	Residential	Com/Ind	Excavation		
Aroclor-1016 (PCB-1016)	mg/kg	2.7	5.7	51	120	0.0210 U	0.0214 U
Aroclor-1221 (PCB-1221)	mg/kg	0.016	2.8	8.3	520	0.0210 U	0.0214 U
Aroclor-1232 (PCB-1232)	mg/kg	0.016	2.4	7.2	490	0.0210 U	0.0214 U
Aroclor-1242 (PCB-1242)	mg/kg	0.24	3.2	9.5	560	0.0210 U	0.0214 U
Aroclor-1248 (PCB-1248)	mg/kg	0.24	3.2	9.5	560	0.0210 U	0.0214 U
Aroclor-1254 (PCB-1254)	mg/kg	0.41	1.7	9.7	33	6.00	0.0214 U
Aroclor-1260 (PCB-1260)	mg/kg	1.1	3.4	9.9	570	0.0210 U	0.0214 U
Petroleum Products							
Gasoline	mg/kg	-	-	-	-	3010	1.48
Total Petroleum Hydrocarbons (C10-C28) DRO	mg/kg	-	-	-	-	62600	2110
Total Petroleum Hydrocarbons (C28-C40) ORO	mg/kg	-	-	-	-	40200	2230

Notes:

J - Estimated concentration.

U - Not detected at the associated reporting limit.

UJ - Not detected; associated reporting limit is estimated.

PCBs - Polychlorinated Biphenyls

Soil MTG - Soil Migration to Groundwater Screening Level, denoted by bold

Residential - Residential Direct Contact Screening Level, denoted by *italics*

Com/Ind - Commercial/Industrial Direct Contact Screening Level, denoted by underline

Excavation - Excavation Direct Contact Screening Level, denoted by shading

"- " - no criteria has been established.

Table 4

Groundwater Analytical Results Summary
Cline Avenue Oil Spill Site (#0000473)
Gary, Indiana

Sample Location:	MW-02-07	MW-07-19	MW-08-19	MW-09-19
Sample ID:	GW-11198545-090519-YY-001	GW-11198545-090619-YY-011	GW-11198545-090619-YY-010	GW-11198545-090619-YY-009
Sample Date:	9/5/2019	9/6/2019	9/6/2019	9/6/2019
Parameters	Units	RGWTSL		
Volatile Organic Compounds				
1,1,1-Trichloroethane	µg/L	200	1.00 U	1.00 U
1,1,2,2-Tetrachloroethane	µg/L	0.76	1.00 U	1.00 U
1,1,2-Trichloroethane	µg/L	5	1.00 U	1.00 U
1,1-Dichloroethane	µg/L	28	1.00 U	1.00 U
1,1-Dichloroethene	µg/L	7	1.00 U	1.00 U
1,2,3-Trichlorobenzene	µg/L	7	1.00 UJ	1.00 UJ
1,2,4-Trichlorobenzene	µg/L	70	1.00 UJ	1.00 UJ
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	0.2	5.00 U	5.00 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	0.05	1.00 U	1.00 U
1,2-Dichlorobenzene	µg/L	600	1.00 U	1.00 U
1,2-Dichloroethane	µg/L	5	1.00 U	1.00 U
1,2-Dichloropropane	µg/L	5	1.00 U	1.00 U
1,3-Dichlorobenzene	µg/L	-	1.00 U	1.00 U
1,4-Dichlorobenzene	µg/L	75	1.00 U	1.00 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	5600	10.0 U	10.0 U
2-Hexanone	µg/L	38	10.0 U	10.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	6300	10.0 U	10.0 U
Acetone	µg/L	14000	50.0 U	50.0 U
Benzene	µg/L	5	1.00 U	1.00 U
Bromodichloromethane	µg/L	80	0.519 J	1.00 U
Bromoform	µg/L	80	2.28	1.00 U
Bromomethane (Methyl bromide)	µg/L	7.5	5.00 U	5.00 U
Carbon disulfide	µg/L	810	1.00 U	1.00 U
Carbon tetrachloride	µg/L	5	1.00 U	1.00 U
Chlorobenzene	µg/L	100	1.00 U	1.00 U
Chlorobromomethane	µg/L	83	1.00 U	1.00 U
Chloroethane	µg/L	21000	5.00 U	5.00 U
Chloroform (Trichloromethane)	µg/L	80	0.883 J	5.00 U
Chloromethane (Methyl chloride)	µg/L	190	2.50 U	2.50 U
cis-1,2-Dichloroethene	µg/L	70	1.00 U	1.00 U
cis-1,3-Dichloropropene	µg/L	-	1.00 U	1.00 U
Cyclohexane	µg/L	13000	1.00 U	1.00 U
Dibromochloromethane	µg/L	80	0.825 J	1.00 U
Dichlorodifluoromethane (CFC-12)	µg/L	200	5.00 U	5.00 U
Ethylbenzene	µg/L	700	1.00 U	1.00 U
Isopropyl benzene	µg/L	450	1.00 U	1.00 U
Methyl acetate	µg/L	20000	20.0 U	20.0 U
Methyl cyclohexane	µg/L	-	1.00 U	1.00 U
Methyl tert butyl ether (MTBE)	µg/L	140	1.00 U	1.00 U
Methylene chloride	µg/L	5	5.00 U	5.00 U
Styrene	µg/L	100	1.00 U	1.00 U
Tetrachloroethene	µg/L	5	1.00 U	1.00 U
Toluene	µg/L	1000	1.00 U	1.00 U
trans-1,2-Dichloroethene	µg/L	100	1.00 U	1.00 U
trans-1,3-Dichloropropene	µg/L	-	1.00 U	1.00 U
Trichloroethene	µg/L	5	1.00 U	1.00 U
Trichlorofluoromethane (CFC-11)	µg/L	5200	5.00 U	5.00 U
Trifluorotrichloroethane (CFC-113)	µg/L	10000	1.00 U	1.00 U
Vinyl chloride	µg/L	2	1.00 U	1.00 U
Xylenes (total)	µg/L	10000	3.00 U	5.76

Table 4

Groundwater Analytical Results Summary
Cline Avenue Oil Spill Site (#0000473)
Gary, Indiana

Sample Location:	MW-02-07	MW-07-19	MW-08-19	MW-09-19
Sample ID:	GW-11198545-090519-YY-001	GW-11198545-090619-YY-011	GW-11198545-090619-YY-010	GW-11198545-090619-YY-009
Sample Date:	9/5/2019	9/6/2019	9/6/2019	9/6/2019
Parameters	Units	RGWTSL		
Semi-volatile Organic Compounds				
1,2,4,5-Tetrachlorobenzene	µg/L	1.7	10.0 U	10.1 U
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	710	10.0 U	10.1 U
2,4,5-Trichlorophenol	µg/L	1200	10.0 U	10.1 U
2,4,6-Trichlorophenol	µg/L	12	10.0 U	10.1 U
2,4-Dichlorophenol	µg/L	46	10.0 U	10.1 U
2,4-Dimethylphenol	µg/L	360	10.0 U	10.1 U
2,4-Dinitrophenol	µg/L	39	10.0 U	10.1 U
2,4-Dinitrotoluene	µg/L	2.4	10.0 U	10.1 U
2,6-Dinitrotoluene	µg/L	0.49	10.0 U	10.1 U
2-Chloronaphthalene	µg/L	750	1.00 U	1.01 U
2-Chlorophenol	µg/L	91	10.0 U	10.1 U
2-Methylnaphthalene	µg/L	36	1.00 U	0.535 J
2-Methylphenol	µg/L	930	10.0 U	10.1 U
2-Nitroaniline	µg/L	190	10.0 U	10.1 U
2-Nitrophenol	µg/L	-	10.0 U	10.1 U
3&4-Methylphenol	µg/L	-	10.0 U	10.1 U
3,3'-Dichlorobenzidine	µg/L	1.3	10.0 U	10.1 U
3-Nitroaniline	µg/L	-	10.0 U	10.1 U
4,6-Dinitro-2-methylphenol	µg/L	1.5	10.0 U	10.1 U
4-Bromophenyl phenyl ether	µg/L	-	10.0 U	10.1 U
4-Chloro-3-methylphenol	µg/L	1400	10.0 U	10.1 U
4-Chloroaniline	µg/L	3.7	10.0 U	10.1 U
4-Chlorophenyl phenyl ether	µg/L	-	10.0 U	10.1 U
4-Nitroaniline	µg/L	38	10.0 U	10.1 U
4-Nitrophenol	µg/L	-	10.0 U	10.1 U
Acenaphthene	µg/L	530	1.00 U	0.915 J
Acenaphthylene	µg/L	-	1.00 U	1.00 U
Acetophenone	µg/L	1900	10.0 U	10.1 U
Anthracene	µg/L	1800	1.00 U	0.354 J
Atrazine	µg/L	3	10.0 U	10.1 U
Benzaldehyde	µg/L	190	10.0 U	10.1 U
Benzo(a)anthracene	µg/L	0.3	1.00 U	0.292 J
Benzo(a)pyrene	µg/L	0.2	1.00 U	1.00 U
Benzo(b)fluoranthene	µg/L	2.5	1.00 U	1.01 U
Benzo(g,h,i)perylene	µg/L	-	1.00 U	1.01 U
Benzo(k)fluoranthene	µg/L	25	1.00 U	1.01 U
Biphenyl (1,1-Biphenyl)	µg/L	0.83	10.0 U	10.1 U
bis(2-Chloroethoxy)methane	µg/L	59	10.0 U	10.1 U
bis(2-Chloroethyl)ether	µg/L	0.14	10.0 U	10.1 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	6	3.00 U	3.03 U
Butyl benzylphthalate (BBP)	µg/L	160	3.00 U	3.03 U
Caprolactam	µg/L	9900	10.0 U	10.1 U
Carbazole	µg/L	-	10.0 U	10.1 U
Chrysene	µg/L	250	1.00 U	1.01 U
Dibenz(a,h)anthracene	µg/L	0.25	1.00 U	1.01 U
Dibenzofuran	µg/L	7.9	10.0 U	0.459 J
Diethyl phthalate	µg/L	15000	3.00 U	3.03 U
Dimethyl phthalate	µg/L	-	3.00 U	3.03 U
Di-n-butylphthalate (DBP)	µg/L	900	0.318 J	0.334 J
Di-n-octyl phthalate (DnOP)	µg/L	200	3.00 U	3.03 U
Fluoranthene	µg/L	800	1.00 U	1.01 U
Fluorene	µg/L	290	1.00 U	1.01 U
Hexachlorobenzene	µg/L	1	1.00 U	1.01 U

Table 4

Groundwater Analytical Results Summary
Cline Avenue Oil Spill Site (#0000473)
Gary, Indiana

Sample Location:	MW-02-07	MW-07-19	MW-08-19	MW-09-19
Sample ID:	GW-11198545-090519-YY-001	GW-11198545-090619-YY-011	GW-11198545-090619-YY-010	GW-11198545-090619-YY-009
Sample Date:	9/5/2019	9/6/2019	9/6/2019	9/6/2019
Parameters	Units	RGWTSL		
Hexachlorobutadiene	µg/L 1.4	10.0 U	10.1 U	10.0 U
Hexachlorocyclopentadiene	µg/L 50	10.0 U	10.1 U	10.0 U
Hexachloroethane	µg/L 3.3	10.0 U	10.1 U	10.0 U
Indeno(1,2,3-cd)pyrene	µg/L 2.5	1.00 U	1.01 U	1.00 U
Isophorone	µg/L 780	10.0 U	10.1 U	10.0 U
Naphthalene	µg/L 1.7	1.00 U	1.01 U	1.00 U
Nitrobenzene	µg/L 1.4	10.0 U	10.1 U	10.0 U
N-Nitrosodi-n-propylamine	µg/L 0.11	10.0 U	10.1 U	10.0 U
N-Nitrosodiphenylamine	µg/L 120	10.0 U	10.1 U	10.0 U
Pentachlorophenol	µg/L 1	10.0 U	10.1 U	10.0 U
Phenanthrene	µg/L -	1.00 U	1.01 U	1.81
Phenol	µg/L 5800	10.0 U	10.1 U	10.0 U
Pyrene	µg/L 120	1.00 U	1.01 U	0.463 J
Metals				
Aluminum (dissolved)	µg/L 20000	152	239	373
Antimony (dissolved)	µg/L 6	1.05 J	2.00 U	2.00 U
Arsenic (dissolved)	µg/L 10	6.77	2.24	3.98
Barium (dissolved)	µg/L 2000	64.2	36.2	50.4
Beryllium (dissolved)	µg/L 4	2.00 U	2.00 U	2.00 U
Cadmium (dissolved)	µg/L 5	0.846 J	1.00 U	1.00 U
Calcium (dissolved)	µg/L -	135000	104000	118000
Chromium (dissolved)	µg/L 100	2.00 U	2.00 U	2.00 U
Cobalt (dissolved)	µg/L 6	3.90	1.85 J	2.12
Copper (dissolved)	µg/L 1300	1.76 J	1.73 J	1.89 J
Iron (dissolved)	µg/L 14000	6400	2100	5750
Lead (dissolved)	µg/L 15	2.00 U	2.89	3.85
Magnesium (dissolved)	µg/L -	21400	23100	29300
Manganese (dissolved)	µg/L 430	2150	376	372
Mercury (dissolved)	µg/L -	0.200 U	0.200 U	0.200 U
Nickel (dissolved)	µg/L 390	4.71	2.15	3.13
Potassium (dissolved)	µg/L -	2670	4630	4110
Selenium (dissolved)	µg/L 50	0.582 J	0.801 J	0.591 J
Silver (dissolved)	µg/L 94	2.00 U	2.00 U	2.00 U
Sodium (dissolved)	µg/L -	12200	286000	449000
Thallium (dissolved)	µg/L 2	2.00 U	2.00 U	2.00 U
Vanadium (dissolved)	µg/L 86	1.61 J	1.29 J	1.94 J
Zinc (dissolved)	µg/L 6000	18.4 J	5.93 J	8.87 J

Table 4

**Groundwater Analytical Results Summary
Cline Avenue Oil Spill Site (#0000473)
Gary, Indiana**

Sample Location:	MW-02-07	MW-07-19	MW-08-19	MW-09-19
Sample ID:	GW-11198545-090519-YY-001	GW-11198545-090619-YY-011	GW-11198545-090619-YY-010	GW-11198545-090619-YY-009
Sample Date:	9/5/2019	9/6/2019	9/6/2019	9/6/2019
Parameters	Units	RGWTSL		
PCBs				
Aroclor-1016 (PCB-1016)	µg/L	1.4	0.500 U	0.500 U
Aroclor-1221 (PCB-1221)	µg/L	0.047	0.500 U	0.500 U
Aroclor-1232 (PCB-1232)	µg/L	0.047	0.500 U	0.500 U
Aroclor-1242 (PCB-1242)	µg/L	0.078	0.500 U	0.500 U
Aroclor-1248 (PCB-1248)	µg/L	0.078	0.500 U	0.500 U
Aroclor-1254 (PCB-1254)	µg/L	0.078	0.500 U	0.500 U
Aroclor-1260 (PCB-1260)	µg/L	0.078	0.500 U	0.500 U

Notes:

RGWTSL - Residential Groundwater Tap Screening Level, established in the IDEM Remediation Closure Guide, and denoted by bold italics

J - Estimated concentration.

R - Rejected.

U - Not detected at the associated reporting limit.

UU - Not detected; associated reporting limit is estimated.

* - Sample analyzed beyond holding time

"-" - no criteria has been established.

Table 4

Groundwater Analytical Results Summary
Cline Avenue Oil Spill Site (#0000473)
Gary, Indiana

Sample Location:	MW-10-19	MW-11-19	MW-12-19	MW-12-19
Sample ID:	GW-11198545-090619-YY-012	GW-11198545-090519-YY-005	GW-11198545-090519-YY-003	GW-11198545-090519-YY-004
Sample Date:	9/6/2019	9/5/2019	9/5/2019	9/5/2019
Parameters	Units	RGWTSL		(Duplicate)
Volatile Organic Compounds				
1,1,1-Trichloroethane	µg/L	200	1.00 U	1.00 U
1,1,2,2-Tetrachloroethane	µg/L	0.76	1.00 U	1.00 U
1,1,2-Trichloroethane	µg/L	5	1.00 U	1.00 U
1,1-Dichloroethane	µg/L	28	1.00 U	1.00 U
1,1-Dichloroethene	µg/L	7	1.00 U	1.00 U
1,2,3-Trichlorobenzene	µg/L	7	1.00 UJ	1.00 UJ
1,2,4-Trichlorobenzene	µg/L	70	1.00 UJ	1.00 UJ
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	0.2	5.00 UJ	5.00 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	0.05	1.00 U	1.00 U
1,2-Dichlorobenzene	µg/L	600	1.00 U	1.00 U
1,2-Dichloroethane	µg/L	5	1.00 U	1.00 U
1,2-Dichloropropane	µg/L	5	1.00 U	1.00 U
1,3-Dichlorobenzene	µg/L	-	1.00 U	1.00 U
1,4-Dichlorobenzene	µg/L	75	1.00 U	1.00 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	5600	10.0 U	10.0 U
2-Hexanone	µg/L	38	10.0 U	10.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	6300	10.0 U	10.0 U
Acetone	µg/L	14000	50.0 U	50.0 U
Benzene	µg/L	5	1.00 U	1.00 U
Bromodichloromethane	µg/L	80	1.00 U	1.00 U
Bromoform	µg/L	80	1.00 U	1.00 U
Bromomethane (Methyl bromide)	µg/L	7.5	5.00 U	5.00 U
Carbon disulfide	µg/L	810	1.00 U	1.00 U
Carbon tetrachloride	µg/L	5	1.00 U	1.00 U
Chlorobenzene	µg/L	100	1.00 U	1.00 U
Chlorobromomethane	µg/L	83	1.00 U	1.00 U
Chloroethane	µg/L	21000	5.00 U	5.00 U
Chloroform (Trichloromethane)	µg/L	80	5.00 U	5.00 U
Chloromethane (Methyl chloride)	µg/L	190	2.50 U	2.50 U
cis-1,2-Dichloroethene	µg/L	70	1.00 U	1.00 U
cis-1,3-Dichloropropene	µg/L	-	1.00 U	1.00 U
Cyclohexane	µg/L	13000	1.93	33.5
Dibromochloromethane	µg/L	80	1.00 U	1.00 U
Dichlorodifluoromethane (CFC-12)	µg/L	200	5.00 U	5.00 U
Ethylbenzene	µg/L	700	1.00 U	1.00 U
Isopropyl benzene	µg/L	450	1.19	2.79 J
Methyl acetate	µg/L	20000	20.0 U	20.0 U
Methyl cyclohexane	µg/L	-	19.6	23.7
Methyl tert butyl ether (MTBE)	µg/L	140	1.00 U	1.00 U
Methylene chloride	µg/L	5	5.00 U	5.00 U
Styrene	µg/L	100	1.00 U	1.00 U
Tetrachloroethene	µg/L	5	1.00 U	1.00 U
Toluene	µg/L	1000	1.00 U	1.00 U
trans-1,2-Dichloroethene	µg/L	100	1.00 U	1.00 U
trans-1,3-Dichloropropene	µg/L	-	1.00 U	1.00 U
Trichloroethene	µg/L	5	1.00 U	1.00 U
Trichlorofluoromethane (CFC-11)	µg/L	5200	5.00 U	5.00 U
Trifluorotrichloroethane (CFC-113)	µg/L	10000	1.00 U	1.00 U
Vinyl chloride	µg/L	2	1.00 U	1.00 U
Xylenes (total)	µg/L	10000	3.00 U	20.2

Table 4

Groundwater Analytical Results Summary
Cline Avenue Oil Spill Site (#0000473)
Gary, Indiana

Sample Location:	MW-10-19	MW-11-19	MW-12-19	MW-12-19
Sample ID:	GW-11198545-090619-YY-012	GW-11198545-090519-YY-005	GW-11198545-090519-YY-003	GW-11198545-090519-YY-004
Sample Date:	9/6/2019	9/5/2019	9/5/2019	9/5/2019 (Duplicate)
Parameters	Units	RGWTS	SL	
Semi-volatile Organic Compounds				
1,2,4,5-Tetrachlorobenzene	µg/L	1.7	11.0 U	10.4 U
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	710	11.0 U	10.4 U
2,4,5-Trichlorophenol	µg/L	1200	11.0 U	10.4 U
2,4,6-Trichlorophenol	µg/L	12	11.0 U	10.4 U
2,4-Dichlorophenol	µg/L	46	11.0 U	10.4 U
2,4-Dimethylphenol	µg/L	360	11.0 U	10.4 U
2,4-Dinitrophenol	µg/L	39	11.0 U	10.4 U
2,4-Dinitrotoluene	µg/L	2.4	11.0 U	10.4 U
2,6-Dinitrotoluene	µg/L	0.49	11.0 U	10.4 U
2-Chloronaphthalene	µg/L	750	1.10 U	1.04 U
2-Chlorophenol	µg/L	91	11.0 U	10.4 U
2-Methylnaphthalene	µg/L	36	1.10 U	1.04 U
2-Methylphenol	µg/L	930	11.0 U	10.4 U
2-Nitroaniline	µg/L	190	11.0 U	10.4 U
2-Nitrophenol	µg/L	-	11.0 U	10.4 U
3&4-Methylphenol	µg/L	-	11.0 U	10.4 U
3,3'-Dichlorobenzidine	µg/L	1.3	11.0 U	10.4 U
3-Nitroaniline	µg/L	-	11.0 U	10.4 U
4,6-Dinitro-2-methylphenol	µg/L	1.5	11.0 U	10.4 U
4-Bromophenyl phenyl ether	µg/L	-	11.0 U	10.4 U
4-Chloro-3-methylphenol	µg/L	1400	11.0 U	10.4 U
4-Chloroaniline	µg/L	3.7	11.0 U	10.4 U
4-Chlorophenyl phenyl ether	µg/L	-	11.0 U	10.4 U
4-Nitroaniline	µg/L	38	11.0 U	10.4 U
4-Nitrophenol	µg/L	-	11.0 U	10.4 U
Acenaphthene	µg/L	530	1.10 U	1.04 U
Acenaphthylene	µg/L	-	1.10 U	1.04 U
Acetophenone	µg/L	1900	11.0 U	10.4 U
Anthracene	µg/L	1800	1.10 U	1.04 U
Atrazine	µg/L	3	11.0 U	10.4 U
Benzaldehyde	µg/L	190	11.0 U	10.4 U
Benzo(a)anthracene	µg/L	0.3	1.10 U	1.04 U
Benzo(a)pyrene	µg/L	0.2	1.10 U	1.04 U
Benzo(b)fluoranthene	µg/L	2.5	1.10 U	1.04 U
Benzo(g,h,i)perylene	µg/L	-	1.10 U	1.04 U
Benzo(k)fluoranthene	µg/L	25	1.10 U	1.04 U
Biphenyl (1,1-Biphenyl)	µg/L	0.83	11.0 U	10.4 U
bis(2-Chloroethoxy)methane	µg/L	59	11.0 U	10.4 U
bis(2-Chloroethyl)ether	µg/L	0.14	11.0 U	10.4 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	6	3.30 U	3.12 U
Butyl benzylphthalate (BBP)	µg/L	160	3.30 U	3.12 U
Caprolactam	µg/L	9900	11.0 U	10.4 U
Carbazole	µg/L	-	11.0 U	10.4 U
Chrysene	µg/L	250	1.10 U	1.04 U
Dibenz(a,h)anthracene	µg/L	0.25	1.10 U	1.04 U
Dibenzofuran	µg/L	7.9	11.0 U	10.4 U
Diethyl phthalate	µg/L	15000	3.30 U	3.12 U
Dimethyl phthalate	µg/L	-	3.30 U	3.12 U
Di-n-butylphthalate (DBP)	µg/L	900	0.302 J	3.12 U
Di-n-octyl phthalate (DnOP)	µg/L	200	3.30 U	3.12 U
Fluoranthene	µg/L	800	1.10 U	1.04 U
Fluorene	µg/L	290	1.10 U	1.04 U
Hexachlorobenzene	µg/L	1	1.10 U	1.04 U

Table 4

Groundwater Analytical Results Summary
Cline Avenue Oil Spill Site (#0000473)
Gary, Indiana

Sample Location:		MW-10-19	MW-11-19	MW-12-19	MW-12-19
Sample ID:		GW-11198545-090619-YY-012	GW-11198545-090519-YY-005	GW-11198545-090519-YY-003	GW-11198545-090519-YY-004
Sample Date:		9/6/2019	9/5/2019	9/5/2019	9/5/2019
					(Duplicate)
Parameters	Units RGWTS				
Hexachlorobutadiene	µg/L 1.4	11.0 U	10.4 U	50.0 U	50.0 U
Hexachlorocyclopentadiene	µg/L 50	11.0 U	10.4 U	50.0 U	50.0 U
Hexachloroethane	µg/L 3.3	11.0 U	10.4 U	50.0 U	50.0 U
Indeno(1,2,3-cd)pyrene	µg/L 2.5	1.10 U	1.04 U	5.00 U	5.00 U
Isophorone	µg/L 780	11.0 U	10.4 U	50.0 U	50.0 U
Naphthalene	µg/L 1.7	1.10 U	1.04 U	5.00 U	5.00 U
Nitrobenzene	µg/L 1.4	11.0 U	10.4 U	50.0 U	50.0 U
N-Nitrosodi-n-propylamine	µg/L 0.11	11.0 U	10.4 U	50.0 U	50.0 U
N-Nitrosodiphenylamine	µg/L 120	11.0 U	10.4 U	50.0 U	50.0 U
Pentachlorophenol	µg/L 1	11.0 U	10.4 U	50.0 U	50.0 U
Phenanthrene	µg/L -	1.10 U	1.04 U	3.00 J	2.27 J
Phenol	µg/L 5800	11.0 U	10.4 U	50.0 U	50.0 U
Pyrene	µg/L 120	1.10 U	1.04 U	5.00 U	5.00 U
Metals					
Aluminum (dissolved)	µg/L 20000	216	162	232	207
Antimony (dissolved)	µg/L 6	2.00 U	2.00 U	2.00 U	2.55
Arsenic (dissolved)	µg/L 10	2.76	8.53	8.79 J	1.33 J
Barium (dissolved)	µg/L 2000	121	76.5	76.9	48.2
Beryllium (dissolved)	µg/L 4	2.00 U	2.00 U	2.00 U	2.00 U
Cadmium (dissolved)	µg/L 5	1.00 U	1.00 U	1.00 U	1.00 U
Calcium (dissolved)	µg/L -	101000	142000	140000 J	75300 J
Chromium (dissolved)	µg/L 100	2.00 U	2.00 U	2.12 U	2.00 U
Cobalt (dissolved)	µg/L 6	1.46 J	1.69 J	2.05	1.48 J
Copper (dissolved)	µg/L 1300	7.32	4.14 J	1.90 J	3.83 J
Iron (dissolved)	µg/L 14000	1490	11500	12200 J	1060 J
Lead (dissolved)	µg/L 15	6.73	4.60	5.51 J	2.41 J
Magnesium (dissolved)	µg/L -	22200	25500	25700	30500
Manganese (dissolved)	µg/L 430	271	1010	1060 J	217 J
Mercury (dissolved)	µg/L -	0.200 U	0.200 U	0.200 U	0.200 U
Nickel (dissolved)	µg/L 390	3.16	1.73 J	1.85 J	2.34
Potassium (dissolved)	µg/L -	4730	2140	2040 J	4960 J
Selenium (dissolved)	µg/L 50	0.472 J	0.787 J	0.755 J	5.59 J
Silver (dissolved)	µg/L 94	2.00 U	2.00 U	2.00 U	2.00 U
Sodium (dissolved)	µg/L -	486000	5090	4800 J	12300 J
Thallium (dissolved)	µg/L 2	2.00 U	2.00 U	2.00 U	2.00 U
Vanadium (dissolved)	µg/L 86	1.58 J	3.25 J	3.75 J	0.730 J
Zinc (dissolved)	µg/L 6000	5.05 J	4.82 J	6.80 J	5.38 J

Table 4

**Groundwater Analytical Results Summary
Cline Avenue Oil Spill Site (#0000473)
Gary, Indiana**

Sample Location:	MW-10-19		MW-11-19		MW-12-19		MW-12-19	
Sample ID:	GW-11198545-090619-YY-012		GW-11198545-090519-YY-005		GW-11198545-090519-YY-003		GW-11198545-090519-YY-004	
Sample Date:	9/6/2019		9/5/2019		9/5/2019		9/5/2019	
							(Duplicate)	
Parameters	Units	RGWTSL						
PCBs								
Aroclor-1016 (PCB-1016)	µg/L	1.4	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Aroclor-1221 (PCB-1221)	µg/L	0.047	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Aroclor-1232 (PCB-1232)	µg/L	0.047	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Aroclor-1242 (PCB-1242)	µg/L	0.078	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Aroclor-1248 (PCB-1248)	µg/L	0.078	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Aroclor-1254 (PCB-1254)	µg/L	0.078	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Aroclor-1260 (PCB-1260)	µg/L	0.078	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U

Notes:

RGWTSL - Residential Groundwater Tap Screening Level, established in the IDEM Remediation Closure Guide, and denoted by bold italics
J - Estimated concentration.

R - Rejected.

U - Not detected at the associated reporting limit.

UU - Not detected; associated reporting limit is estimated.

* - Sample analyzed beyond holding time

"-" - no criteria has been established.

Table 4

Groundwater Analytical Results Summary
Cline Avenue Oil Spill Site (#0000473)
Gary, Indiana

Sample Location:	MW-13-19	MW-14-19	MW-15-19	MW-16-19
Sample ID:	GW-11198545-090519-YY-002	GW-11198545-090519-YY-006	GW-11198545-090519-YY-007	GW-11198545-090519-YY-008
Sample Date:	9/5/2019	9/5/2019	9/5/2019	9/5/2019
Parameters	Units	RGWTSL		
Volatile Organic Compounds				
1,1,1-Trichloroethane	µg/L	200	R	5.00 U
1,1,2,2-Tetrachloroethane	µg/L	0.76	R	5.00 U
1,1,2-Trichloroethane	µg/L	5	R	5.00 U
1,1-Dichloroethane	µg/L	28	R	5.00 U
1,1-Dichloroethene	µg/L	7	R	5.00 U
1,2,3-Trichlorobenzene	µg/L	7	R	5.00 UJ
1,2,4-Trichlorobenzene	µg/L	70	R	5.00 UJ
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	0.2	R	25.0 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	0.05	R	5.00 U
1,2-Dichlorobenzene	µg/L	600	R	5.00 U
1,2-Dichloroethane	µg/L	5	R	5.00 U
1,2-Dichloropropane	µg/L	5	R	5.00 U
1,3-Dichlorobenzene	µg/L	-	R	5.00 U
1,4-Dichlorobenzene	µg/L	75	R	5.00 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	5600	R	50.0 U
2-Hexanone	µg/L	38	R	50.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	6300	R	50.0 U
Acetone	µg/L	14000	R	250 U
Benzene	µg/L	5	1.00 U*	5.00 U
Bromodichloromethane	µg/L	80	1.00 U*	5.00 U
Bromoform	µg/L	80	1.00 U*	5.00 U
Bromomethane (Methyl bromide)	µg/L	7.5	5.00 U	25.0 U
Carbon disulfide	µg/L	810	1.00 U*	5.00 U
Carbon tetrachloride	µg/L	5	1.00 U	5.00 U
Chlorobenzene	µg/L	100	1.00 U	5.00 U
Chlorobromomethane	µg/L	83	1.00 U	5.00 U
Chloroethane	µg/L	21000	5.00 U	25.0 U
Chloroform (Trichloromethane)	µg/L	80	5.00 U*	25.0 U
Chloromethane (Methyl chloride)	µg/L	190	2.50 U	12.5 U
cis-1,2-Dichloroethene	µg/L	70	1.00 U	5.00 U
cis-1,3-Dichloropropene	µg/L	-	1.00 U	5.00 U
Cyclohexane	µg/L	13000	1.00 U*	5.00 U
Dibromochloromethane	µg/L	80	1.00 U*	5.00 U
Dichlorodifluoromethane (CFC-12)	µg/L	200	5.00 U	25.0 U
Ethylbenzene	µg/L	700	1.00 U*	49.2
Isopropyl benzene	µg/L	450	1.00 U*	7.98
Methyl acetate	µg/L	20000	20.0 U	100 U
Methyl cyclohexane	µg/L	-	1.00 U*	5.00 U
Methyl tert butyl ether (MTBE)	µg/L	140	1.00 U	5.00 U
Methylene chloride	µg/L	5	5.00 U	25.0 U
Styrene	µg/L	100	1.00 U	5.00 U
Tetrachloroethene	µg/L	5	1.00 U	5.00 U
Toluene	µg/L	1000	1.00 U*	12.4
trans-1,2-Dichloroethene	µg/L	100	1.00 U	5.00 U
trans-1,3-Dichloropropene	µg/L	-	1.00 U	5.00 U
Trichloroethene	µg/L	5	1.00 U	5.00 U
Trichlorofluoromethane (CFC-11)	µg/L	5200	5.00 U	25.0 U
Trifluorotrichloroethane (CFC-113)	µg/L	10000	1.00 U	5.00 U
Vinyl chloride	µg/L	2	1.00 U	5.00 U
Xylenes (total)	µg/L	10000	3.00 U*	15.0 U

Table 4

Groundwater Analytical Results Summary
Cline Avenue Oil Spill Site (#0000473)
Gary, Indiana

Sample Location:	MW-13-19	MW-14-19	MW-15-19	MW-16-19
Sample ID:	GW-11198545-090519-YY-002	GW-11198545-090519-YY-006	GW-11198545-090519-YY-007	GW-11198545-090519-YY-008
Sample Date:	9/5/2019	9/5/2019	9/5/2019	9/5/2019
Parameters	Units	RGWTSL		
Semi-volatile Organic Compounds				
1,2,4,5-Tetrachlorobenzene	µg/L	1.7	50.0 U	51.5 U
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	710	50.0 U	51.5 U
2,4,5-Trichlorophenol	µg/L	1200	50.0 U	51.5 U
2,4,6-Trichlorophenol	µg/L	12	50.0 U	51.5 U
2,4-Dichlorophenol	µg/L	46	50.0 U	51.5 U
2,4-Dimethylphenol	µg/L	360	9.28 J	51.5 U
2,4-Dinitrophenol	µg/L	39	50.0 U	51.5 U
2,4-Dinitrotoluene	µg/L	2.4	50.0 U	51.5 U
2,6-Dinitrotoluene	µg/L	0.49	50.0 U	51.5 U
2-Chloronaphthalene	µg/L	750	5.00 U	5.15 U
2-Chlorophenol	µg/L	91	50.0 U	51.5 U
2-Methylnaphthalene	µg/L	36	54.5	41.8
2-Methylphenol	µg/L	930	50.0 U	51.5 U
2-Nitroaniline	µg/L	190	50.0 U	51.5 U
2-Nitrophenol	µg/L	-	50.0 U	51.5 U
3&4-Methylphenol	µg/L	-	50.0 U	51.5 U
3,3'-Dichlorobenzidine	µg/L	1.3	50.0 U	51.5 U
3-Nitroaniline	µg/L	-	50.0 U	51.5 U
4,6-Dinitro-2-methylphenol	µg/L	1.5	50.0 U	51.5 U
4-Bromophenyl phenyl ether	µg/L	-	50.0 U	51.5 U
4-Chloro-3-methylphenol	µg/L	1400	50.0 U	51.5 U
4-Chloroaniline	µg/L	3.7	50.0 U	51.5 U
4-Chlorophenyl phenyl ether	µg/L	-	50.0 U	51.5 U
4-Nitroaniline	µg/L	38	50.0 U	51.5 U
4-Nitrophenol	µg/L	-	50.0 U	51.5 U
Acenaphthene	µg/L	530	1.94 J	2.22 J
Acenaphthylene	µg/L	-	5.00 U	5.15 U
Acetophenone	µg/L	1900	50.0 U	51.5 U
Anthracene	µg/L	1800	5.00 U	5.15 U
Atrazine	µg/L	3	50.0 U	51.5 U
Benzaldehyde	µg/L	190	50.0 U	51.5 U
Benzo(a)anthracene	µg/L	0.3	5.00 U	1.14 J
Benzo(a)pyrene	µg/L	0.2	5.00 U	5.15 U
Benzo(b)fluoranthene	µg/L	2.5	5.00 U	5.15 U
Benzo(g,h,i)perylene	µg/L	-	5.00 U	5.15 U
Benzo(k)fluoranthene	µg/L	25	5.00 U	5.15 U
Biphenyl (1,1-Biphenyl)	µg/L	0.83	50.0 U	51.5 U
bis(2-Chloroethoxy)methane	µg/L	59	50.0 U	51.5 U
bis(2-Chloroethyl)ether	µg/L	0.14	50.0 U	51.5 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	6	15.0 U	15.5 U
Butyl benzylphthalate (BBP)	µg/L	160	15.0 U	15.5 U
Caprolactam	µg/L	9900	50.0 U	51.5 U
Carbazole	µg/L	-	16.0 J	31.4 J
Chrysene	µg/L	250	5.00 U	5.15 U
Dibenz(a,h)anthracene	µg/L	0.25	5.00 U	5.15 U
Dibenzofuran	µg/L	7.9	2.15 J	2.05 J
Diethyl phthalate	µg/L	15000	15.0 U	15.5 U
Dimethyl phthalate	µg/L	-	15.0 U	15.5 U
Di-n-butylphthalate (DBP)	µg/L	900	15.0 U	15.5 U
Di-n-octyl phthalate (DnOP)	µg/L	200	15.0 U	15.5 U
Fluoranthene	µg/L	800	5.00 U	5.15 U
Fluorene	µg/L	290	3.80 J	5.69
Hexachlorobenzene	µg/L	1	5.00 U	5.15 U

Table 4

Groundwater Analytical Results Summary
Cline Avenue Oil Spill Site (#0000473)
Gary, Indiana

Sample Location:		MW-13-19	MW-14-19	MW-15-19	MW-16-19
Sample ID:		GW-11198545-090519-YY-002	GW-11198545-090519-YY-006	GW-11198545-090519-YY-007	GW-11198545-090519-YY-008
Sample Date:		9/5/2019	9/5/2019	9/5/2019	9/5/2019
Parameters	Units RGWTS				
Hexachlorobutadiene	µg/L 1.4	50.0 U	51.5 U	10.0 U	50.0 U
Hexachlorocyclopentadiene	µg/L 50	50.0 U	51.5 U	10.0 U	50.0 U
Hexachloroethane	µg/L 3.3	50.0 U	51.5 U	10.0 U	50.0 U
Indeno(1,2,3-cd)pyrene	µg/L 2.5	5.00 U	5.15 U	1.00 U	5.00 U
Isophorone	µg/L 780	50.0 U	51.5 U	10.0 U	50.0 U
Naphthalene	µg/L 1.7	5.00 U	5.15 U	1.00 U	5.00 U
Nitrobenzene	µg/L 1.4	50.0 U	51.5 U	10.0 U	50.0 U
N-Nitrosodi-n-propylamine	µg/L 0.11	50.0 U	51.5 U	10.0 U	50.0 U
N-Nitrosodiphenylamine	µg/L 120	50.0 U	51.5 U	10.0 U	50.0 U
Pentachlorophenol	µg/L 1	50.0 U	51.5 U	10.0 U	50.0 U
Phenanthrene	µg/L -	12.8	24.2	1.00 U	6.88
Phenol	µg/L 5800	50.0 U	51.5 U	10.0 U	50.0 U
Pyrene	µg/L 120	5.00 U	2.34 J	1.00 U	3.24 J
Metals					
Aluminum (dissolved)	µg/L 20000	132	224	230	826
Antimony (dissolved)	µg/L 6	1.02 J	2.00 U	1.04 J	2.00 U
Arsenic (dissolved)	µg/L 10	41.8	10.7	4.48	3.70
Barium (dissolved)	µg/L 2000	126	131	165	152
Beryllium (dissolved)	µg/L 4	2.00 U	2.00 U	2.00 U	2.00 U
Cadmium (dissolved)	µg/L 5	1.00 U	1.00 U	1.00 U	1.00 U
Calcium (dissolved)	µg/L -	201000	217000	179000	171000
Chromium (dissolved)	µg/L 100	6.50	3.61 U	2.00 U	3.23 U
Cobalt (dissolved)	µg/L 6	2.54	2.12	6.51	5.23
Copper (dissolved)	µg/L 1300	0.929 J	1.17 J	2.94 J	8.53
Iron (dissolved)	µg/L 14000	35600	10300	3070	5200
Lead (dissolved)	µg/L 15	2.00 U	19.3	3.22	7.74
Magnesium (dissolved)	µg/L -	76100	42000	133000	59700
Manganese (dissolved)	µg/L 430	999	1270	1150	968
Mercury (dissolved)	µg/L -	0.200 U	0.200 U	0.200 U	0.200 U
Nickel (dissolved)	µg/L 390	5.32	3.43	11.2	8.49
Potassium (dissolved)	µg/L -	8420	3790	7090	11400
Selenium (dissolved)	µg/L 50	0.871 J	0.578 J	0.495 J	0.574 J
Silver (dissolved)	µg/L 94	2.00 U	2.00 U	2.00 U	2.00 U
Sodium (dissolved)	µg/L -	28600	7790	20300	8910
Thallium (dissolved)	µg/L 2	2.00 U	2.00 U	2.00 U	2.00 U
Vanadium (dissolved)	µg/L 86	12.5	5.15	2.61 J	4.54 J
Zinc (dissolved)	µg/L 6000	3.89 J	6.75 J	9.29 J	17.9 J

Table 4

**Groundwater Analytical Results Summary
Cline Avenue Oil Spill Site (#0000473)
Gary, Indiana**

Sample Location:	MW-13-19	MW-14-19	MW-15-19	MW-16-19
Sample ID:	GW-11198545-090519-YY-002	GW-11198545-090519-YY-006	GW-11198545-090519-YY-007	GW-11198545-090519-YY-008
Sample Date:	9/5/2019	9/5/2019	9/5/2019	9/5/2019
Parameters	Units	RGWTSL		
PCBs				
Aroclor-1016 (PCB-1016)	µg/L	1.4	0.500 U	0.500 U
Aroclor-1221 (PCB-1221)	µg/L	0.047	0.500 U	0.500 U
Aroclor-1232 (PCB-1232)	µg/L	0.047	0.500 U	0.500 U
Aroclor-1242 (PCB-1242)	µg/L	0.078	0.500 U	0.500 U
Aroclor-1248 (PCB-1248)	µg/L	0.078	0.500 U	0.500 U
Aroclor-1254 (PCB-1254)	µg/L	0.078	0.500 U	0.500 U
Aroclor-1260 (PCB-1260)	µg/L	0.078	0.500 U	0.500 U

Notes:

RGWTSL - Residential Groundwater Tap Screening Level, established in the IDEM Remediation Closure Guide, and denoted by bold italics

J - Estimated concentration.

R - Rejected.

U - Not detected at the associated reporting limit.

UU - Not detected; associated reporting limit is estimated.

* - Sample analyzed beyond holding time

"-" - no criteria has been established.

Attachment A

Stratigraphic and Instrumentation Logs

Attachment A.1

Existing Piezometer and Monitoring Well Logs

09/28/11

BORELOG		CLIENT: U.S. EPA	PROJECT: Cline Ave Ditch Oil Sheen	LOCATION: Gary, IN	SAMPLE STATION ID: 1 0847	
DEPTH (FT)	LITHOLOGIC DESCRIPTION	SAMPLE COLLECTED	SAMPLE TIME	RECOVERY	REMARKS/FIELD OBSERVATIONS	
2	• Fine sand w/ tr. gravel; light and dark brown; no odor; dry 0.0 ppm [0-1.5'] • Small silt layer @ ~ 9"; roots throughout					
4	• Fine sand; light brown; no odor; wet 0.0 ppm [1.5-3.0] • Fine sand; black; strong odor; saturated some sheen; 23.7 ppm [3.5-5']					
6	• Fine sand; light gray; saturated; strong odor; some sheen 62.1 ppm [5.5'-8.5']					
8	• Fine to medium sand; light gray; saturated; strong odor; product present; 71.8 ppm [8.5-11]					
10	• Fine sand; light gray; saturated; faint odor; 31.6 ppm [11-12.5]					
12	<u>End of boring</u>					

Describe the following: soil type, grain size, color, consistency, odor, presence of oil sheen

EXPLANATION	DATE 09/28/11		PAGE 1
	DRILLING METHOD: Geoprobe		
	DRILLED BY Cabeno		
	LOGGED BY J. Colomb		

BORELOG		CLIENT: U.S. EPA	PROJECT: Cline Ave Ditch Oil Sheen	LOCATION: Gary, IN	SAMPLE STATION ID: 2 0907
DEPTH (FT)	LITHOLOGIC DESCRIPTION	SAMPLE COLLECTED	SAMPLE TIME	RECOVERY	REMARKS/FIELD OBSERVATIONS
0	• Fine sand w/ tr. gravel, light brown; roots, no odor; 0.0 ppm; dry [0-1']				
2	• Fine sand; light brown w/ dark brown; banding; no odor damp; 0.0 ppm [1-3.5']				
4	• Fine sand; light gray; no odor; saturated; slight odor 0.3 ppm [3.5-5.0']				
6	• Fine sand; light gray; strong odor; saturated; 31.6 ppm [5.0-9.5']				
8					
10	• Fine to medium sand; light gray; strong odor; shrunken; 39.5 ppm [9.5'-11.0']				
12	• Fine sand; light gray; slight odor; wet 12.6 ppm (11.0-12.0')				
	<u>End of boring</u>				

Describe the following: soil type, grain size, color, consistency, odor, presence of oil sheen		DATE 09/28/11	PAGE 1
EXPLANATION	DRILLING METHOD: Geoprobe		
	DRILLED BY Cabeno		
	LOGGED BY J. Colomb		

BORELOG		CLIENT: U.S. EPA	PROJECT: Cline Ave Ditch Oil Sheen	LOCATION: Gary, IN	SAMPLE STATION ID: 3 1500
DEPTH (FT)	LITHOLOGIC DESCRIPTION	SAMPLE COLLECTED	SAMPLE TIME	RECOVERY	REMARKS/FIELD OBSERVATIONS
	° Fine sand w/ fr. gravel; light brown; dry; no odor; tools. 0.0 ppm [0 - 1.0'] ° Fine sand; light brown; some banding; dry; no odor; 0.0 ppm [1.0 - 2.0'] ° Dark brown silt layer ~ 2" thick; no odor [2.2'] ° Fine sand; no odor; wet; no odor light brown; 0.2 ppm [2.2' - 5.5'] ° Fine sand → medium sand; slight odor; wet; light brown; 16.2 ppm [5.5' - 6.5'] ° Fine sand; saturated; light gray; strong odor; 33.7 ppm [6.5' - 8.0'] ° Fine sand; saturated; light gray; visible sheening; strong odor; 70.3 ppm [8.0 - 10.5'] ° Fine sand; saturated; some medium light gray; strong odor 61.3 ppm [10.5 - 12.5'] <u>End of boring</u>				

Describe the following: soil type, grain size, color, consistency, odor, presence of oil sheen

EXPLANATION	DATE 09/27/11	PAGE 1
	DRILLING METHOD: Geoprobe	
	DRILLED BY Cabeno	
	LOGGED BY J. Colomb	

BORELOG		CLIENT: U.S. EPA	PROJECT: Cline Ave Ditch Oil Sheen	LOCATION: Gary, IN	SAMPLE STATION ID: 4 152←
DEPTH (FT)	LITHOLOGIC DESCRIPTION	SAMPLE COLLECTED	SAMPLE TIME	RECOVERY	REMARKS/FIELD OBSERVATIONS
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	° Silty sand w/ fr gravel; light brown → dark brown; roots; no odor; 0.0 ppm [0-1.0'] ° Fine sand w/ brown and black banding; slight odor; dry; 0.8 ppm [1.0-3.0'] ° Fine sand; black; strong odor; damp; 37.6 ppm; [3.0-3.5'] ° Fine sand → medium sand; dark gray w/ light gray banding; strong odor; saturated; [3.5-7.0'] ° Fine sand; dark brown; strong odor; saturated; visible product; 73.5 ppm [7.0-9.5'] ° Fine sand; saturated; some sheening; dark brown/gray; strong odor; 36.5 ppm [9.5-12.5'] <u>End of boring</u>				

Describe the following: soil type, grain size, color, consistency, odor, presence of oil sheen

EXPLANATION		DATE 09/27/11	PAGE 1
	DRILLING METHOD: Geoprobe		
	DRILLED BY Cabeno		
	LOGGED BY J. Colomb		

BORELOG		CLIENT: U.S. EPA	PROJECT: Cline Ave Ditch Oil Sheen	LOCATION: Gary, IN	SAMPLE STATION ID: 5 1412	
DEPTH (FT)	LITHOLOGIC DESCRIPTION	SAMPLE COLLECTED	SAMPLE TIME	RECOVERY	REMARKS/FIELD OBSERVATIONS	
0	o Fine sand w/ tr. gravel; no odor; dry; roots; light brown 0.0 ppm [0-1.5']					
2	o Fine sand; light brown; damp; no odor; 0.0 ppm [1.5-3.5']					
4	o Fine sand; light gray; saturated; strong odor; visible product; sheen 60.3 ppm [3.5'-5.0']					
6	o Fine sand; light brown; wet; slight odor; 3.1 ppm [5.0-6.0']					
8	o Fine sand; light gray; saturated; no odor; 0.9 ppm [6.0-7.5']					
10	o Fine sand; light gray; saturated; strong odor; 78.2 ppm; visible product; sheen [7.5'-10.0']					
12	o Fine sand; → medium sand; light gray saturated; mild odor; 30.6 ppm [10.0-12.5']					
	<u>End of boring</u>					

EXPLANATION	Describe the following: soil type, grain size, color, consistency, odor, presence of oil sheen	
	DATE 09/27/11	PAGE 1
	DRILLING METHOD: Geoprobe	
	DRILLED BY Cabeno	LOGGED BY J. Colomb

BORELOG		CLIENT: U.S. EPA	PROJECT: Cline Ave Ditch Oil Sheen	LOCATION: Gary, IN	SAMPLE STATION ID: 6 1350	
DEPTH (FT)	LITHOLOGIC DESCRIPTION	SAMPLE COLLECTED	SAMPLE TIME	RECOVERY	REMARKS/FIELD OBSERVATIONS	
2	• Fine sand w tr. gravel; dry; light brown; no odor; roots [0-1.5'] 0.0 ppm					
4	• Fine sand; damp damp; light brown w/ dark brown stratification; damp; no odor 0.0 ppm [1.5-4.0']					
6	• Fine sand; light gray; strong odor; product observed; saturated: 63.2 ppm [4.0-4.5']					
8	• Fine sand; light gray; slight odor; sheen observed; Saturated 33.1 ppm [4.5'-8.0']					
10	• Fine sand; light brown; wet; no odor; 0.8 ppm [8.0'-9.0']					
12	• Fine sand; light gray; saturated; some sheen observed; 16.3 ppm [9.0-12.5']					
	<u>End of bore</u>					

EXPLANATION	Describe the following: soil type, grain size, color, consistency, odor, presence of oil sheen	
	DATE 09/27/11	PAGE 1
	DRILLING METHOD: Geoprobe	
	DRILLED BY Cabeno	LOGGED BY J. Colomb

BORELOG		CLIENT: U.S. EPA	PROJECT: Cline Ave Ditch Oil Sheen	LOCATION: Gary, IN	SAMPLE STATION ID: 7D 0930	
DEPTH (FT)	LITHOLOGIC DESCRIPTION	SAMPLE COLLECTED	SAMPLE TIME	RECOVERY	REMARKS/FIELD OBSERVATIONS	
2	• Fine sand; light brown w/ dark brown banding; dry; no odor; roots; 0.0 ppm [0-1.5']					
4	• Fine sand; black; strong odor; wet; 26.7 ppm [1.5-4.5']					
6	• Fine sand; light gray; strong odor; wet; 39.5 ppm [4.5-5.0'] product present.					
8	• Fine sand; light gray; strong odor; saturated; product visible; 64.9 ppm [5.0- 8.5'] Thick product layer @ [5.75-6.0] (75.0 ppm)					
10	• Fine to medium sand; strong odor; saturated; shining; 42.6 ppm [8.5-9.25'] light gray					
12	• Fine sand; saturated; strong odor; 21.6 ppm [9.25-12.0] light gray					
14	• Fine sand; wet; light brown; for slight odor; 3.2 ppm [12.0-15.0]					
Describe the following: soil type, grain size, color, consistency, odor, presence of oil sheen						
EXPLANATION				DATE 04/28/11	PAGE 1	
				DRILLING METHOD: Geoprobe		
				DRILLED BY Cabeno		
				LOGGED BY J. Colomb		

7D Continued

15.-17.0 No recovery

- ° Fine sand; light gray; stiff and compacted; saturated;
no odor 0.8 ppm [17.0-20] saturated
- ° Fine sand; light gray; stiff and compacted; saturated;
no odor; 0.0 ppm [20'-25'] saturated
- ° Fine → medium sand; light gray; stiff and compacted; saturated;
no odor; 0.0 ppm [25-28]
- ° Fine sand; light gray; stiff and compacted; saturated; no odor;
0.0 ppm [28-30']
- ° Fine sand; light gray; stiff and compacted; saturated;
no odor; 0.0 ppm [30-33.5]
- ° Gravel w/ to fine sand; brown; saturated; no odor -
≥ 1 cm
0.0 ppm [33.5-34.25]
- ° Fine sand; light gray; stiff and compacted;
saturated; no odor; 0.0 ppm [34.25-36']
- ° Clay (fat); light gray; stiff; wet; no odor; 0.0 ppm
[36-40']

End of boring

BORELOG		CLIENT: U.S. EPA	PROJECT: Cline Ave Ditch Oil Sheen	LOCATION: Gary, IN	SAMPLE STATION ID: 8 1326	
DEPTH (FT)	LITHOLOGIC DESCRIPTION	SAMPLE COLLECTED	SAMPLE TIME	RECOVERY	REMARKS/FIELD OBSERVATIONS	
2	• Fine sand w/ tr. gravel; light brown; dry; no odor; roots; [0 - 1.5'] 0.0 ppm					
4	• Fine sand; dark gray/black; strong odor; wet. [1.5 - 3.5'] 77.3 ppm • Fine sand; light brown; damp; no odor; [3.5 - 3.75'] 2.3 ppm • silt w/ tr. fine sand; damp; no odor [3.75 - 4.0] 1.0 ppm • Fine sand w/ some medium; light gray; strong odor; saturated [4.0 - 9.0] 2.2 ppm • Fine sand w/ some medium; light gray; strong odor; saturated [9.0 - 11.5] 49.2 ppm • fine to medium sand; light gray; saturated; no odor [11.5 - 18.0] 2.7 ppm					
	<u>End of boring</u>					
Describe the following: soil type, grain size, color, consistency, odor, presence of oil sheen						
EXPLANATION				DATE 09/27/11	PAGE 1	
				DRILLING METHOD: Geoprobe		
				DRILLED BY Cabeno		
				LOGGED BY J. Colomb		

BORELOG		CLIENT: U.S. EPA	PROJECT: Cline Ave Ditch Oil Sheen	LOCATION: Gary, IN	SAMPLE STATION ID: 9 1302	
DEPTH (FT)	LITHOLOGIC DESCRIPTION	SAMPLE COLLECTED	SAMPLE TIME	RECOVERY	REMARKS/FIELD OBSERVATIONS	
2	• Fine sand w/ tr. gravel; no odor; dry; roots; 0.0 ppm [0-1.0']					
4	• Fine sand; black; strong odor; wet; 65.6 ppm [1.0'-3.5']					
6	• silt w/ tr fine sand; dark brown/black; strong odor; clump; 31.2 ppm [3.5'-4.0']					
8	• Fine sand; light gray/gray; wet; faint odor; 1.4 ppm [4.0'-5.0']					
10	• Fine sand; light gray; saturated; strong odor; 67.5 ppm [5.0'-9.0']					
12	• Fine sand; light gray; saturated; strong odor; 41.2 ppm Sheen observed [9.0'-12.0']					
	• Fine to medium sand; light gray; saturated strong odor 30.6 [12.0'-13.0']					
	<u>End of bore</u>					
Describe the following: soil type, grain size, color, consistency, odor, presence of oil sheen						
EXPLANATION				DATE 09/27/11	PAGE 1	
				DRILLING METHOD: Geoprobe		
				DRILLED BY Cabeno		
				LOGGED BY J. Colomb		

BORELOG		CLIENT: U.S. EPA	PROJECT: Cline Ave Ditch Oil Sheen	LOCATION: Gary, IN	SAMPLE STATION ID: 10 1207	
DEPTH (FT)	LITHOLOGIC DESCRIPTION	SAMPLE COLLECTED	SAMPLE TIME	RECOVERY	REMARKS/FIELD OBSERVATIONS	
1 2 3 4 5 6 7 8 9 10 11 12	• Fine sand; light brown; some gravel and roots; no odor; dry 0.0 ppm [0-6"] • Fine sand; light brown; no odor; dry to damp; 0.0 ppm [6"-3.0'] • Fine to medium sand; dark brown; saturated; faint odor [3.0'-5.0'] 0.2 ppm • Fine sand; gray; saturated; faint odor [5.0'-9.0'] slight sheen observed 1.2 ppm • Fine sand; light gray; saturated; no odor [9.0'-13'] 0.4 ppm • Fine sand; light gray/brown; saturated; no odor [13'-14'] 0.1 ppm <u>End of boring</u>					
Describe the following: soil type, grain size, color, consistency, odor, presence of oil sheen						
EXPLANATION				DATE 09/27/11		PAGE 1
				DRILLING METHOD: Geoprobe		
				DRILLED BY Cabeno		
				LOGGED BY J. Colomb		

BORELOG		CLIENT: U.S. EPA	PROJECT: Cline Ave Ditch Oil Sheen	LOCATION: Gary, IN	SAMPLE STATION ID: 11 1130	
DEPTH (FT)	LITHOLOGIC DESCRIPTION	SAMPLE COLLECTED	SAMPLE TIME	RECOVERY	REMARKS/FIELD OBSERVATIONS	
2	• Fine sand; light brown; no odor; dry; 0.0 ppm; roots. [0-1']					
4	• Fine sand; dark brown; no odor; damp; light brown stratification 0.0 ppm [1-2.0']					
6	• Fine sand; ^{light} dark brown; faint product odor; damp; 0.2 ppm [2.0-3.0']					
8	• Fine sand; gray; strong odor; saturated ✓ sheen observed [3.0-6.0] 6.0 ppm					
10	• F → medium sand; gray strong odor; saturated; <u>no</u> sheen observed [6.0-9.0] 20.4 ppm					
12	• Fine sand; gray; faint odor; wet; <u>no</u> sheen observed [9.0-11.5] 1.3 ppm					
	• Fine sand; dark gray; strong odor; saturated; sheen observed: [11.5-15.0] 18.6 ppm					
	<u>End of bore</u>					

Describe the following: soil type, grain size, color, consistency, odor, presence of oil sheen

EXPLANATION	DATE 09/27/11	PAGE 1
	DRILLING METHOD: Geoprobe	
	DRILLED BY Cabeno	
	LOGGED BY J. Colomb	

BORELOG		CLIENT: U.S. EPA	PROJECT: Cline Ave Ditch Oil Sheen	LOCATION: Gary, IN	SAMPLE STATION ID: 12 1055	
DEPTH (FT)	LITHOLOGIC DESCRIPTION	SAMPLE COLLECTED	SAMPLE TIME	RECOVERY	REMARKS/FIELD OBSERVATIONS	
2 4 6 8 10 12	• Fine sand; dry; light brown; no odor; roots from 0-6" [0-2'] • Fine sand; damp; light brown w/ dark brown stratification; 6.0 ppm; [2'-3'] • Fine sand; wet; gray; strong odor; 4.4 ppm; no sheen [3'-5'] • Fine → medium sand; saturated; strong odor; sheen observed; [5'-7'] 2.5 ppm 33.6 ppm • Fine sand; saturated; gray; strong odor; sheen observed; 14.5 ppm [7'-10'] • Fine → medium sand; wet; strong odor; no sheen; 0.5 ppm [10'-12'] <u>End of bore</u>					
Describe the following: soil type, grain size, color, consistency, odor, presence of oil sheen						
EXPLANATION				DATE 09/27/11		PAGE
				DRILLING METHOD: Geoprobe		
				DRILLED BY Cabeno		
				LOGGED BY J. Colomb		



QUALITY ENVIRONMENTAL
PROFESSIONALS, INC.

1511 South Franklin Road
Indianapolis, Indiana

LOG OF: **B-4/MW-2**
(1 of 1)

Project Number: 07-05-024

Client: GARY AIRPORT	Drilling Method: HSA
Project: NBD BANK TRUST PROPERTY	Sampling Method: CONTINUOUS
Location: EAST OF CLINE AVENUE	Elevation: 100.74'
Logged By: JHA	Time Terminated: 8:12 Weather: 90°F, sunny
Drilling Company: D & T Drilling	Drillers: Mack & John
Completion Date: August 7, 2007	

Depth (feet)	SOIL DESCRIPTION	Sample	REMARKS	PID (ppm)	Depth (feet)	WELL DIAGRAM
	7.5YR 3/2 dark brown, SAND, fine grained, some silt					
	10YR 7/6 yellow, SAND, fine grained, trace silt	1	Sample at 0-2' submitted for laboratory analysis	8.2		Surface Casing
2					2	Bentonite Seal
		2	Sample at 2-4' submitted for laboratory analysis	6.1		
4	wet at 4'				4	
		3		8.3		
6	10YR 4/1 dark gray, SAND, fine grained, trace silt	4		8.8	6	
						Sand Pack
8		5		6.5	8	2" PVC Sch. 40 0.010" slot
10		6		5.7	10	
12					12	
	Boring terminated at 13 ft					

WELL LOG 07-05-024.GPJ WELL LOG.GDT 9/24/07



QUALITY ENVIRONMENTAL
PROFESSIONALS, INC.

1611 South Franklin Road
Indianapolis, Indiana

LOG OF: **B-6/MW-3**
(1 of 1)

Project Number: 07-05-024

Client: GARY AIRPORT	Drilling Method: HSA
Project: NBD BANK TRUST PROPERTY	Sampling Method: CONTINUOUS
Location: EAST OF CLINE AVENUE	Elevation: 99.82'
Logged By: JHA	Time Terminated: 11:35 Weather: 90°F, sunny
Drilling Company: D & T Drilling	Drillers: Mack & John Completion Date: August 7, 2007

Depth (feet)	SOIL DESCRIPTION	Sample	REMARKS	PID (ppm)	Depth (feet)	WELL DIAGRAM
	GLEYS 1 2.5/N black, SAND, fine grained, with some silt and trace clay					
	10YR 4/1 dark gray, SAND, fine grained, with trace silt	1	Sample at 0-2' submitted for laboratory analysis	188.8	2	Surface Casing
2		2	Sample at 2-4' submitted for laboratory analysis	141.4	2	Bentonite Seal
4		3		25.6	4	
6		4		5.2	6	
8		5		0	8	Sand Pack
10		6		0	10	2" PVC Sch. 40 0.010" slot
12					12	
	Boring terminated at 13 ft					

WELL LOG 07-05-024.GPJ WELL LOG.GDT 9/24/07

Attachment A.2

New Monitoring Well Logs



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: Cline Avenue
PROJECT NUMBER: 11198545
CLIENT: Glenn Springs Holdings
LOCATION: Gary, Indiana
DRILLING CONTRACTOR: GHD

HOLE DESIGNATION: MW-07-19
DATE COMPLETED: August 27, 2019
DRILLING METHOD: Geoprobe/4 1/4" Ø HSA
FIELD PERSONNEL: Y. Yang
DRILLER: W. Tidwell

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (ft)		PID (ppm)
2	ASPHALT - Hydrovac, not sampled from 1.0 to 8.0ft BGS	1.00	Concrete Bentonite Chips 8" Ø Borehole Sand Pack 2" Ø Well Screen Native Soil					
4								
6								
8	SP-SAND, compact, fine to very fine grained, light brown, wet			1GP		0.8		0.1
10	- light grayish brown at 10.0ft BGS							0.1
12				2GP		4.3		0.0
14								0.1
16	END OF BOREHOLE @ 15.0ft BGS	15.00						
18								
20								
22								
24								
26								
28								

WELL DETAILS

Screened interval:

4.00 to 14.00ft BGS

Length: 10ft

Diameter: 2in

Slot Size: 0.010

Material: PVC

Seal:

1.00 to 3.00ft BGS

Material: Bentonite Chips

Sand Pack:

3.00 to 14.00ft BGS

Material: 22/11 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 8/27/19

OVERBURDEN LOG 11198545-CO.GPJ GHD_Corp 9/16/19



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: Cline Avenue
PROJECT NUMBER: 11198545
CLIENT: Glenn Springs Holdings
LOCATION: Gary, Indiana
DRILLING CONTRACTOR: GHD

HOLE DESIGNATION: MW-08-19
DATE COMPLETED: August 27, 2019
DRILLING METHOD: Geoprobe/4 1/4" Ø HSA
FIELD PERSONNEL: Y. Yang
DRILLER: W. Tidwell

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (ft)		PID (ppm)
	ASPHALT/CONCRETE		Concrete Bentonite Chips 8" Ø Borehole Sand Pack 2" Ø Well Screen Native Soil					
2	Hydrovac, not sampled	1.50						
4								
6								
8	SP-SAND, compact, fine grained, light brown, wet, slight hydrocarbon odor, sheen	8.00		1GP		1.8		15.1
10	SP-SAND, compact, fine to very fine grained, light grayish brown, staining, hydrocarbon odor	10.20						0.3
12				2GP		4.1		0.2
14								0.3
16	END OF BOREHOLE @ 15.0ft BGS	15.00						
18								
20								
22								
24								
26								
28								

WELL DETAILS

Screened interval:

4.00 to 14.00ft BGS

Length: 10ft

Diameter: 2in

Slot Size: 0.010

Material: PVC

Seal:

1.00 to 3.00ft BGS

Material: Bentonite Chips

Sand Pack:

3.00 to 14.00ft BGS

Material: 22/11 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 8/27/19

OVERBURDEN LOG 11198545-CO.GPJ GHD_Corp 9/16/19



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: Cline Avenue
PROJECT NUMBER: 11198545
CLIENT: Glenn Springs Holdings
LOCATION: Gary, Indiana
DRILLING CONTRACTOR: GHD

HOLE DESIGNATION: MW-09-19
DATE COMPLETED: August 6, 2019
DRILLING METHOD: Geoprobe/4 1/4" Ø HSA
FIELD PERSONNEL: Y. Yang
DRILLER: W. Tidwell

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (ft)		PID (ppm)
0.40	TOPSOIL, silty, sandy, trace organics, loose, light brown, dry		Concrete					1.1
2	FILL, sandy, compact, light brown		Bentonite Chips	1GP		2.2		
4	- wet at 3.0ft BGS			25-5				5.7
6	SP-SAND, compact, fine to very fine grained, light brown to grayish brown, wet, staining, slight hydrocarbon odor	6.00	8" Ø Borehole	2GP		4.5		11.3
8			Sand Pack					12.2
10			2" Ø Well Screen	3GP		4.2		5.9
12			Native Soil					3.0
14								
16	END OF BOREHOLE @ 15.0ft BGS	15.00						
18								
20								
22								
24								
26								
28								

WELL DETAILS

Screened interval:

3.00 to 13.00ft BGS

Length: 10ft

Diameter: 2in

Slot Size: 0.010

Material: PVC

Seal:

1.00 to 3.00ft BGS

Material: Bentonite Chips

Sand Pack:

3.00 to 13.00ft BGS

Material: 22/11 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

WATER FOUND ∇ 8/6/19

CHEMICAL ANALYSIS

OVERBURDEN LOG 11198545-CO.GPJ GHD_Corp 9/16/19

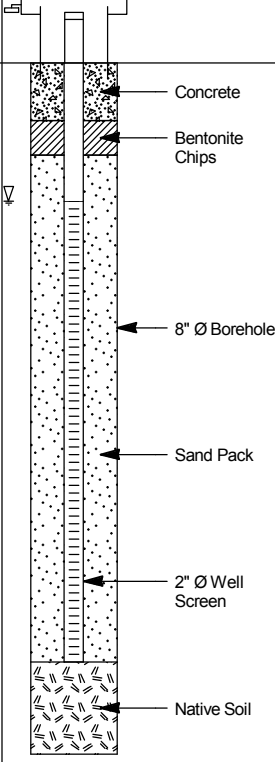


STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: Cline Avenue
PROJECT NUMBER: 11198545
CLIENT: Glenn Springs Holdings
LOCATION: Gary, Indiana
DRILLING CONTRACTOR: GHD

HOLE DESIGNATION: MW-10-19
DATE COMPLETED: August 28, 2019
DRILLING METHOD: Geoprobe/4 1/4" Ø HSA
FIELD PERSONNEL: Y. Yang
DRILLER: W. Tidwell

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (ft)		PID (ppm)
2	Hydrovac, not sampled		 Concrete Bentonite Chips 8" Ø Borehole Sand Pack 2" Ø Well Screen Native Soil					
4								
6								
8								
10	SP-SAND, compact, fine to very fine grained, light gray, wet - hydrocarbon odor, staining 10.0 to 12.0 ft BGS	10.00		1GP		5.0		59.5
12								2.1
14								2.4
16	END OF BOREHOLE @ 15.0ft BGS	15.00						
18								
20								
22								
24								
26								
28								

WELL DETAILS

Screened interval:

3.00 to 13.00ft BGS

Length: 10ft

Diameter: 2in

Slot Size: 0.010

Material: PVC

Seal:

1.00 to 2.00ft BGS

Material: Bentonite Chips

Sand Pack:

3.00 to 13.00ft BGS

Material: 22/11 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 8/28/19

OVERBURDEN LOG 11198545-CO.GPJ GHD_Corp 9/16/19

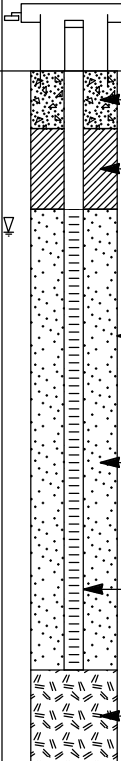


STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: Cline Avenue
PROJECT NUMBER: 11198545
CLIENT: Glenn Springs Holdings
LOCATION: Gary, Indiana
DRILLING CONTRACTOR: GHD

HOLE DESIGNATION: MW-11-19
DATE COMPLETED: August 6, 2019
DRILLING METHOD: Geoprobe/4 1/4" Ø HSA
FIELD PERSONNEL: Y. Yang
DRILLER: W. Tidwell

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (ft)		PID (ppm)
								
	FILL, sandy, loose, brown, damp							
2	SP-SAND, loose to compact, fine to very fine grained, light brown	1.00		1GP		2.5		2.1
4	- wet at 3.5ft BGS			25-5				12.2
6								3.9
8				2GP		4.2		4.0
10								6.2
12				3GP		3.8		4.3
14	- medium to very fine grained at 14.0ft BGS	14.50						
16	SP-SAND, compact, fine to very fine grained, light grayish brown, slight odor, staining	15.00						
16	END OF BOREHOLE @ 15.0ft BGS							
18								
20								
22								
24								
26								
28								

WELL DETAILS

Screened interval:

3.00 to 13.00ft BGS

Length: 10ft

Diameter: 2in

Slot Size: 0.010

Material: PVC

Seal:

1.00 to 3.00ft BGS

Material: Bentonite Chips

Sand Pack:

3.00 to 13.00ft BGS

Material: 22/11 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

WATER FOUND ∇ 8/6/19

CHEMICAL ANALYSIS

OVERBURDEN LOG 11198545-CO.GPJ GHD_Corp 9/16/19



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: Cline Avenue
PROJECT NUMBER: 11198545
CLIENT: Glenn Springs Holdings
LOCATION: Gary, Indiana
DRILLING CONTRACTOR: GHD

HOLE DESIGNATION: MW-12-19
DATE COMPLETED: August 27, 2019
DRILLING METHOD: Geoprobe/4 1/4" Ø HSA
FIELD PERSONNEL: Y. Yang
DRILLER: W. Tidwell

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (ft)		PID (ppm)
2	Hydrovac, not sampled		Concrete Bentonite Chips 8" Ø Borehole Sand Pack 2" Ø Well Screen Native Soil					
4								
6								
8	SP-SAND, compact, fine to medium grained, light gray, wet, strong hydrocarbon odor, staining	8.00		1GP		0.8		21.3
10								
12				2GP				15.3
14								3.7
16	END OF BOREHOLE @ 15.0ft BGS	15.00						1.3
18								
20								
22								
24			WELL DETAILS Screened interval: 4.00 to 14.00ft BGS Length: 10ft Diameter: 2in Slot Size: 0.010 Material: PVC Seal: 1.00 to 3.00ft BGS Material: Bentonite Chips Sand Pack: 3.00 to 14.30ft BGS Material: 22/11 Sand					
26								
28								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 8/27/19

OVERBURDEN LOG 11198545-CO.GPJ GHD_Corp 9/16/19



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: Cline Avenue
PROJECT NUMBER: 11198545
CLIENT: Glenn Springs Holdings
LOCATION: Gary, Indiana
DRILLING CONTRACTOR: GHD

HOLE DESIGNATION: MW-13-19
DATE COMPLETED: August 5, 2019
DRILLING METHOD: Geoprobe/4 1/4" Ø HSA
FIELD PERSONNEL: Y. Yang
DRILLER: W. Tidwell

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (ft)		PID (ppm)
2	FILL, sandy, silty, loose to compact, brown, damp							120.4
4	FILL, sandy, silty, trace debris, compact, grayish brown, strong odor, staining - wet, saturated with product at 3.5ft BGS	2.50		1.5-3' 1GP		4.0		1667
6	SP-SAND, loose to compact, fine to very fine grained, grayish brown to light grayish brown, wet, strong hydrocarbon odor, staining	5.00						307.6
8				2GP		3.5		3527
10								2056
12				3GP		3.1		1660
14								177.6
16	END OF BOREHOLE @ 15.0ft BGS	15.00	<u>WELL DETAILS</u> Screened interval: 3.50 to 13.50ft BGS Length: 10ft Diameter: 2in Slot Size: 0.010 Material: PVC Seal: 1.00 to 3.00ft BGS Material: Bentonite Chips Sand Pack: 3.00 to 13.50ft BGS Material: 22/11 Sand					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 8/5/19
CHEMICAL ANALYSIS

OVERBURDEN LOG 11198545-CO.GPJ GHD_Corp 9/16/19



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: Cline Avenue
PROJECT NUMBER: 11198545
CLIENT: Glenn Springs Holdings
LOCATION: Gary, Indiana
DRILLING CONTRACTOR: GHD

HOLE DESIGNATION: MW-14-19
DATE COMPLETED: August 5, 2019
DRILLING METHOD: Geoprobe/4 1/4" Ø HSA
FIELD PERSONNEL: Y. Yang
DRILLER: W. Tidwell

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (ft)		PID (ppm)
0.30	TOPSOIL, sandy, silty, trace organic debris, light brown, damp	0.50	Concrete					
2	FILL, sandy, silty, trace gravel, light brown to tan, damp		Bentonite Chips	1GP		4.1		311.5
4	FILL, silty, sandy, dark gray to grayish brown, strong odor			25-5				1475
6	- wet at 4.8ft BGS - debris at 5.0ft BGS - saturated with product from 5.0 to 7.0ft BGS	5.20	8" Ø Borehole					
8	SP-SAND, fine to very fine grained, gray to light gray, strong hydrocarbon odor		Sand Pack	2GP		3.3		2006
10								1698
12			2" Ø Well Screen					19.8
14				3GP		3.7		6.3
15.00	END OF BOREHOLE @ 15.0ft BGS	15.00	Native Soil					

WELL DETAILS

Screened interval:

4.00 to 14.00ft BGS

Length: 10ft

Diameter: 2in

Slot Size: 0.010

Material: PVC

Seal:

1.00 to 3.00ft BGS

Material: Bentonite Chips

Sand Pack:

3.00 to 14.00ft BGS

Material: 22/11 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

WATER FOUND ∇ 8/5/19

CHEMICAL ANALYSIS

OVERBURDEN LOG 11198545-CO.GPJ GHD_Corp 9/16/19

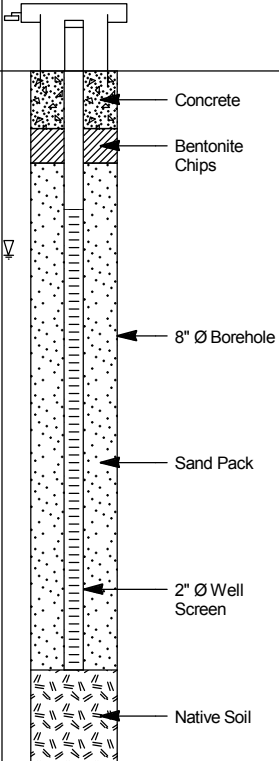


STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: Cline Avenue
PROJECT NUMBER: 11198545
CLIENT: Glenn Springs Holdings
LOCATION: Gary, Indiana
DRILLING CONTRACTOR: GHD

HOLE DESIGNATION: MW-15-19
DATE COMPLETED: August 28, 2019
DRILLING METHOD: Geoprobe/4 1/4" Ø HSA
FIELD PERSONNEL: Y. Yang
DRILLER: W. Tidwell

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (ft)		PID (ppm)
2	Hydrovac, not sampled		 Concrete Bentonite Chips 8" Ø Borehole Sand Pack 2" Ø Well Screen Native Soil					
4								
6								
8	SP-SAND, compact, fine to very fine grained, light gray to light brown, wet	8.00		1GP		2.0		0.0
10								
12	- light grayish brown at 12.5ft BGS			2GP		3.1		0.0
14								0.1
16	END OF BOREHOLE @ 15.0ft BGS	15.00						0.1
18								
20								
22								
24								
26								
28								

WELL DETAILS

Screened interval:

3.00 to 13.00ft BGS

Length: 10ft

Diameter: 2in

Slot Size: 0.010

Material: PVC

Seal:

1.00 to 2.00ft BGS

Material: Bentonite Chips

Sand Pack:

2.00 to 15.00ft BGS

Material: 22/11 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 8/28/19

OVERBURDEN LOG 11198545-CO.GPJ GHD_Corp 9/16/19



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: Cline Avenue
PROJECT NUMBER: 11198545
CLIENT: Glenn Springs Holdings
LOCATION: Gary, Indiana
DRILLING CONTRACTOR: GHD

HOLE DESIGNATION: MW-16-19
DATE COMPLETED: August 28, 2019
DRILLING METHOD: Hand Auger/Geoprobe/4 1/4" Ø HSA
FIELD PERSONNEL: Y. Yang
DRILLER: W. Tidwell

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (ft)		PID (ppm)
	TOPSOIL, sandy, loose to compact, brown, damp	0.50		1HA				21.2
	FILL, sandy, compact, moist, staining, hydrocarbon odor			2HA				97.3
2				1-2				
	- wet at 3.0ft BGS			3HA				39.7
		3.50		4HA				68.2
4	SP-SAND, compact, fine to very fine grained, light grayish brown, wet, staining, hydrocarbon odor			5HA				159.6
				6HA				82.7
6								112.6
8				7GP		3.6		87.3
10								14.4
12				8GP		3.7		3.1
14								1.8
16	END OF BOREHOLE @ 15.0ft BGS	15.00						

WELL DETAILS

Screened interval:

3.00 to 13.00ft BGS

Length: 10ft

Diameter: 2in

Slot Size: 0.010

Material: PVC

Seal:

1.00 to 2.00ft BGS

Material: Bentonite Chips

Sand Pack:

2.00 to 15.00ft BGS

Material: 22/11 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

WATER FOUND ∇ 8/28/19

CHEMICAL ANALYSIS

OVERBURDEN LOG 11198545-CO.GPJ GHD_Corp 9/16/19

Attachment B

Laboratory Analytical Reports

August 15, 2019

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

GHD - Glenn Springs Holdings

Sample Delivery Group: L1126377
Samples Received: 08/07/2019
Project Number: 11198545
Description: Cline Avenue Ditch

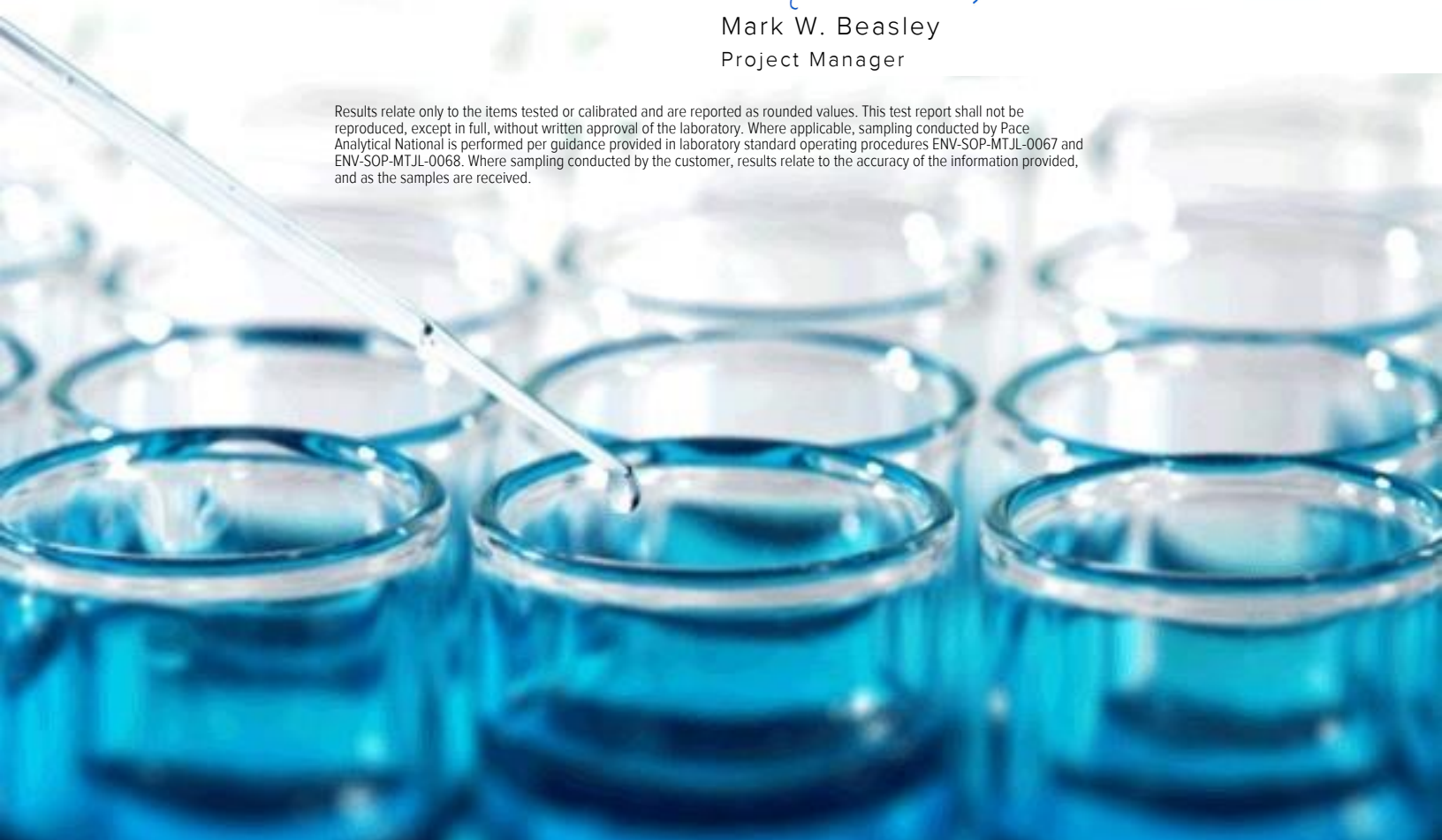
Report To: Angela Bown
2055 Niagara Falls Blvd. #3
Niagara Falls, NY 14034

Entire Report Reviewed By:



Mark W. Beasley
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.





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SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



SO-11198545-080519-YY-001 L1126377-01 Solid

Collected by YY
Collected date/time 08/05/19 11:25
Received date/time 08/07/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1327658	1	08/13/19 15:26	08/13/19 15:34	KBC	Mt. Juliet, TN
Mercury by Method 7471A	WG1325024	1	08/08/19 12:14	08/13/19 19:23	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1325034	1	08/08/19 08:15	08/10/19 11:24	EL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1325034	1	08/08/19 08:15	08/11/19 19:35	EL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1325034	5	08/08/19 08:15	08/11/19 19:48	EL	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1326829	500	08/05/19 11:25	08/12/19 01:04	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1327233	40	08/05/19 11:25	08/13/19 06:03	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1327774	200	08/13/19 22:58	08/14/19 14:02	KME	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082	WG1327209	1	08/13/19 13:48	08/14/19 11:20	MTJ	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082	WG1327209	10	08/13/19 13:48	08/14/19 12:35	MTJ	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1327753	100	08/13/19 19:48	08/14/19 12:25	AAT	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1327753	1000	08/13/19 19:48	08/14/19 19:01	DMM	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

SO-11198585-080519-YY-002 L1126377-02 Solid

Collected by YY
Collected date/time 08/05/19 14:30
Received date/time 08/07/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1327658	1	08/13/19 15:26	08/13/19 15:34	KBC	Mt. Juliet, TN
Mercury by Method 7471A	WG1325024	1	08/08/19 12:14	08/13/19 19:25	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1325034	1	08/08/19 08:15	08/10/19 13:09	EL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1325034	1	08/08/19 08:15	08/11/19 19:50	EL	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1326829	100	08/05/19 14:30	08/12/19 01:28	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1327233	8	08/05/19 14:30	08/13/19 06:23	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1327774	100	08/13/19 22:58	08/14/19 13:35	KME	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082	WG1327209	1	08/13/19 13:48	08/14/19 11:33	MTJ	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1327753	50	08/13/19 19:48	08/14/19 11:17	AAT	Mt. Juliet, TN

TB-11198545-080519-YY-01 L1126377-03 GW

Collected by YY
Collected date/time 08/05/19 08:00
Received date/time 08/07/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1325892	1	08/09/19 13:20	08/09/19 13:20	JAH	Mt. Juliet, TN

SO-11198545-080619-YY-003 L1126377-04 Solid

Collected by YY
Collected date/time 08/06/19 11:45
Received date/time 08/07/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1327659	1	08/13/19 15:15	08/13/19 15:25	KBC	Mt. Juliet, TN
Mercury by Method 7471A	WG1325024	1	08/08/19 12:14	08/13/19 19:27	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1325034	1	08/08/19 08:15	08/10/19 13:12	EL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1325034	1	08/08/19 08:15	08/11/19 19:58	EL	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1326829	1	08/06/19 11:45	08/11/19 15:53	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1327233	1	08/06/19 11:45	08/13/19 01:57	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1327774	50	08/13/19 22:58	08/14/19 13:22	KME	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082	WG1327209	1	08/13/19 13:48	08/14/19 11:45	MTJ	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1327753	5	08/13/19 19:48	08/14/19 10:09	AAT	Mt. Juliet, TN

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



SO-11198545-080619-YY-004 L1126377-05 Solid

Collected by
YY

Collected date/time
08/06/19 13:45

Received date/time
08/07/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1327659	1	08/13/19 15:15	08/13/19 15:25	KBC	Mt. Juliet, TN
Mercury by Method 7471A	WG1325024	1	08/08/19 12:14	08/13/19 19:35	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1325034	1	08/08/19 08:15	08/10/19 13:14	EL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1325034	1	08/08/19 08:15	08/11/19 20:01	EL	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1326829	1	08/06/19 13:45	08/11/19 16:41	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1327233	1	08/06/19 13:45	08/13/19 02:17	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1327774	1	08/13/19 22:58	08/14/19 12:56	KME	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082	WG1327209	1	08/13/19 13:48	08/14/19 13:25	MTJ	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1327753	1	08/13/19 19:48	08/14/19 08:15	AAT	Mt. Juliet, TN

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

SO-11198545-080619-YY-005 L1126377-06 Solid

Collected by
YY

Collected date/time
08/06/19 14:00

Received date/time
08/07/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1327659	1	08/13/19 15:15	08/13/19 15:25	KBC	Mt. Juliet, TN
Mercury by Method 7471A	WG1325024	1	08/08/19 12:14	08/13/19 19:37	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1325034	1	08/08/19 08:15	08/10/19 13:17	EL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1325034	1	08/08/19 08:15	08/11/19 20:04	EL	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1326829	1	08/06/19 14:00	08/11/19 17:04	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1327233	1	08/06/19 14:00	08/13/19 02:38	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1327774	1	08/13/19 22:58	08/14/19 13:09	KME	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082	WG1327209	1	08/13/19 13:48	08/14/19 13:37	MTJ	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1327753	1	08/13/19 19:48	08/14/19 09:00	AAT	Mt. Juliet, TN



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Mark W. Beasley
Project Manager

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.0		1	08/13/2019 15:34	WG1327658

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	0.0694		0.00346	0.0370	1	08/13/2019 19:23	WG1325024

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Aluminum	3270	J3 J5 J6 O1	4.32	12.3	1	08/10/2019 11:24	WG1325034
Antimony	1.67	J J6	0.926	2.47	1	08/10/2019 11:24	WG1325034
Arsenic	24.3		0.568	2.47	1	08/10/2019 11:24	WG1325034
Barium	199	O1	0.210	0.617	1	08/10/2019 11:24	WG1325034
Beryllium	U	J6	0.0864	0.247	1	08/10/2019 11:24	WG1325034
Cadmium	1.47		0.0864	0.617	1	08/10/2019 11:24	WG1325034
Calcium	103000	J3 O1 V	5.71	123	1	08/10/2019 11:24	WG1325034
Chromium	72.8	J6 O1	0.173	1.23	1	08/10/2019 11:24	WG1325034
Cobalt	4.18	O1	0.284	1.23	1	08/10/2019 11:24	WG1325034
Copper	1030	J3 O1 V	0.654	2.47	1	08/10/2019 11:24	WG1325034
Iron	14000	O1 V	1.74	12.3	1	08/10/2019 11:24	WG1325034
Lead	20500		1.17	3.09	5	08/11/2019 19:48	WG1325034
Magnesium	8810	O1 V	1.37	123	1	08/10/2019 11:24	WG1325034
Manganese	309	J6 O1	0.148	1.23	1	08/10/2019 11:24	WG1325034
Nickel	53.9	J6	0.605	2.47	1	08/10/2019 11:24	WG1325034
Potassium	520	B J6	12.6	123	1	08/10/2019 11:24	WG1325034
Selenium	U	O1	0.765	2.47	1	08/10/2019 11:24	WG1325034
Silver	0.764	J J6	0.148	1.23	1	08/10/2019 11:24	WG1325034
Sodium	456	J6	12.2	123	1	08/10/2019 11:24	WG1325034
Thallium	U		0.802	2.47	1	08/11/2019 19:35	WG1325034
Vanadium	39.8	J6 O1	0.296	2.47	1	08/10/2019 11:24	WG1325034
Zinc	335	J6 O1	0.728	6.17	1	08/10/2019 11:24	WG1325034

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	3010		13.3	61.7	500	08/12/2019 01:04	WG1326829
(S) a,a,a-Trifluorotoluene(FID)	104			77.0-120		08/12/2019 01:04	WG1326829

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	60.1		0.676	1.23	40	08/13/2019 06:03	WG1327233
Benzene	5.64		0.0197	0.0494	40	08/13/2019 06:03	WG1327233
Bromochloromethane	U		0.0558	0.247	40	08/13/2019 06:03	WG1327233
Bromodichloromethane	U		0.0389	0.123	40	08/13/2019 06:03	WG1327233
Bromoform	U		0.295	1.23	40	08/13/2019 06:03	WG1327233
Bromomethane	U		0.183	0.617	40	08/13/2019 06:03	WG1327233
Carbon disulfide	U		0.200	0.617	40	08/13/2019 06:03	WG1327233
Carbon tetrachloride	U		0.0533	0.247	40	08/13/2019 06:03	WG1327233
Chlorobenzene	U		0.0283	0.123	40	08/13/2019 06:03	WG1327233
Chlorodibromomethane	U		0.0222	0.123	40	08/13/2019 06:03	WG1327233
Chloroethane	U		0.0533	0.247	40	08/13/2019 06:03	WG1327233

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloroform	U		0.0205	0.123	40	08/13/2019 06:03	WG1327233
Chloromethane	U		0.0686	0.617	40	08/13/2019 06:03	WG1327233
Cyclohexane	32.4		0.0251	0.123	40	08/13/2019 06:03	WG1327233
1,2-Dibromo-3-Chloropropane	U		0.252	1.23	40	08/13/2019 06:03	WG1327233
1,2-Dibromoethane	U		0.0259	0.123	40	08/13/2019 06:03	WG1327233
Dichlorodifluoromethane	U		0.0404	0.123	40	08/13/2019 06:03	WG1327233
1,1-Dichloroethane	U		0.0284	0.123	40	08/13/2019 06:03	WG1327233
1,2-Dichloroethane	U		0.0234	0.123	40	08/13/2019 06:03	WG1327233
1,2-Dichlorobenzene	U		0.0716	0.247	40	08/13/2019 06:03	WG1327233
1,3-Dichlorobenzene	U		0.0839	0.247	40	08/13/2019 06:03	WG1327233
1,4-Dichlorobenzene	U		0.0973	0.247	40	08/13/2019 06:03	WG1327233
1,1-Dichloroethene	U		0.0247	0.123	40	08/13/2019 06:03	WG1327233
cis-1,2-Dichloroethene	U		0.0341	0.123	40	08/13/2019 06:03	WG1327233
trans-1,2-Dichloroethene	U		0.0706	0.247	40	08/13/2019 06:03	WG1327233
1,2-Dichloropropane	U		0.0627	0.247	40	08/13/2019 06:03	WG1327233
cis-1,3-Dichloropropene	U		0.0334	0.123	40	08/13/2019 06:03	WG1327233
trans-1,3-Dichloropropene	U		0.0755	0.247	40	08/13/2019 06:03	WG1327233
Ethylbenzene	19.7		0.0262	0.123	40	08/13/2019 06:03	WG1327233
2-Hexanone	U		0.494	1.23	40	08/13/2019 06:03	WG1327233
Isopropylbenzene	5.47		0.0426	0.123	40	08/13/2019 06:03	WG1327233
2-Butanone (MEK)	U		0.617	1.23	40	08/13/2019 06:03	WG1327233
Methyl Acetate	U		0.104	0.247	40	08/13/2019 06:03	WG1327233
Methyl Cyclohexane	107		0.0508	0.247	40	08/13/2019 06:03	WG1327233
Methylene Chloride	U		0.328	1.23	40	08/13/2019 06:03	WG1327233
4-Methyl-2-pentanone (MIBK)	U		0.494	1.23	40	08/13/2019 06:03	WG1327233
Methyl tert-butyl ether	U		0.0146	0.0494	40	08/13/2019 06:03	WG1327233
Styrene	U		0.135	0.617	40	08/13/2019 06:03	WG1327233
1,1,2,2-Tetrachloroethane	U		0.0193	0.123	40	08/13/2019 06:03	WG1327233
Tetrachloroethene	U		0.0346	0.123	40	08/13/2019 06:03	WG1327233
Toluene	4.32		0.0617	0.247	40	08/13/2019 06:03	WG1327233
1,2,3-Trichlorobenzene	U		0.0309	0.123	40	08/13/2019 06:03	WG1327233
1,2,4-Trichlorobenzene	U		0.238	0.617	40	08/13/2019 06:03	WG1327233
1,1,1-Trichloroethane	U		0.0136	0.123	40	08/13/2019 06:03	WG1327233
1,1,2-Trichloroethane	U		0.0436	0.123	40	08/13/2019 06:03	WG1327233
Trichloroethene	U		0.0197	0.0494	40	08/13/2019 06:03	WG1327233
Trichlorofluoromethane	U		0.0247	0.123	40	08/13/2019 06:03	WG1327233
1,1,2-Trichlorotrifluoroethane	U		0.0333	0.123	40	08/13/2019 06:03	WG1327233
Vinyl chloride	U		0.0337	0.123	40	08/13/2019 06:03	WG1327233
Xylenes, Total	110		0.236	0.321	40	08/13/2019 06:03	WG1327233
(S) Toluene-d8	106			75.0-131		08/13/2019 06:03	WG1327233
(S) 4-Bromofluorobenzene	109			67.0-138		08/13/2019 06:03	WG1327233
(S) 1,2-Dichloroethane-d4	106			70.0-130		08/13/2019 06:03	WG1327233

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	62600		397	987	200	08/14/2019 14:02	WG1327774
C28-C40 Oil Range	40200		67.6	987	200	08/14/2019 14:02	WG1327774
(S) o-Terphenyl	0.000	J7		18.0-148		08/14/2019 14:02	WG1327774

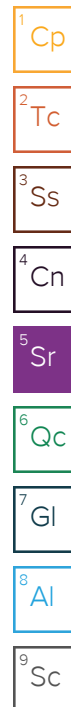


Polychlorinated Biphenyls (GC) by Method 8082

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.00432	0.0210	1	08/14/2019 11:20	WG1327209
PCB 1221	U		0.00663	0.0210	1	08/14/2019 11:20	WG1327209
PCB 1232	U		0.00515	0.0210	1	08/14/2019 11:20	WG1327209
PCB 1242	U		0.00392	0.0210	1	08/14/2019 11:20	WG1327209
PCB 1248	U		0.00389	0.0210	1	08/14/2019 11:20	WG1327209
PCB 1254	6.00		0.0583	0.210	10	08/14/2019 12:35	WG1327209
PCB 1260	U		0.00610	0.0210	1	08/14/2019 11:20	WG1327209
(S) Decachlorobiphenyl	138	J1		10.0-135		08/14/2019 11:20	WG1327209
(S) Decachlorobiphenyl	149	J1		10.0-135		08/14/2019 12:35	WG1327209
(S) Tetrachloro-m-xylene	82.3			10.0-139		08/14/2019 11:20	WG1327209
(S) Tetrachloro-m-xylene	88.6			10.0-139		08/14/2019 12:35	WG1327209

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	28.8		0.792	4.11	100	08/14/2019 12:25	WG1327753
Acenaphthylene	U		0.828	4.11	100	08/14/2019 12:25	WG1327753
Acetophenone	U		9.28	41.1	100	08/14/2019 12:25	WG1327753
Anthracene	33.8		0.780	4.11	100	08/14/2019 12:25	WG1327753
Atrazine	U		11.6	41.1	100	08/14/2019 12:25	WG1327753
Benzaldehyde	U		6.57	41.1	100	08/14/2019 12:25	WG1327753
Benzo(a)anthracene	121		0.528	4.11	100	08/14/2019 12:25	WG1327753
Benzo(b)fluoranthene	66.8		0.858	4.11	100	08/14/2019 12:25	WG1327753
Benzo(k)fluoranthene	9.69		0.718	4.11	100	08/14/2019 12:25	WG1327753
Benzo(g,h,i)perylene	45.5		0.890	4.11	100	08/14/2019 12:25	WG1327753
Benzo(a)pyrene	77.9		0.676	4.11	100	08/14/2019 12:25	WG1327753
Biphenyl	U		0.726	41.1	100	08/14/2019 12:25	WG1327753
Bis(2-chlorethoxy)methane	U		0.950	41.1	100	08/14/2019 12:25	WG1327753
Bis(2-chloroethyl)ether	U		1.11	41.1	100	08/14/2019 12:25	WG1327753
Bis(2-chloroisopropyl)ether	U		0.938	41.1	100	08/14/2019 12:25	WG1327753
4-Bromophenyl-phenylether	U		1.41	41.1	100	08/14/2019 12:25	WG1327753
Caprolactam	U		12.8	41.1	100	08/14/2019 12:25	WG1327753
Carbazole	10.2	J1	0.647	41.1	100	08/14/2019 12:25	WG1327753
4-Chloroaniline	U		4.34	41.1	100	08/14/2019 12:25	WG1327753
2-Chloronaphthalene	U		0.789	4.11	100	08/14/2019 12:25	WG1327753
4-Chlorophenyl-phenylether	U		0.774	41.1	100	08/14/2019 12:25	WG1327753
Chrysene	274		6.85	41.1	1000	08/14/2019 19:01	WG1327753
Dibenz(a,h)anthracene	38.1		1.01	4.11	100	08/14/2019 12:25	WG1327753
Dibenzofuran	U		0.639	41.1	100	08/14/2019 12:25	WG1327753
3,3-Dichlorobenzidine	U		9.80	41.1	100	08/14/2019 12:25	WG1327753
2,4-Dinitrotoluene	U		0.749	41.1	100	08/14/2019 12:25	WG1327753
2,6-Dinitrotoluene	U		0.910	41.1	100	08/14/2019 12:25	WG1327753
Fluoranthene	28.9		0.612	4.11	100	08/14/2019 12:25	WG1327753
Fluorene	41.5		0.842	4.11	100	08/14/2019 12:25	WG1327753
Hexachlorobenzene	U		1.06	41.1	100	08/14/2019 12:25	WG1327753
Hexachloro-1,3-butadiene	U		1.23	41.1	100	08/14/2019 12:25	WG1327753
Hexachlorocyclopentadiene	U		7.24	41.1	100	08/14/2019 12:25	WG1327753
Hexachloroethane	U		1.65	41.1	100	08/14/2019 12:25	WG1327753
Indeno(1,2,3-cd)pyrene	13.6		0.953	4.11	100	08/14/2019 12:25	WG1327753
Isophorone	U		0.644	41.1	100	08/14/2019 12:25	WG1327753
2-Methylnaphthalene	400		10.6	41.1	1000	08/14/2019 19:01	WG1327753
Naphthalene	27.2		1.10	4.11	100	08/14/2019 12:25	WG1327753
2-Nitroaniline	U		0.932	41.1	100	08/14/2019 12:25	WG1327753
3-Nitroaniline	U		1.05	41.1	100	08/14/2019 12:25	WG1327753
4-Nitroaniline	U		0.789	41.1	100	08/14/2019 12:25	WG1327753
Nitrobenzene	U		0.858	41.1	100	08/14/2019 12:25	WG1327753





Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
n-Nitrosodiphenylamine	U		11.1	41.1	100	08/14/2019 12:25	WG1327753
n-Nitrosodi-n-propylamine	U		1.12	41.1	100	08/14/2019 12:25	WG1327753
Phenanthrene	167		0.652	4.11	100	08/14/2019 12:25	WG1327753
Benzylbutyl phthalate	U		1.27	41.1	100	08/14/2019 12:25	WG1327753
Bis(2-ethylhexyl)phthalate	U		1.48	41.1	100	08/14/2019 12:25	WG1327753
Di-n-butyl phthalate	U		1.35	41.1	100	08/14/2019 12:25	WG1327753
Diethyl phthalate	U		0.853	41.1	100	08/14/2019 12:25	WG1327753
Dimethyl phthalate	U		0.666	41.1	100	08/14/2019 12:25	WG1327753
Di-n-octyl phthalate	U		1.12	41.1	100	08/14/2019 12:25	WG1327753
Pyrene	126		1.52	4.11	100	08/14/2019 12:25	WG1327753
1,2,4,5-Tetrachlorobenzene	U		9.40	41.1	100	08/14/2019 12:25	WG1327753
4-Chloro-3-methylphenol	U		0.589	41.1	100	08/14/2019 12:25	WG1327753
2-Chlorophenol	U		1.03	41.1	100	08/14/2019 12:25	WG1327753
2-Methylphenol	U		1.22	41.1	100	08/14/2019 12:25	WG1327753
3&4-Methyl Phenol	U		0.966	41.1	100	08/14/2019 12:25	WG1327753
2,4-Dichlorophenol	U		0.921	41.1	100	08/14/2019 12:25	WG1327753
2,4-Dimethylphenol	U		5.81	41.1	100	08/14/2019 12:25	WG1327753
4,6-Dinitro-2-methylphenol	U		15.3	41.1	100	08/14/2019 12:25	WG1327753
2,4-Dinitrophenol	U		12.1	41.1	100	08/14/2019 12:25	WG1327753
2-Nitrophenol	U		1.60	41.1	100	08/14/2019 12:25	WG1327753
4-Nitrophenol	U		6.48	41.1	100	08/14/2019 12:25	WG1327753
Pentachlorophenol	U		5.92	41.1	100	08/14/2019 12:25	WG1327753
Phenol	U		0.858	41.1	100	08/14/2019 12:25	WG1327753
2,4,5-Trichlorophenol	U		1.28	41.1	100	08/14/2019 12:25	WG1327753
2,4,6-Trichlorophenol	U		0.961	41.1	100	08/14/2019 12:25	WG1327753
(S) 2-Fluorophenol	112	J7		12.0-120		08/14/2019 12:25	WG1327753
(S) 2-Fluorophenol	0.000	J7		12.0-120		08/14/2019 19:01	WG1327753
(S) Phenol-d5	169	J7		10.0-120		08/14/2019 12:25	WG1327753
(S) Phenol-d5	0.000	J7		10.0-120		08/14/2019 19:01	WG1327753
(S) Nitrobenzene-d5	1330	J7		10.0-122		08/14/2019 12:25	WG1327753
(S) Nitrobenzene-d5	2970	J7		10.0-122		08/14/2019 19:01	WG1327753
(S) 2-Fluorobiphenyl	614	J7		15.0-120		08/14/2019 19:01	WG1327753
(S) 2-Fluorobiphenyl	0.000	J7		15.0-120		08/14/2019 12:25	WG1327753
(S) 2,4,6-Tribromophenol	83.9	J7		10.0-127		08/14/2019 12:25	WG1327753
(S) 2,4,6-Tribromophenol	0.000	J7		10.0-127		08/14/2019 19:01	WG1327753
(S) p-Terphenyl-d14	73.2	J7		10.0-120		08/14/2019 12:25	WG1327753
(S) p-Terphenyl-d14	0.000	J7		10.0-120		08/14/2019 19:01	WG1327753

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	74.8		1	08/13/2019 15:34	WG1327658

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	1.26		0.00374	0.0401	1	08/13/2019 19:25	WG1325024

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Aluminum	2140		4.68	13.4	1	08/10/2019 13:09	WG1325034
Antimony	1.27	J	1.00	2.67	1	08/10/2019 13:09	WG1325034
Arsenic	5.06		0.615	2.67	1	08/10/2019 13:09	WG1325034
Barium	18.9		0.227	0.669	1	08/10/2019 13:09	WG1325034
Beryllium	0.0988	J	0.0936	0.267	1	08/10/2019 13:09	WG1325034
Cadmium	0.565	J	0.0936	0.669	1	08/10/2019 13:09	WG1325034
Calcium	27900		6.19	134	1	08/10/2019 13:09	WG1325034
Chromium	6.66		0.187	1.34	1	08/10/2019 13:09	WG1325034
Cobalt	1.95		0.308	1.34	1	08/10/2019 13:09	WG1325034
Copper	356		0.709	2.67	1	08/10/2019 13:09	WG1325034
Iron	4550		1.89	13.4	1	08/10/2019 13:09	WG1325034
Lead	2210		0.254	0.669	1	08/10/2019 13:09	WG1325034
Magnesium	11600		1.48	134	1	08/10/2019 13:09	WG1325034
Manganese	139		0.160	1.34	1	08/10/2019 13:09	WG1325034
Nickel	13.3		0.655	2.67	1	08/10/2019 13:09	WG1325034
Potassium	333	B	13.6	134	1	08/10/2019 13:09	WG1325034
Selenium	U		0.829	2.67	1	08/10/2019 13:09	WG1325034
Silver	U		0.160	1.34	1	08/10/2019 13:09	WG1325034
Sodium	191	B	13.2	134	1	08/10/2019 13:09	WG1325034
Thallium	U		0.869	2.67	1	08/11/2019 19:50	WG1325034
Vanadium	13.0		0.321	2.67	1	08/10/2019 13:09	WG1325034
Zinc	101		0.789	6.69	1	08/10/2019 13:09	WG1325034

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	305		2.90	13.4	100	08/12/2019 01:28	WG1326829
(S) a,a,a-Trifluorotoluene(FID)	103			77.0-120		08/12/2019 01:28	WG1326829

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	2.36		0.147	0.267	8	08/13/2019 06:23	WG1327233
Benzene	0.208		0.00428	0.0107	8	08/13/2019 06:23	WG1327233
Bromochloromethane	U		0.0121	0.0535	8	08/13/2019 06:23	WG1327233
Bromodichloromethane	U		0.00843	0.0267	8	08/13/2019 06:23	WG1327233
Bromoform	U		0.0639	0.267	8	08/13/2019 06:23	WG1327233
Bromomethane	U		0.0396	0.134	8	08/13/2019 06:23	WG1327233
Carbon disulfide	U		0.0435	0.134	8	08/13/2019 06:23	WG1327233
Carbon tetrachloride	U		0.0116	0.0535	8	08/13/2019 06:23	WG1327233
Chlorobenzene	U		0.00613	0.0267	8	08/13/2019 06:23	WG1327233
Chlorodibromomethane	U		0.00481	0.0267	8	08/13/2019 06:23	WG1327233
Chloroethane	U		0.0116	0.0535	8	08/13/2019 06:23	WG1327233
Chloroform	U		0.00444	0.0267	8	08/13/2019 06:23	WG1327233



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloromethane	U		0.0148	0.134	8	08/13/2019 06:23	WG1327233
Cyclohexane	1.29		0.00543	0.0267	8	08/13/2019 06:23	WG1327233
1,2-Dibromo-3-Chloropropane	U		0.0546	0.267	8	08/13/2019 06:23	WG1327233
1,2-Dibromoethane	U		0.00562	0.0267	8	08/13/2019 06:23	WG1327233
Dichlorodifluoromethane	U		0.00875	0.0267	8	08/13/2019 06:23	WG1327233
1,1-Dichloroethane	U		0.00615	0.0267	8	08/13/2019 06:23	WG1327233
1,2-Dichloroethane	U		0.00508	0.0267	8	08/13/2019 06:23	WG1327233
1,2-Dichlorobenzene	U		0.0155	0.0535	8	08/13/2019 06:23	WG1327233
1,3-Dichlorobenzene	U		0.0182	0.0535	8	08/13/2019 06:23	WG1327233
1,4-Dichlorobenzene	U		0.0211	0.0535	8	08/13/2019 06:23	WG1327233
1,1-Dichloroethene	U		0.00535	0.0267	8	08/13/2019 06:23	WG1327233
cis-1,2-Dichloroethene	U		0.00738	0.0267	8	08/13/2019 06:23	WG1327233
trans-1,2-Dichloroethene	U		0.0152	0.0535	8	08/13/2019 06:23	WG1327233
1,2-Dichloropropane	U		0.0136	0.0535	8	08/13/2019 06:23	WG1327233
cis-1,3-Dichloropropene	U		0.00725	0.0267	8	08/13/2019 06:23	WG1327233
trans-1,3-Dichloropropene	U		0.0163	0.0535	8	08/13/2019 06:23	WG1327233
Ethylbenzene	0.0624		0.00567	0.0267	8	08/13/2019 06:23	WG1327233
2-Hexanone	U		0.107	0.267	8	08/13/2019 06:23	WG1327233
Isopropylbenzene	0.0828		0.00923	0.0267	8	08/13/2019 06:23	WG1327233
2-Butanone (MEK)	U		0.134	0.267	8	08/13/2019 06:23	WG1327233
Methyl Acetate	0.404		0.0225	0.0535	8	08/13/2019 06:23	WG1327233
Methyl Cyclohexane	5.75		0.0110	0.0535	8	08/13/2019 06:23	WG1327233
Methylene Chloride	U		0.0710	0.267	8	08/13/2019 06:23	WG1327233
4-Methyl-2-pentanone (MIBK)	U		0.107	0.267	8	08/13/2019 06:23	WG1327233
Methyl tert-butyl ether	U		0.00316	0.0107	8	08/13/2019 06:23	WG1327233
Styrene	U		0.0292	0.134	8	08/13/2019 06:23	WG1327233
1,1,2,2-Tetrachloroethane	U		0.00417	0.0267	8	08/13/2019 06:23	WG1327233
Tetrachloroethene	U		0.00749	0.0267	8	08/13/2019 06:23	WG1327233
Toluene	0.282		0.0134	0.0535	8	08/13/2019 06:23	WG1327233
1,2,3-Trichlorobenzene	U		0.00669	0.0267	8	08/13/2019 06:23	WG1327233
1,2,4-Trichlorobenzene	U		0.0516	0.134	8	08/13/2019 06:23	WG1327233
1,1,1-Trichloroethane	U		0.00294	0.0267	8	08/13/2019 06:23	WG1327233
1,1,2-Trichloroethane	U		0.00944	0.0267	8	08/13/2019 06:23	WG1327233
Trichloroethene	U		0.00428	0.0107	8	08/13/2019 06:23	WG1327233
Trichlorofluoromethane	U		0.00535	0.0267	8	08/13/2019 06:23	WG1327233
1,1,2-Trichlorotrifluoroethane	U		0.00722	0.0267	8	08/13/2019 06:23	WG1327233
Vinyl chloride	U		0.00730	0.0267	8	08/13/2019 06:23	WG1327233
Xylenes, Total	2.45		0.0511	0.0695	8	08/13/2019 06:23	WG1327233
(S) Toluene-d8	105			75.0-131		08/13/2019 06:23	WG1327233
(S) 4-Bromofluorobenzene	109			67.0-138		08/13/2019 06:23	WG1327233
(S) 1,2-Dichloroethane-d4	106			70.0-130		08/13/2019 06:23	WG1327233

¹ Cp
² Tc
³ Ss
⁴ Cn
⁵ Sr
⁶ Qc
⁷ Gl
⁸ Al
⁹ Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	6950		215	535	100	08/14/2019 13:35	WG1327774
C28-C40 Oil Range	4770		36.6	535	100	08/14/2019 13:35	WG1327774
(S) o-Terphenyl	323	<u>J7</u>		18.0-148		08/14/2019 13:35	WG1327774

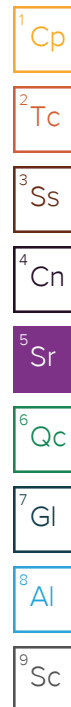


Polychlorinated Biphenyls (GC) by Method 8082

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.00468	0.0227	1	08/14/2019 11:33	WG1327209
PCB 1221	U		0.00718	0.0227	1	08/14/2019 11:33	WG1327209
PCB 1232	U		0.00558	0.0227	1	08/14/2019 11:33	WG1327209
PCB 1242	U		0.00425	0.0227	1	08/14/2019 11:33	WG1327209
PCB 1248	U		0.00421	0.0227	1	08/14/2019 11:33	WG1327209
PCB 1254	U		0.00631	0.0227	1	08/14/2019 11:33	WG1327209
PCB 1260	U		0.00661	0.0227	1	08/14/2019 11:33	WG1327209
(S) Decachlorobiphenyl	66.7			10.0-135		08/14/2019 11:33	WG1327209
(S) Tetrachloro-m-xylene	72.9			10.0-139		08/14/2019 11:33	WG1327209

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	1.42	U	0.429	2.23	50	08/14/2019 11:17	WG1327753
Acenaphthylene	U		0.448	2.23	50	08/14/2019 11:17	WG1327753
Acetophenone	U		5.03	22.3	50	08/14/2019 11:17	WG1327753
Anthracene	1.39	U	0.423	2.23	50	08/14/2019 11:17	WG1327753
Atrazine	U		6.27	22.3	50	08/14/2019 11:17	WG1327753
Benzaldehyde	U		3.56	22.3	50	08/14/2019 11:17	WG1327753
Benzo(a)anthracene	6.11		0.286	2.23	50	08/14/2019 11:17	WG1327753
Benzo(b)fluoranthene	4.69		0.464	2.23	50	08/14/2019 11:17	WG1327753
Benzo(k)fluoranthene	0.713	U	0.389	2.23	50	08/14/2019 11:17	WG1327753
Benzo(g,h,i)perylene	4.00		0.483	2.23	50	08/14/2019 11:17	WG1327753
Benzo(a)pyrene	4.85		0.366	2.23	50	08/14/2019 11:17	WG1327753
Biphenyl	U		0.393	22.3	50	08/14/2019 11:17	WG1327753
Bis(2-chlorethoxy)methane	U		0.515	22.3	50	08/14/2019 11:17	WG1327753
Bis(2-chloroethyl)ether	U		0.599	22.3	50	08/14/2019 11:17	WG1327753
Bis(2-chloroisopropyl)ether	U		0.508	22.3	50	08/14/2019 11:17	WG1327753
4-Bromophenyl-phenylether	U		0.762	22.3	50	08/14/2019 11:17	WG1327753
Caprolactam	U		6.95	22.3	50	08/14/2019 11:17	WG1327753
Carbazole	0.725	U	0.350	22.3	50	08/14/2019 11:17	WG1327753
4-Chloroaniline	U		2.35	22.3	50	08/14/2019 11:17	WG1327753
2-Chloronaphthalene	U		0.428	2.23	50	08/14/2019 11:17	WG1327753
4-Chlorophenyl-phenylether	U		0.420	22.3	50	08/14/2019 11:17	WG1327753
Chrysene	12.6		0.372	2.23	50	08/14/2019 11:17	WG1327753
Dibenz(a,h)anthracene	2.59		0.550	2.23	50	08/14/2019 11:17	WG1327753
Dibenzofuran	U		0.346	22.3	50	08/14/2019 11:17	WG1327753
3,3-Dichlorobenzidine	U		5.31	22.3	50	08/14/2019 11:17	WG1327753
2,4-Dinitrotoluene	U		0.407	22.3	50	08/14/2019 11:17	WG1327753
2,6-Dinitrotoluene	U		0.494	22.3	50	08/14/2019 11:17	WG1327753
Fluoranthene	3.20		0.332	2.23	50	08/14/2019 11:17	WG1327753
Fluorene	1.83	U	0.456	2.23	50	08/14/2019 11:17	WG1327753
Hexachlorobenzene	U		0.572	22.3	50	08/14/2019 11:17	WG1327753
Hexachloro-1,3-butadiene	U		0.669	22.3	50	08/14/2019 11:17	WG1327753
Hexachlorocyclopentadiene	U		3.93	22.3	50	08/14/2019 11:17	WG1327753
Hexachloroethane	U		0.896	22.3	50	08/14/2019 11:17	WG1327753
Indeno(1,2,3-cd)pyrene	1.43	U	0.516	2.23	50	08/14/2019 11:17	WG1327753
Isophorone	U		0.349	22.3	50	08/14/2019 11:17	WG1327753
2-Methylnaphthalene	6.83		0.576	2.23	50	08/14/2019 11:17	WG1327753
Naphthalene	U		0.595	2.23	50	08/14/2019 11:17	WG1327753
2-Nitroaniline	U		0.506	22.3	50	08/14/2019 11:17	WG1327753
3-Nitroaniline	U		0.568	22.3	50	08/14/2019 11:17	WG1327753
4-Nitroaniline	U		0.428	22.3	50	08/14/2019 11:17	WG1327753
Nitrobenzene	U		0.464	22.3	50	08/14/2019 11:17	WG1327753
n-Nitrosodiphenylamine	U		6.02	22.3	50	08/14/2019 11:17	WG1327753
n-Nitrosodi-n-propylamine	U		0.606	22.3	50	08/14/2019 11:17	WG1327753





Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Phenanthrene	9.84		0.353	2.23	50	08/14/2019 11:17	WG1327753
Benzylbutyl phthalate	U		0.689	22.3	50	08/14/2019 11:17	WG1327753
Bis(2-ethylhexyl)phthalate	U		0.802	22.3	50	08/14/2019 11:17	WG1327753
Di-n-butyl phthalate	U		0.729	22.3	50	08/14/2019 11:17	WG1327753
Diethyl phthalate	U		0.463	22.3	50	08/14/2019 11:17	WG1327753
Dimethyl phthalate	U		0.361	22.3	50	08/14/2019 11:17	WG1327753
Di-n-octyl phthalate	U		0.607	22.3	50	08/14/2019 11:17	WG1327753
Pyrene	13.3		0.823	2.23	50	08/14/2019 11:17	WG1327753
1,2,4,5-Tetrachlorobenzene	U		5.10	22.3	50	08/14/2019 11:17	WG1327753
4-Chloro-3-methylphenol	U		0.320	22.3	50	08/14/2019 11:17	WG1327753
2-Chlorophenol	U		0.555	22.3	50	08/14/2019 11:17	WG1327753
2-Methylphenol	U		0.659	22.3	50	08/14/2019 11:17	WG1327753
3&4-Methyl Phenol	U		0.524	22.3	50	08/14/2019 11:17	WG1327753
2,4-Dichlorophenol	U		0.499	22.3	50	08/14/2019 11:17	WG1327753
2,4-Dimethylphenol	U		3.16	22.3	50	08/14/2019 11:17	WG1327753
4,6-Dinitro-2-methylphenol	U		8.29	22.3	50	08/14/2019 11:17	WG1327753
2,4-Dinitrophenol	U		6.55	22.3	50	08/14/2019 11:17	WG1327753
2-Nitrophenol	U		0.869	22.3	50	08/14/2019 11:17	WG1327753
4-Nitrophenol	U		3.52	22.3	50	08/14/2019 11:17	WG1327753
Pentachlorophenol	U		3.21	22.3	50	08/14/2019 11:17	WG1327753
Phenol	U		0.464	22.3	50	08/14/2019 11:17	WG1327753
2,4,5-Trichlorophenol	U		0.695	22.3	50	08/14/2019 11:17	WG1327753
2,4,6-Trichlorophenol	U		0.522	22.3	50	08/14/2019 11:17	WG1327753
(S) 2-Fluorophenol	68.8	J7		12.0-120		08/14/2019 11:17	WG1327753
(S) Phenol-d5	72.9	J7		10.0-120		08/14/2019 11:17	WG1327753
(S) Nitrobenzene-d5	114	J7		10.0-122		08/14/2019 11:17	WG1327753
(S) 2-Fluorobiphenyl	85.8	J7		15.0-120		08/14/2019 11:17	WG1327753
(S) 2,4,6-Tribromophenol	92.5	J7		10.0-127		08/14/2019 11:17	WG1327753
(S) p-Terphenyl-d14	106	J7		10.0-120		08/14/2019 11:17	WG1327753

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		10.0	50.0	1	08/09/2019 13:20	WG1325892
Benzene	U		0.331	1.00	1	08/09/2019 13:20	WG1325892
Bromochloromethane	U		0.520	1.00	1	08/09/2019 13:20	WG1325892
Bromodichloromethane	U		0.380	1.00	1	08/09/2019 13:20	WG1325892
Bromoform	U		0.469	1.00	1	08/09/2019 13:20	WG1325892
Bromomethane	U		0.866	5.00	1	08/09/2019 13:20	WG1325892
Carbon disulfide	U		0.275	1.00	1	08/09/2019 13:20	WG1325892
Carbon tetrachloride	U		0.379	1.00	1	08/09/2019 13:20	WG1325892
Chlorobenzene	U		0.348	1.00	1	08/09/2019 13:20	WG1325892
Chlorodibromomethane	U		0.327	1.00	1	08/09/2019 13:20	WG1325892
Chloroethane	U		0.453	5.00	1	08/09/2019 13:20	WG1325892
Chloroform	U		0.324	5.00	1	08/09/2019 13:20	WG1325892
Chloromethane	U		0.276	2.50	1	08/09/2019 13:20	WG1325892
Cyclohexane	U		0.390	1.00	1	08/09/2019 13:20	WG1325892
1,2-Dibromo-3-Chloropropane	U		1.33	5.00	1	08/09/2019 13:20	WG1325892
1,2-Dibromoethane	U		0.381	1.00	1	08/09/2019 13:20	WG1325892
1,2-Dichlorobenzene	U		0.349	1.00	1	08/09/2019 13:20	WG1325892
1,3-Dichlorobenzene	U		0.220	1.00	1	08/09/2019 13:20	WG1325892
1,4-Dichlorobenzene	U		0.274	1.00	1	08/09/2019 13:20	WG1325892
Dichlorodifluoromethane	U		0.551	5.00	1	08/09/2019 13:20	WG1325892
1,1-Dichloroethane	U		0.259	1.00	1	08/09/2019 13:20	WG1325892
1,2-Dichloroethane	U		0.361	1.00	1	08/09/2019 13:20	WG1325892
1,1-Dichloroethene	U		0.398	1.00	1	08/09/2019 13:20	WG1325892
cis-1,2-Dichloroethene	U		0.260	1.00	1	08/09/2019 13:20	WG1325892
trans-1,2-Dichloroethene	U		0.396	1.00	1	08/09/2019 13:20	WG1325892
1,2-Dichloropropane	U		0.306	1.00	1	08/09/2019 13:20	WG1325892
cis-1,3-Dichloropropene	U		0.418	1.00	1	08/09/2019 13:20	WG1325892
trans-1,3-Dichloropropene	U		0.419	1.00	1	08/09/2019 13:20	WG1325892
Ethylbenzene	U		0.384	1.00	1	08/09/2019 13:20	WG1325892
2-Hexanone	U		3.82	10.0	1	08/09/2019 13:20	WG1325892
Isopropylbenzene	U		0.326	1.00	1	08/09/2019 13:20	WG1325892
2-Butanone (MEK)	U		3.93	10.0	1	08/09/2019 13:20	WG1325892
Methyl Acetate	U		4.30	20.0	1	08/09/2019 13:20	WG1325892
Methyl Cyclohexane	U		0.380	1.00	1	08/09/2019 13:20	WG1325892
Methylene Chloride	U		1.00	5.00	1	08/09/2019 13:20	WG1325892
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	08/09/2019 13:20	WG1325892
Methyl tert-butyl ether	U		0.367	1.00	1	08/09/2019 13:20	WG1325892
Styrene	U		0.307	1.00	1	08/09/2019 13:20	WG1325892
1,1,2,2-Tetrachloroethane	U		0.130	1.00	1	08/09/2019 13:20	WG1325892
Tetrachloroethene	U		0.372	1.00	1	08/09/2019 13:20	WG1325892
Toluene	U		0.412	1.00	1	08/09/2019 13:20	WG1325892
1,2,3-Trichlorobenzene	U		0.230	1.00	1	08/09/2019 13:20	WG1325892
1,2,4-Trichlorobenzene	U		0.355	1.00	1	08/09/2019 13:20	WG1325892
1,1,1-Trichloroethane	U		0.319	1.00	1	08/09/2019 13:20	WG1325892
1,1,2-Trichloroethane	U		0.383	1.00	1	08/09/2019 13:20	WG1325892
Trichloroethene	U		0.398	1.00	1	08/09/2019 13:20	WG1325892
Trichlorofluoromethane	U		1.20	5.00	1	08/09/2019 13:20	WG1325892
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00	1	08/09/2019 13:20	WG1325892
Vinyl chloride	U		0.259	1.00	1	08/09/2019 13:20	WG1325892
Xylenes, Total	U		1.06	3.00	1	08/09/2019 13:20	WG1325892
(S) Toluene-d8	104			80.0-120		08/09/2019 13:20	WG1325892
(S) 4-Bromofluorobenzene	104			77.0-126		08/09/2019 13:20	WG1325892
(S) 1,2-Dichloroethane-d4	110			70.0-130		08/09/2019 13:20	WG1325892

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	79.7		1	08/13/2019 15:25	WG1327659

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	0.0744		0.00351	0.0376	1	08/13/2019 19:27	WG1325024

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Aluminum	2270		4.39	12.5	1	08/10/2019 13:12	WG1325034
Antimony	U		0.941	2.51	1	08/10/2019 13:12	WG1325034
Arsenic	1.63	<u>L</u>	0.577	2.51	1	08/10/2019 13:12	WG1325034
Barium	13.6		0.213	0.627	1	08/10/2019 13:12	WG1325034
Beryllium	0.122	<u>L</u>	0.0878	0.251	1	08/10/2019 13:12	WG1325034
Cadmium	0.317	<u>L</u>	0.0878	0.627	1	08/10/2019 13:12	WG1325034
Calcium	28200		5.81	125	1	08/10/2019 13:12	WG1325034
Chromium	5.74		0.176	1.25	1	08/10/2019 13:12	WG1325034
Cobalt	1.84		0.288	1.25	1	08/10/2019 13:12	WG1325034
Copper	51.6		0.665	2.51	1	08/10/2019 13:12	WG1325034
Iron	4070		1.77	12.5	1	08/10/2019 13:12	WG1325034
Lead	150		0.238	0.627	1	08/10/2019 13:12	WG1325034
Magnesium	14900		1.39	125	1	08/10/2019 13:12	WG1325034
Manganese	149		0.150	1.25	1	08/10/2019 13:12	WG1325034
Nickel	11.2		0.614	2.51	1	08/10/2019 13:12	WG1325034
Potassium	397	<u>B</u>	12.8	125	1	08/10/2019 13:12	WG1325034
Selenium	U		0.777	2.51	1	08/10/2019 13:12	WG1325034
Silver	U		0.150	1.25	1	08/10/2019 13:12	WG1325034
Sodium	201	<u>B</u>	12.4	125	1	08/10/2019 13:12	WG1325034
Thallium	U		0.815	2.51	1	08/11/2019 19:58	WG1325034
Vanadium	7.04		0.301	2.51	1	08/10/2019 13:12	WG1325034
Zinc	70.9		0.740	6.27	1	08/10/2019 13:12	WG1325034

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.293		0.0272	0.125	1	08/11/2019 15:53	WG1326829
(S) a,a,a-Trifluorotoluene(FID)	94.6			77.0-120		08/11/2019 15:53	WG1326829

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	0.153		0.0172	0.0314	1	08/13/2019 01:57	WG1327233
Benzene	0.00298		0.000502	0.00125	1	08/13/2019 01:57	WG1327233
Bromochloromethane	U		0.00142	0.00627	1	08/13/2019 01:57	WG1327233
Bromodichloromethane	U		0.000988	0.00314	1	08/13/2019 01:57	WG1327233
Bromoform	U		0.00750	0.0314	1	08/13/2019 01:57	WG1327233
Bromomethane	U		0.00464	0.0157	1	08/13/2019 01:57	WG1327233
Carbon disulfide	U		0.00509	0.0157	1	08/13/2019 01:57	WG1327233
Carbon tetrachloride	U		0.00135	0.00627	1	08/13/2019 01:57	WG1327233
Chlorobenzene	U		0.000719	0.00314	1	08/13/2019 01:57	WG1327233
Chlorodibromomethane	U		0.000564	0.00314	1	08/13/2019 01:57	WG1327233
Chloroethane	U		0.00135	0.00627	1	08/13/2019 01:57	WG1327233
Chloroform	U		0.000520	0.00314	1	08/13/2019 01:57	WG1327233



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloromethane	U		0.00174	0.0157	1	08/13/2019 01:57	WG1327233
Cyclohexane	0.00684		0.000637	0.00314	1	08/13/2019 01:57	WG1327233
1,2-Dibromo-3-Chloropropane	U		0.00640	0.0314	1	08/13/2019 01:57	WG1327233
1,2-Dibromoethane	U		0.000658	0.00314	1	08/13/2019 01:57	WG1327233
Dichlorodifluoromethane	U		0.00103	0.00314	1	08/13/2019 01:57	WG1327233
1,1-Dichloroethane	U		0.000721	0.00314	1	08/13/2019 01:57	WG1327233
1,2-Dichloroethane	U		0.000596	0.00314	1	08/13/2019 01:57	WG1327233
1,2-Dichlorobenzene	U		0.00182	0.00627	1	08/13/2019 01:57	WG1327233
1,3-Dichlorobenzene	U		0.00213	0.00627	1	08/13/2019 01:57	WG1327233
1,4-Dichlorobenzene	U		0.00247	0.00627	1	08/13/2019 01:57	WG1327233
1,1-Dichloroethene	U		0.000627	0.00314	1	08/13/2019 01:57	WG1327233
cis-1,2-Dichloroethene	U		0.000865	0.00314	1	08/13/2019 01:57	WG1327233
trans-1,2-Dichloroethene	U		0.00179	0.00627	1	08/13/2019 01:57	WG1327233
1,2-Dichloropropane	U		0.00159	0.00627	1	08/13/2019 01:57	WG1327233
cis-1,3-Dichloropropene	U		0.000850	0.00314	1	08/13/2019 01:57	WG1327233
trans-1,3-Dichloropropene	U		0.00192	0.00627	1	08/13/2019 01:57	WG1327233
Ethylbenzene	0.00699		0.000665	0.00314	1	08/13/2019 01:57	WG1327233
2-Hexanone	U		0.0125	0.0314	1	08/13/2019 01:57	WG1327233
Isopropylbenzene	U		0.00108	0.00314	1	08/13/2019 01:57	WG1327233
2-Butanone (MEK)	U		0.0157	0.0314	1	08/13/2019 01:57	WG1327233
Methyl Acetate	0.0682		0.00263	0.00627	1	08/13/2019 01:57	WG1327233
Methyl Cyclohexane	0.0110		0.00129	0.00627	1	08/13/2019 01:57	WG1327233
Methylene Chloride	U		0.00833	0.0314	1	08/13/2019 01:57	WG1327233
4-Methyl-2-pentanone (MIBK)	U		0.0125	0.0314	1	08/13/2019 01:57	WG1327233
Methyl tert-butyl ether	U		0.000370	0.00125	1	08/13/2019 01:57	WG1327233
Styrene	U		0.00342	0.0157	1	08/13/2019 01:57	WG1327233
1,1,2,2-Tetrachloroethane	U		0.000489	0.00314	1	08/13/2019 01:57	WG1327233
Tetrachloroethene	U		0.000878	0.00314	1	08/13/2019 01:57	WG1327233
Toluene	0.0305		0.00157	0.00627	1	08/13/2019 01:57	WG1327233
1,2,3-Trichlorobenzene	U		0.000784	0.00314	1	08/13/2019 01:57	WG1327233
1,2,4-Trichlorobenzene	U		0.00604	0.0157	1	08/13/2019 01:57	WG1327233
1,1,1-Trichloroethane	U		0.000345	0.00314	1	08/13/2019 01:57	WG1327233
1,1,2-Trichloroethane	U		0.00111	0.00314	1	08/13/2019 01:57	WG1327233
Trichloroethene	U		0.000502	0.00125	1	08/13/2019 01:57	WG1327233
Trichlorofluoromethane	U		0.000627	0.00314	1	08/13/2019 01:57	WG1327233
1,1,2-Trichlorotrifluoroethane	U		0.000846	0.00314	1	08/13/2019 01:57	WG1327233
Vinyl chloride	U		0.000856	0.00314	1	08/13/2019 01:57	WG1327233
Xylenes, Total	0.0509		0.00599	0.00815	1	08/13/2019 01:57	WG1327233
(S) Toluene-d8	103			75.0-131		08/13/2019 01:57	WG1327233
(S) 4-Bromofluorobenzene	105			67.0-138		08/13/2019 01:57	WG1327233
(S) 1,2-Dichloroethane-d4	104			70.0-130		08/13/2019 01:57	WG1327233

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	110	J	101	251	50	08/14/2019 13:22	WG1327774
C28-C40 Oil Range	473		17.2	251	50	08/14/2019 13:22	WG1327774
(S) o-Terphenyl	78.7	JJ		18.0-148		08/14/2019 13:22	WG1327774



Collected date/time: 08/06/19 11:45

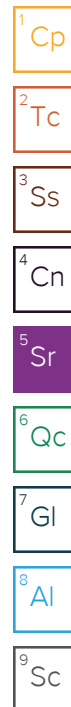
L1126377

Polychlorinated Biphenyls (GC) by Method 8082

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.00439	0.0213	1	08/14/2019 11:45	WG1327209
PCB 1221	U		0.00673	0.0213	1	08/14/2019 11:45	WG1327209
PCB 1232	U		0.00523	0.0213	1	08/14/2019 11:45	WG1327209
PCB 1242	U		0.00399	0.0213	1	08/14/2019 11:45	WG1327209
PCB 1248	U		0.00395	0.0213	1	08/14/2019 11:45	WG1327209
PCB 1254	U		0.00592	0.0213	1	08/14/2019 11:45	WG1327209
PCB 1260	U		0.00619	0.0213	1	08/14/2019 11:45	WG1327209
(S) Decachlorobiphenyl	34.5			10.0-135		08/14/2019 11:45	WG1327209
(S) Tetrachloro-m-xylene	63.0			10.0-139		08/14/2019 11:45	WG1327209

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

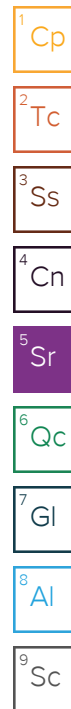
Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0403	0.209	5	08/14/2019 10:09	WG1327753
Acenaphthylene	U		0.0420	0.209	5	08/14/2019 10:09	WG1327753
Acetophenone	U	J3 J6	0.472	2.09	5	08/14/2019 10:09	WG1327753
Anthracene	U		0.0396	0.209	5	08/14/2019 10:09	WG1327753
Atrazine	U	J6	0.588	2.09	5	08/14/2019 10:09	WG1327753
Benzaldehyde	U		0.334	2.09	5	08/14/2019 10:09	WG1327753
Benzo(a)anthracene	0.118	U	0.0268	0.209	5	08/14/2019 10:09	WG1327753
Benzo(b)fluoranthene	0.138	U	0.0435	0.209	5	08/14/2019 10:09	WG1327753
Benzo(k)fluoranthene	U		0.0365	0.209	5	08/14/2019 10:09	WG1327753
Benzo(g,h,i)perylene	0.772	J6	0.0453	0.209	5	08/14/2019 10:09	WG1327753
Benzo(a)pyrene	0.138	U	0.0344	0.209	5	08/14/2019 10:09	WG1327753
Biphenyl	U		0.0369	2.09	5	08/14/2019 10:09	WG1327753
Bis(2-chlorethoxy)methane	U		0.0483	2.09	5	08/14/2019 10:09	WG1327753
Bis(2-chloroethyl)ether	U		0.0562	2.09	5	08/14/2019 10:09	WG1327753
Bis(2-chloroisopropyl)ether	U		0.0477	2.09	5	08/14/2019 10:09	WG1327753
4-Bromophenyl-phenylether	U		0.0715	2.09	5	08/14/2019 10:09	WG1327753
Caprolactam	U	J6	0.652	2.09	5	08/14/2019 10:09	WG1327753
Carbazole	U		0.0329	2.09	5	08/14/2019 10:09	WG1327753
4-Chloroaniline	U		0.221	2.09	5	08/14/2019 10:09	WG1327753
2-Chloronaphthalene	U		0.0401	0.209	5	08/14/2019 10:09	WG1327753
4-Chlorophenyl-phenylether	U		0.0394	2.09	5	08/14/2019 10:09	WG1327753
Chrysene	0.403	J6	0.0349	0.209	5	08/14/2019 10:09	WG1327753
Dibenz(a,h)anthracene	0.120	U	0.0515	0.209	5	08/14/2019 10:09	WG1327753
Dibenzofuran	U		0.0325	2.09	5	08/14/2019 10:09	WG1327753
3,3-Dichlorobenzidine	U		0.498	2.09	5	08/14/2019 10:09	WG1327753
2,4-Dinitrotoluene	U		0.0381	2.09	5	08/14/2019 10:09	WG1327753
2,6-Dinitrotoluene	U		0.0463	2.09	5	08/14/2019 10:09	WG1327753
Fluoranthene	0.0761	U	0.0311	0.209	5	08/14/2019 10:09	WG1327753
Fluorene	U		0.0428	0.209	5	08/14/2019 10:09	WG1327753
Hexachlorobenzene	U		0.0537	2.09	5	08/14/2019 10:09	WG1327753
Hexachloro-1,3-butadiene	U		0.0627	2.09	5	08/14/2019 10:09	WG1327753
Hexachlorocyclopentadiene	U	J6	0.367	2.09	5	08/14/2019 10:09	WG1327753
Hexachloroethane	U		0.0840	2.09	5	08/14/2019 10:09	WG1327753
Indeno(1,2,3-cd)pyrene	0.116	U	0.0484	0.209	5	08/14/2019 10:09	WG1327753
Isophorone	U		0.0327	2.09	5	08/14/2019 10:09	WG1327753
2-Methylnaphthalene	0.154	U	0.0540	0.209	5	08/14/2019 10:09	WG1327753
Naphthalene	0.0772	U	0.0558	0.209	5	08/14/2019 10:09	WG1327753
2-Nitroaniline	U		0.0474	2.09	5	08/14/2019 10:09	WG1327753
3-Nitroaniline	U		0.0533	2.09	5	08/14/2019 10:09	WG1327753
4-Nitroaniline	U		0.0401	2.09	5	08/14/2019 10:09	WG1327753
Nitrobenzene	U		0.0435	2.09	5	08/14/2019 10:09	WG1327753
n-Nitrosodiphenylamine	U	J6	0.564	2.09	5	08/14/2019 10:09	WG1327753
n-Nitrosodi-n-propylamine	U		0.0568	2.09	5	08/14/2019 10:09	WG1327753





Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Phenanthrene	0.0927	J	0.0331	0.209	5	08/14/2019 10:09	WG1327753
Benzylbutyl phthalate	U		0.0646	2.09	5	08/14/2019 10:09	WG1327753
Bis(2-ethylhexyl)phthalate	U		0.0752	2.09	5	08/14/2019 10:09	WG1327753
Di-n-butyl phthalate	U		0.0683	2.09	5	08/14/2019 10:09	WG1327753
Diethyl phthalate	U		0.0434	2.09	5	08/14/2019 10:09	WG1327753
Dimethyl phthalate	U		0.0339	2.09	5	08/14/2019 10:09	WG1327753
Di-n-octyl phthalate	U		0.0569	2.09	5	08/14/2019 10:09	WG1327753
Pyrene	0.116	J	0.0771	0.209	5	08/14/2019 10:09	WG1327753
1,2,4,5-Tetrachlorobenzene	U	J3 J6	0.478	2.09	5	08/14/2019 10:09	WG1327753
4-Chloro-3-methylphenol	U		0.0300	2.09	5	08/14/2019 10:09	WG1327753
2-Chlorophenol	U		0.0520	2.09	5	08/14/2019 10:09	WG1327753
2-Methylphenol	U		0.0618	2.09	5	08/14/2019 10:09	WG1327753
3&4-Methyl Phenol	U		0.0492	2.09	5	08/14/2019 10:09	WG1327753
2,4-Dichlorophenol	U		0.0468	2.09	5	08/14/2019 10:09	WG1327753
2,4-Dimethylphenol	U		0.296	2.09	5	08/14/2019 10:09	WG1327753
4,6-Dinitro-2-methylphenol	U	J6	0.777	2.09	5	08/14/2019 10:09	WG1327753
2,4-Dinitrophenol	U	J6	0.614	2.09	5	08/14/2019 10:09	WG1327753
2-Nitrophenol	U		0.0815	2.09	5	08/14/2019 10:09	WG1327753
4-Nitrophenol	U		0.330	2.09	5	08/14/2019 10:09	WG1327753
Pentachlorophenol	U		0.301	2.09	5	08/14/2019 10:09	WG1327753
Phenol	U		0.0435	2.09	5	08/14/2019 10:09	WG1327753
2,4,5-Trichlorophenol	U		0.0652	2.09	5	08/14/2019 10:09	WG1327753
2,4,6-Trichlorophenol	U		0.0488	2.09	5	08/14/2019 10:09	WG1327753
(S) 2-Fluorophenol	76.2			12.0-120		08/14/2019 10:09	WG1327753
(S) Phenol-d5	74.8			10.0-120		08/14/2019 10:09	WG1327753
(S) Nitrobenzene-d5	65.6			10.0-122		08/14/2019 10:09	WG1327753
(S) 2-Fluorobiphenyl	66.9			15.0-120		08/14/2019 10:09	WG1327753
(S) 2,4,6-Tribromophenol	74.2			10.0-127		08/14/2019 10:09	WG1327753
(S) p-Terphenyl-d14	72.1			10.0-120		08/14/2019 10:09	WG1327753



Sample Narrative:

L1126377-04 WG1327753: Dilution due to matrix.



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	79.1		1	08/13/2019 15:25	WG1327659

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	0.00847	<u>J</u>	0.00354	0.0379	1	08/13/2019 19:35	WG1325024

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Aluminum	1730		4.42	12.6	1	08/10/2019 13:14	WG1325034
Antimony	U		0.948	2.53	1	08/10/2019 13:14	WG1325034
Arsenic	1.38	<u>J</u>	0.581	2.53	1	08/10/2019 13:14	WG1325034
Barium	9.59		0.215	0.632	1	08/10/2019 13:14	WG1325034
Beryllium	U		0.0885	0.253	1	08/10/2019 13:14	WG1325034
Cadmium	0.231	<u>J</u>	0.0885	0.632	1	08/10/2019 13:14	WG1325034
Calcium	21600		5.85	126	1	08/10/2019 13:14	WG1325034
Chromium	3.35		0.177	1.26	1	08/10/2019 13:14	WG1325034
Cobalt	1.82		0.291	1.26	1	08/10/2019 13:14	WG1325034
Copper	6.23		0.670	2.53	1	08/10/2019 13:14	WG1325034
Iron	3650		1.78	12.6	1	08/10/2019 13:14	WG1325034
Lead	21.7		0.240	0.632	1	08/10/2019 13:14	WG1325034
Magnesium	10400		1.40	126	1	08/10/2019 13:14	WG1325034
Manganese	105		0.152	1.26	1	08/10/2019 13:14	WG1325034
Nickel	9.71		0.619	2.53	1	08/10/2019 13:14	WG1325034
Potassium	441	<u>B</u>	12.9	126	1	08/10/2019 13:14	WG1325034
Selenium	U		0.784	2.53	1	08/10/2019 13:14	WG1325034
Silver	U		0.152	1.26	1	08/10/2019 13:14	WG1325034
Sodium	195	<u>B</u>	12.5	126	1	08/10/2019 13:14	WG1325034
Thallium	U		0.822	2.53	1	08/11/2019 20:01	WG1325034
Vanadium	6.69		0.303	2.53	1	08/10/2019 13:14	WG1325034
Zinc	54.8		0.746	6.32	1	08/10/2019 13:14	WG1325034

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0280	<u>J</u>	0.0274	0.126	1	08/11/2019 16:41	WG1326829
(S) a,a,a-Trifluorotoluene(FID)	96.0			77.0-120		08/11/2019 16:41	WG1326829

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	0.0372		0.0173	0.0316	1	08/13/2019 02:17	WG1327233
Benzene	U		0.000506	0.00126	1	08/13/2019 02:17	WG1327233
Bromochloromethane	U		0.00143	0.00632	1	08/13/2019 02:17	WG1327233
Bromodichloromethane	U		0.000996	0.00316	1	08/13/2019 02:17	WG1327233
Bromoform	U		0.00756	0.0316	1	08/13/2019 02:17	WG1327233
Bromomethane	U		0.00468	0.0158	1	08/13/2019 02:17	WG1327233
Carbon disulfide	U		0.00513	0.0158	1	08/13/2019 02:17	WG1327233
Carbon tetrachloride	U		0.00137	0.00632	1	08/13/2019 02:17	WG1327233
Chlorobenzene	U		0.000724	0.00316	1	08/13/2019 02:17	WG1327233
Chlorodibromomethane	U		0.000569	0.00316	1	08/13/2019 02:17	WG1327233
Chloroethane	U		0.00137	0.00632	1	08/13/2019 02:17	WG1327233
Chloroform	U		0.000525	0.00316	1	08/13/2019 02:17	WG1327233

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloromethane	U		0.00176	0.0158	1	08/13/2019 02:17	WG1327233
Cyclohexane	0.00523		0.000642	0.00316	1	08/13/2019 02:17	WG1327233
1,2-Dibromo-3-Chloropropane	U		0.00645	0.0316	1	08/13/2019 02:17	WG1327233
1,2-Dibromoethane	U		0.000664	0.00316	1	08/13/2019 02:17	WG1327233
Dichlorodifluoromethane	U		0.00103	0.00316	1	08/13/2019 02:17	WG1327233
1,1-Dichloroethane	U		0.000727	0.00316	1	08/13/2019 02:17	WG1327233
1,2-Dichloroethane	U		0.000600	0.00316	1	08/13/2019 02:17	WG1327233
1,2-Dichlorobenzene	U		0.00183	0.00632	1	08/13/2019 02:17	WG1327233
1,3-Dichlorobenzene	U		0.00215	0.00632	1	08/13/2019 02:17	WG1327233
1,4-Dichlorobenzene	U		0.00249	0.00632	1	08/13/2019 02:17	WG1327233
1,1-Dichloroethene	U		0.000632	0.00316	1	08/13/2019 02:17	WG1327233
cis-1,2-Dichloroethene	U		0.000872	0.00316	1	08/13/2019 02:17	WG1327233
trans-1,2-Dichloroethene	U		0.00181	0.00632	1	08/13/2019 02:17	WG1327233
1,2-Dichloropropane	U		0.00161	0.00632	1	08/13/2019 02:17	WG1327233
cis-1,3-Dichloropropene	U		0.000857	0.00316	1	08/13/2019 02:17	WG1327233
trans-1,3-Dichloropropene	U		0.00193	0.00632	1	08/13/2019 02:17	WG1327233
Ethylbenzene	U		0.000670	0.00316	1	08/13/2019 02:17	WG1327233
2-Hexanone	U		0.0126	0.0316	1	08/13/2019 02:17	WG1327233
Isopropylbenzene	U		0.00109	0.00316	1	08/13/2019 02:17	WG1327233
2-Butanone (MEK)	U		0.0158	0.0316	1	08/13/2019 02:17	WG1327233
Methyl Acetate	U		0.00265	0.00632	1	08/13/2019 02:17	WG1327233
Methyl Cyclohexane	U		0.00130	0.00632	1	08/13/2019 02:17	WG1327233
Methylene Chloride	U		0.00839	0.0316	1	08/13/2019 02:17	WG1327233
4-Methyl-2-pentanone (MIBK)	U		0.0126	0.0316	1	08/13/2019 02:17	WG1327233
Methyl tert-butyl ether	U		0.000373	0.00126	1	08/13/2019 02:17	WG1327233
Styrene	U		0.00345	0.0158	1	08/13/2019 02:17	WG1327233
1,1,2,2-Tetrachloroethane	U		0.000493	0.00316	1	08/13/2019 02:17	WG1327233
Tetrachloroethene	U		0.000885	0.00316	1	08/13/2019 02:17	WG1327233
Toluene	0.00638		0.00158	0.00632	1	08/13/2019 02:17	WG1327233
1,2,3-Trichlorobenzene	U		0.000790	0.00316	1	08/13/2019 02:17	WG1327233
1,2,4-Trichlorobenzene	U		0.00609	0.0158	1	08/13/2019 02:17	WG1327233
1,1,1-Trichloroethane	U		0.000348	0.00316	1	08/13/2019 02:17	WG1327233
1,1,2-Trichloroethane	U		0.00112	0.00316	1	08/13/2019 02:17	WG1327233
Trichloroethene	U		0.000506	0.00126	1	08/13/2019 02:17	WG1327233
Trichlorofluoromethane	U		0.000632	0.00316	1	08/13/2019 02:17	WG1327233
1,1,2-Trichlorotrifluoroethane	U		0.000853	0.00316	1	08/13/2019 02:17	WG1327233
Vinyl chloride	U		0.000863	0.00316	1	08/13/2019 02:17	WG1327233
Xylenes, Total	U		0.00604	0.00822	1	08/13/2019 02:17	WG1327233
(S) Toluene-d8	104			75.0-131		08/13/2019 02:17	WG1327233
(S) 4-Bromofluorobenzene	100			67.0-138		08/13/2019 02:17	WG1327233
(S) 1,2-Dichloroethane-d4	104			70.0-130		08/13/2019 02:17	WG1327233

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	4.80	J	2.04	5.06	1	08/14/2019 12:56	WG1327774
C28-C40 Oil Range	12.1		0.346	5.06	1	08/14/2019 12:56	WG1327774
(S) o-Terphenyl	70.7			18.0-148		08/14/2019 12:56	WG1327774



Polychlorinated Biphenyls (GC) by Method 8082

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.00442	0.0215	1	08/14/2019 13:25	WG1327209
PCB 1221	U		0.00679	0.0215	1	08/14/2019 13:25	WG1327209
PCB 1232	U		0.00527	0.0215	1	08/14/2019 13:25	WG1327209
PCB 1242	U		0.00402	0.0215	1	08/14/2019 13:25	WG1327209
PCB 1248	U		0.00398	0.0215	1	08/14/2019 13:25	WG1327209
PCB 1254	U		0.00597	0.0215	1	08/14/2019 13:25	WG1327209
PCB 1260	U		0.00624	0.0215	1	08/14/2019 13:25	WG1327209
(S) Decachlorobiphenyl	54.1			10.0-135		08/14/2019 13:25	WG1327209
(S) Tetrachloro-m-xylene	85.6			10.0-139		08/14/2019 13:25	WG1327209

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00812	0.0421	1	08/14/2019 08:15	WG1327753
Acenaphthylene	U		0.00848	0.0421	1	08/14/2019 08:15	WG1327753
Acetophenone	U		0.0951	0.421	1	08/14/2019 08:15	WG1327753
Anthracene	U		0.00799	0.0421	1	08/14/2019 08:15	WG1327753
Atrazine	U		0.119	0.421	1	08/14/2019 08:15	WG1327753
Benzaldehyde	U		0.0672	0.421	1	08/14/2019 08:15	WG1327753
Benzo(a)anthracene	0.0153	LC	0.00541	0.0421	1	08/14/2019 08:15	WG1327753
Benzo(b)fluoranthene	0.0159	LC	0.00879	0.0421	1	08/14/2019 08:15	WG1327753
Benzo(k)fluoranthene	U		0.00736	0.0421	1	08/14/2019 08:15	WG1327753
Benzo(g,h,i)perylene	0.0259	LC	0.00911	0.0421	1	08/14/2019 08:15	WG1327753
Benzo(a)pyrene	0.0115	LC	0.00693	0.0421	1	08/14/2019 08:15	WG1327753
Biphenyl	U		0.00743	0.421	1	08/14/2019 08:15	WG1327753
Bis(2-chlorethoxy)methane	U		0.00973	0.421	1	08/14/2019 08:15	WG1327753
Bis(2-chloroethyl)ether	U		0.0113	0.421	1	08/14/2019 08:15	WG1327753
Bis(2-chloroisopropyl)ether	U		0.00961	0.421	1	08/14/2019 08:15	WG1327753
4-Bromophenyl-phenylether	U		0.0144	0.421	1	08/14/2019 08:15	WG1327753
Caprolactam	U		0.131	0.421	1	08/14/2019 08:15	WG1327753
Carbazole	U		0.00662	0.421	1	08/14/2019 08:15	WG1327753
4-Chloroaniline	U		0.0445	0.421	1	08/14/2019 08:15	WG1327753
2-Chloronaphthalene	U		0.00808	0.0421	1	08/14/2019 08:15	WG1327753
4-Chlorophenyl-phenylether	U		0.00793	0.421	1	08/14/2019 08:15	WG1327753
Chrysene	0.0353	LC	0.00702	0.0421	1	08/14/2019 08:15	WG1327753
Dibenz(a,h)anthracene	U		0.0104	0.0421	1	08/14/2019 08:15	WG1327753
Dibenzofuran	U		0.00655	0.421	1	08/14/2019 08:15	WG1327753
3,3-Dichlorobenzidine	U		0.100	0.421	1	08/14/2019 08:15	WG1327753
2,4-Dinitrotoluene	U		0.00767	0.421	1	08/14/2019 08:15	WG1327753
2,6-Dinitrotoluene	U		0.00932	0.421	1	08/14/2019 08:15	WG1327753
Fluoranthene	0.00983	LC	0.00627	0.0421	1	08/14/2019 08:15	WG1327753
Fluorene	U		0.00862	0.0421	1	08/14/2019 08:15	WG1327753
Hexachlorobenzene	U		0.0108	0.421	1	08/14/2019 08:15	WG1327753
Hexachloro-1,3-butadiene	U		0.0126	0.421	1	08/14/2019 08:15	WG1327753
Hexachlorocyclopentadiene	U		0.0742	0.421	1	08/14/2019 08:15	WG1327753
Hexachloroethane	U		0.0169	0.421	1	08/14/2019 08:15	WG1327753
Indeno(1,2,3-cd)pyrene	U		0.00976	0.0421	1	08/14/2019 08:15	WG1327753
Isophorone	U		0.00660	0.421	1	08/14/2019 08:15	WG1327753
2-Methylnaphthalene	0.0302	LC	0.0109	0.0421	1	08/14/2019 08:15	WG1327753
Naphthalene	U		0.0112	0.0421	1	08/14/2019 08:15	WG1327753
2-Nitroaniline	U		0.00954	0.421	1	08/14/2019 08:15	WG1327753
3-Nitroaniline	U		0.0107	0.421	1	08/14/2019 08:15	WG1327753
4-Nitroaniline	U		0.00808	0.421	1	08/14/2019 08:15	WG1327753
Nitrobenzene	U		0.00879	0.421	1	08/14/2019 08:15	WG1327753
n-Nitrosodiphenylamine	U		0.114	0.421	1	08/14/2019 08:15	WG1327753
n-Nitrosodi-n-propylamine	U		0.0115	0.421	1	08/14/2019 08:15	WG1327753

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc



Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Phenanthrene	0.0363	U	0.00667	0.0421	1	08/14/2019 08:15	WG1327753
Benzylbutyl phthalate	U		0.0130	0.421	1	08/14/2019 08:15	WG1327753
Bis(2-ethylhexyl)phthalate	U		0.0152	0.421	1	08/14/2019 08:15	WG1327753
Di-n-butyl phthalate	U		0.0138	0.421	1	08/14/2019 08:15	WG1327753
Diethyl phthalate	U		0.00873	0.421	1	08/14/2019 08:15	WG1327753
Dimethyl phthalate	U		0.00683	0.421	1	08/14/2019 08:15	WG1327753
Di-n-octyl phthalate	U		0.0115	0.421	1	08/14/2019 08:15	WG1327753
Pyrene	0.0259	U	0.0155	0.0421	1	08/14/2019 08:15	WG1327753
1,2,4,5-Tetrachlorobenzene	U		0.0963	0.421	1	08/14/2019 08:15	WG1327753
4-Chloro-3-methylphenol	U		0.00603	0.421	1	08/14/2019 08:15	WG1327753
2-Chlorophenol	U		0.0105	0.421	1	08/14/2019 08:15	WG1327753
2-Methylphenol	U		0.0125	0.421	1	08/14/2019 08:15	WG1327753
3&4-Methyl Phenol	U		0.00990	0.421	1	08/14/2019 08:15	WG1327753
2,4-Dichlorophenol	U		0.00943	0.421	1	08/14/2019 08:15	WG1327753
2,4-Dimethylphenol	U		0.0595	0.421	1	08/14/2019 08:15	WG1327753
4,6-Dinitro-2-methylphenol	U		0.157	0.421	1	08/14/2019 08:15	WG1327753
2,4-Dinitrophenol	U		0.124	0.421	1	08/14/2019 08:15	WG1327753
2-Nitrophenol	U		0.0164	0.421	1	08/14/2019 08:15	WG1327753
4-Nitrophenol	U		0.0664	0.421	1	08/14/2019 08:15	WG1327753
Pentachlorophenol	U		0.0607	0.421	1	08/14/2019 08:15	WG1327753
Phenol	U		0.00879	0.421	1	08/14/2019 08:15	WG1327753
2,4,5-Trichlorophenol	U		0.0131	0.421	1	08/14/2019 08:15	WG1327753
2,4,6-Trichlorophenol	U		0.00985	0.421	1	08/14/2019 08:15	WG1327753
(S) 2-Fluorophenol	71.2			12.0-120		08/14/2019 08:15	WG1327753
(S) Phenol-d5	67.8			10.0-120		08/14/2019 08:15	WG1327753
(S) Nitrobenzene-d5	56.3			10.0-122		08/14/2019 08:15	WG1327753
(S) 2-Fluorobiphenyl	62.2			15.0-120		08/14/2019 08:15	WG1327753
(S) 2,4,6-Tribromophenol	66.2			10.0-127		08/14/2019 08:15	WG1327753
(S) p-Terphenyl-d14	75.7			10.0-120		08/14/2019 08:15	WG1327753

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Sample Narrative:

L1126377-05 WG1327753: Dilution due to matrix.



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	88.9		1	08/13/2019 15:25	WG1327659

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	0.00325	<u>J</u>	0.00315	0.0337	1	08/13/2019 19:37	WG1325024

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Aluminum	2120		3.94	11.2	1	08/10/2019 13:17	WG1325034
Antimony	1.01	<u>J</u>	0.844	2.25	1	08/10/2019 13:17	WG1325034
Arsenic	1.83	<u>J</u>	0.517	2.25	1	08/10/2019 13:17	WG1325034
Barium	12.2		0.191	0.562	1	08/10/2019 13:17	WG1325034
Beryllium	0.134	<u>J</u>	0.0787	0.225	1	08/10/2019 13:17	WG1325034
Cadmium	0.339	<u>J</u>	0.0787	0.562	1	08/10/2019 13:17	WG1325034
Calcium	32400		5.21	112	1	08/10/2019 13:17	WG1325034
Chromium	4.82		0.157	1.12	1	08/10/2019 13:17	WG1325034
Cobalt	2.30		0.259	1.12	1	08/10/2019 13:17	WG1325034
Copper	7.65		0.596	2.25	1	08/10/2019 13:17	WG1325034
Iron	4740		1.59	11.2	1	08/10/2019 13:17	WG1325034
Lead	27.8		0.214	0.562	1	08/10/2019 13:17	WG1325034
Magnesium	11800		1.25	112	1	08/10/2019 13:17	WG1325034
Manganese	143		0.135	1.12	1	08/10/2019 13:17	WG1325034
Nickel	11.3		0.551	2.25	1	08/10/2019 13:17	WG1325034
Potassium	398	<u>B</u>	11.5	112	1	08/10/2019 13:17	WG1325034
Selenium	U		0.697	2.25	1	08/10/2019 13:17	WG1325034
Silver	U		0.135	1.12	1	08/10/2019 13:17	WG1325034
Sodium	161	<u>B</u>	11.1	112	1	08/10/2019 13:17	WG1325034
Thallium	U		0.731	2.25	1	08/11/2019 20:04	WG1325034
Vanadium	9.03		0.270	2.25	1	08/10/2019 13:17	WG1325034
Zinc	67.3		0.664	5.62	1	08/10/2019 13:17	WG1325034

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0813	<u>J</u>	0.0244	0.112	1	08/11/2019 17:04	WG1326829
(S) a,a,a-Trifluorotoluene(FID)	97.0			77.0-120		08/11/2019 17:04	WG1326829

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	0.0425		0.0154	0.0281	1	08/13/2019 02:38	WG1327233
Benzene	U		0.000450	0.00112	1	08/13/2019 02:38	WG1327233
Bromochloromethane	U		0.00127	0.00562	1	08/13/2019 02:38	WG1327233
Bromodichloromethane	U		0.000886	0.00281	1	08/13/2019 02:38	WG1327233
Bromoform	U		0.00673	0.0281	1	08/13/2019 02:38	WG1327233
Bromomethane	U		0.00416	0.0141	1	08/13/2019 02:38	WG1327233
Carbon disulfide	U		0.00457	0.0141	1	08/13/2019 02:38	WG1327233
Carbon tetrachloride	U		0.00121	0.00562	1	08/13/2019 02:38	WG1327233
Chlorobenzene	U		0.000645	0.00281	1	08/13/2019 02:38	WG1327233
Chlorodibromomethane	U		0.000506	0.00281	1	08/13/2019 02:38	WG1327233
Chloroethane	U		0.00121	0.00562	1	08/13/2019 02:38	WG1327233
Chloroform	U		0.000467	0.00281	1	08/13/2019 02:38	WG1327233



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloromethane	U		0.00156	0.0141	1	08/13/2019 02:38	WG1327233
Cyclohexane	0.00599		0.000571	0.00281	1	08/13/2019 02:38	WG1327233
1,2-Dibromo-3-Chloropropane	U		0.00574	0.0281	1	08/13/2019 02:38	WG1327233
1,2-Dibromoethane	U		0.000591	0.00281	1	08/13/2019 02:38	WG1327233
Dichlorodifluoromethane	U		0.000920	0.00281	1	08/13/2019 02:38	WG1327233
1,1-Dichloroethane	U		0.000647	0.00281	1	08/13/2019 02:38	WG1327233
1,2-Dichloroethane	U		0.000534	0.00281	1	08/13/2019 02:38	WG1327233
1,2-Dichlorobenzene	U		0.00163	0.00562	1	08/13/2019 02:38	WG1327233
1,3-Dichlorobenzene	U		0.00191	0.00562	1	08/13/2019 02:38	WG1327233
1,4-Dichlorobenzene	U		0.00222	0.00562	1	08/13/2019 02:38	WG1327233
1,1-Dichloroethene	U		0.000562	0.00281	1	08/13/2019 02:38	WG1327233
cis-1,2-Dichloroethene	U		0.000776	0.00281	1	08/13/2019 02:38	WG1327233
trans-1,2-Dichloroethene	U		0.00161	0.00562	1	08/13/2019 02:38	WG1327233
1,2-Dichloropropane	U		0.00143	0.00562	1	08/13/2019 02:38	WG1327233
cis-1,3-Dichloropropene	U		0.000763	0.00281	1	08/13/2019 02:38	WG1327233
trans-1,3-Dichloropropene	U		0.00172	0.00562	1	08/13/2019 02:38	WG1327233
Ethylbenzene	U		0.000596	0.00281	1	08/13/2019 02:38	WG1327233
2-Hexanone	U		0.0112	0.0281	1	08/13/2019 02:38	WG1327233
Isopropylbenzene	U		0.000971	0.00281	1	08/13/2019 02:38	WG1327233
2-Butanone (MEK)	U		0.0141	0.0281	1	08/13/2019 02:38	WG1327233
Methyl Acetate	0.00961		0.00236	0.00562	1	08/13/2019 02:38	WG1327233
Methyl Cyclohexane	U		0.00116	0.00562	1	08/13/2019 02:38	WG1327233
Methylene Chloride	U		0.00747	0.0281	1	08/13/2019 02:38	WG1327233
4-Methyl-2-pentanone (MIBK)	U		0.0112	0.0281	1	08/13/2019 02:38	WG1327233
Methyl tert-butyl ether	U		0.000332	0.00112	1	08/13/2019 02:38	WG1327233
Styrene	U		0.00307	0.0141	1	08/13/2019 02:38	WG1327233
1,1,2,2-Tetrachloroethane	U		0.000439	0.00281	1	08/13/2019 02:38	WG1327233
Tetrachloroethene	U		0.000787	0.00281	1	08/13/2019 02:38	WG1327233
Toluene	0.00618		0.00141	0.00562	1	08/13/2019 02:38	WG1327233
1,2,3-Trichlorobenzene	U		0.000703	0.00281	1	08/13/2019 02:38	WG1327233
1,2,4-Trichlorobenzene	U		0.00542	0.0141	1	08/13/2019 02:38	WG1327233
1,1,1-Trichloroethane	U		0.000309	0.00281	1	08/13/2019 02:38	WG1327233
1,1,2-Trichloroethane	U		0.000993	0.00281	1	08/13/2019 02:38	WG1327233
Trichloroethene	U		0.000450	0.00112	1	08/13/2019 02:38	WG1327233
Trichlorofluoromethane	U		0.000562	0.00281	1	08/13/2019 02:38	WG1327233
1,1,2-Trichlorotrifluoroethane	U		0.000759	0.00281	1	08/13/2019 02:38	WG1327233
Vinyl chloride	U		0.000768	0.00281	1	08/13/2019 02:38	WG1327233
Xylenes, Total	U		0.00538	0.00731	1	08/13/2019 02:38	WG1327233
(S) Toluene-d8	106			75.0-131		08/13/2019 02:38	WG1327233
(S) 4-Bromofluorobenzene	99.1			67.0-138		08/13/2019 02:38	WG1327233
(S) 1,2-Dichloroethane-d4	99.3			70.0-130		08/13/2019 02:38	WG1327233

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	10.3		1.81	4.50	1	08/14/2019 13:09	WG1327774
C28-C40 Oil Range	27.3		0.308	4.50	1	08/14/2019 13:09	WG1327774
(S) o-Terphenyl	81.4			18.0-148		08/14/2019 13:09	WG1327774



Collected date/time: 08/06/19 14:00

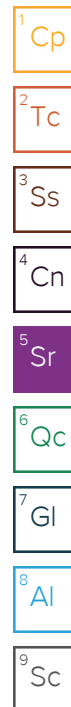
L1126377

Polychlorinated Biphenyls (GC) by Method 8082

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.00394	0.0191	1	08/14/2019 13:37	WG1327209
PCB 1221	U		0.00604	0.0191	1	08/14/2019 13:37	WG1327209
PCB 1232	U		0.00469	0.0191	1	08/14/2019 13:37	WG1327209
PCB 1242	U		0.00358	0.0191	1	08/14/2019 13:37	WG1327209
PCB 1248	U		0.00354	0.0191	1	08/14/2019 13:37	WG1327209
PCB 1254	U		0.00531	0.0191	1	08/14/2019 13:37	WG1327209
PCB 1260	U		0.00556	0.0191	1	08/14/2019 13:37	WG1327209
(S) Decachlorobiphenyl	87.9			10.0-135		08/14/2019 13:37	WG1327209
(S) Tetrachloro-m-xylene	92.2			10.0-139		08/14/2019 13:37	WG1327209

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00722	0.0375	1	08/14/2019 09:00	WG1327753
Acenaphthylene	U		0.00755	0.0375	1	08/14/2019 09:00	WG1327753
Acetophenone	U		0.0846	0.375	1	08/14/2019 09:00	WG1327753
Anthracene	U		0.00711	0.0375	1	08/14/2019 09:00	WG1327753
Atrazine	U		0.106	0.375	1	08/14/2019 09:00	WG1327753
Benzaldehyde	U		0.0598	0.375	1	08/14/2019 09:00	WG1327753
Benzo(a)anthracene	0.0154	U	0.00481	0.0375	1	08/14/2019 09:00	WG1327753
Benzo(b)fluoranthene	0.0177	U	0.00782	0.0375	1	08/14/2019 09:00	WG1327753
Benzo(k)fluoranthene	U		0.00655	0.0375	1	08/14/2019 09:00	WG1327753
Benzo(g,h,i)perylene	0.0304	U	0.00811	0.0375	1	08/14/2019 09:00	WG1327753
Benzo(a)pyrene	0.0124	U	0.00616	0.0375	1	08/14/2019 09:00	WG1327753
Biphenyl	U		0.00661	0.375	1	08/14/2019 09:00	WG1327753
Bis(2-chlorethoxy)methane	U		0.00866	0.375	1	08/14/2019 09:00	WG1327753
Bis(2-chloroethyl)ether	U		0.0101	0.375	1	08/14/2019 09:00	WG1327753
Bis(2-chloroisopropyl)ether	U		0.00855	0.375	1	08/14/2019 09:00	WG1327753
4-Bromophenyl-phenylether	U		0.0128	0.375	1	08/14/2019 09:00	WG1327753
Caprolactam	U		0.117	0.375	1	08/14/2019 09:00	WG1327753
Carbazole	U		0.00589	0.375	1	08/14/2019 09:00	WG1327753
4-Chloroaniline	U		0.0396	0.375	1	08/14/2019 09:00	WG1327753
2-Chloronaphthalene	U		0.00719	0.0375	1	08/14/2019 09:00	WG1327753
4-Chlorophenyl-phenylether	U		0.00705	0.375	1	08/14/2019 09:00	WG1327753
Chrysene	0.0301	U	0.00624	0.0375	1	08/14/2019 09:00	WG1327753
Dibenz(a,h)anthracene	U		0.00924	0.0375	1	08/14/2019 09:00	WG1327753
Dibenzofuran	U		0.00583	0.375	1	08/14/2019 09:00	WG1327753
3,3-Dichlorobenzidine	U		0.0893	0.375	1	08/14/2019 09:00	WG1327753
2,4-Dinitrotoluene	U		0.00683	0.375	1	08/14/2019 09:00	WG1327753
2,6-Dinitrotoluene	U		0.00829	0.375	1	08/14/2019 09:00	WG1327753
Fluoranthene	0.0107	U	0.00558	0.0375	1	08/14/2019 09:00	WG1327753
Fluorene	U		0.00767	0.0375	1	08/14/2019 09:00	WG1327753
Hexachlorobenzene	U		0.00963	0.375	1	08/14/2019 09:00	WG1327753
Hexachloro-1,3-butadiene	U		0.0112	0.375	1	08/14/2019 09:00	WG1327753
Hexachlorocyclopentadiene	U		0.0660	0.375	1	08/14/2019 09:00	WG1327753
Hexachloroethane	U		0.0151	0.375	1	08/14/2019 09:00	WG1327753
Indeno(1,2,3-cd)pyrene	0.00997	U	0.00868	0.0375	1	08/14/2019 09:00	WG1327753
Isophorone	U		0.00587	0.375	1	08/14/2019 09:00	WG1327753
2-Methylnaphthalene	U		0.00969	0.0375	1	08/14/2019 09:00	WG1327753
Naphthalene	U		0.0100	0.0375	1	08/14/2019 09:00	WG1327753
2-Nitroaniline	U		0.00849	0.375	1	08/14/2019 09:00	WG1327753
3-Nitroaniline	U		0.00956	0.375	1	08/14/2019 09:00	WG1327753
4-Nitroaniline	U		0.00719	0.375	1	08/14/2019 09:00	WG1327753
Nitrobenzene	U		0.00782	0.375	1	08/14/2019 09:00	WG1327753
n-Nitrosodiphenylamine	U		0.101	0.375	1	08/14/2019 09:00	WG1327753
n-Nitrosodi-n-propylamine	U		0.0102	0.375	1	08/14/2019 09:00	WG1327753





Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Phenanthrene	0.0331	U	0.00594	0.0375	1	08/14/2019 09:00	WG1327753
Benzylbutyl phthalate	U		0.0116	0.375	1	08/14/2019 09:00	WG1327753
Bis(2-ethylhexyl)phthalate	U		0.0135	0.375	1	08/14/2019 09:00	WG1327753
Di-n-butyl phthalate	U		0.0123	0.375	1	08/14/2019 09:00	WG1327753
Diethyl phthalate	U		0.00777	0.375	1	08/14/2019 09:00	WG1327753
Dimethyl phthalate	U		0.00607	0.375	1	08/14/2019 09:00	WG1327753
Di-n-octyl phthalate	U		0.0102	0.375	1	08/14/2019 09:00	WG1327753
Pyrene	0.0285	U	0.0138	0.0375	1	08/14/2019 09:00	WG1327753
1,2,4,5-Tetrachlorobenzene	U		0.0857	0.375	1	08/14/2019 09:00	WG1327753
4-Chloro-3-methylphenol	U		0.00537	0.375	1	08/14/2019 09:00	WG1327753
2-Chlorophenol	U		0.00935	0.375	1	08/14/2019 09:00	WG1327753
2-Methylphenol	U		0.0111	0.375	1	08/14/2019 09:00	WG1327753
3&4-Methyl Phenol	U		0.00881	0.375	1	08/14/2019 09:00	WG1327753
2,4-Dichlorophenol	U		0.00839	0.375	1	08/14/2019 09:00	WG1327753
2,4-Dimethylphenol	U		0.0530	0.375	1	08/14/2019 09:00	WG1327753
4,6-Dinitro-2-methylphenol	U		0.139	0.375	1	08/14/2019 09:00	WG1327753
2,4-Dinitrophenol	U		0.110	0.375	1	08/14/2019 09:00	WG1327753
2-Nitrophenol	U		0.0146	0.375	1	08/14/2019 09:00	WG1327753
4-Nitrophenol	U		0.0591	0.375	1	08/14/2019 09:00	WG1327753
Pentachlorophenol	U		0.0540	0.375	1	08/14/2019 09:00	WG1327753
Phenol	U		0.00782	0.375	1	08/14/2019 09:00	WG1327753
2,4,5-Trichlorophenol	U		0.0117	0.375	1	08/14/2019 09:00	WG1327753
2,4,6-Trichlorophenol	U		0.00876	0.375	1	08/14/2019 09:00	WG1327753
(S) 2-Fluorophenol	63.2			12.0-120		08/14/2019 09:00	WG1327753
(S) Phenol-d5	60.6			10.0-120		08/14/2019 09:00	WG1327753
(S) Nitrobenzene-d5	52.3			10.0-122		08/14/2019 09:00	WG1327753
(S) 2-Fluorobiphenyl	56.0			15.0-120		08/14/2019 09:00	WG1327753
(S) 2,4,6-Tribromophenol	77.5			10.0-127		08/14/2019 09:00	WG1327753
(S) p-Terphenyl-d14	77.5			10.0-120		08/14/2019 09:00	WG1327753

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3440215-1 08/13/19 15:34

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	%		%	%
Total Solids	0.00100			

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

L1126377-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1126377-01 08/13/19 15:34 • (DUP) R3440215-3 08/13/19 15:34

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	81.0	80.0	1	1.21		10

7Gl

8Al

Laboratory Control Sample (LCS)

(LCS) R3440215-2 08/13/19 15:34

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	

9Sc

Total Solids by Method 2540 G-2011

[L1126377-04,05,06](#)

Method Blank (MB)

(MB) R3440213-1 08/13/19 15:25

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	%		%	%
Total Solids	0.000			

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1126392-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1126392-02 08/13/19 15:25 • (DUP) R3440213-3 08/13/19 15:25

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	81.4	81.0	1	0.557		10

Laboratory Control Sample (LCS)

(LCS) R3440213-2 08/13/19 15:25

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	



Method Blank (MB)

(MB) R3440104-1 08/13/19 18:28

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Mercury	U		0.00280	0.0300

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3440104-2 08/13/19 18:30 • (LCSD) R3440104-3 08/13/19 18:37

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%
Mercury	0.500	0.494	0.502	98.7	100	80.0-120			1.69	20

L1126341-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1126341-01 08/13/19 18:39 • (MS) R3440104-4 08/13/19 18:42 • (MSD) R3440104-5 08/13/19 18:44

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Mercury	0.500	U	0.397	0.313	79.3	62.6	1	75.0-125		J3 J6	23.6	20

Method Blank (MB)

(MB) R3439319-1 08/10/19 11:16

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Aluminum	U		3.50	10.0
Antimony	U		0.750	2.00
Arsenic	U		0.460	2.00
Barium	U		0.170	0.500
Beryllium	U		0.0700	0.200
Cadmium	U		0.0700	0.500
Calcium	U		4.63	100
Chromium	U		0.140	1.00
Cobalt	U		0.230	1.00
Copper	U		0.530	2.00
Iron	U		1.41	10.0
Lead	0.217	U	0.190	0.500
Magnesium	1.33	U	1.11	100
Manganese	U		0.120	1.00
Nickel	U		0.490	2.00
Potassium	42.9	U	10.2	100
Selenium	U		0.620	2.00
Silver	U		0.120	1.00
Sodium	19.2	U	9.85	100
Vanadium	U		0.240	2.00
Zinc	U		0.590	5.00

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Method Blank (MB)

(MB) R3439360-1 08/11/19 19:27

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Thallium	U		0.650	2.00

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3439319-2 08/10/19 11:19 • (LCSD) R3439319-3 08/10/19 11:21

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Aluminum	1000	995	1000	99.5	100	80.0-120			0.493	20
Antimony	100	101	101	101	101	80.0-120			0.570	20
Arsenic	100	97.6	98.3	97.6	98.3	80.0-120			0.734	20
Barium	100	105	105	105	105	80.0-120			0.0956	20
Beryllium	100	100	100	100	100	80.0-120			0.0560	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3439319-2 08/10/19 11:19 • (LCSD) R3439319-3 08/10/19 11:21

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Cadmium	100	99.5	99.3	99.5	99.3	80.0-120			0.183	20
Calcium	1000	1000	1010	100	101	80.0-120			0.668	20
Chromium	100	96.3	96.2	96.3	96.2	80.0-120			0.0265	20
Cobalt	100	104	104	104	104	80.0-120			0.297	20
Copper	100	98.7	98.7	98.7	98.7	80.0-120			0.0253	20
Iron	1000	996	999	99.6	99.9	80.0-120			0.311	20
Lead	100	99.7	99.9	99.7	99.9	80.0-120			0.201	20
Magnesium	1000	998	1000	99.8	100	80.0-120			0.287	20
Manganese	100	96.4	96.5	96.4	96.5	80.0-120			0.0457	20
Nickel	100	104	104	104	104	80.0-120			0.153	20
Potassium	1000	1020	1030	102	103	80.0-120			1.09	20
Selenium	100	99.3	101	99.3	101	80.0-120			1.19	20
Silver	20.0	19.1	19.1	95.5	95.5	80.0-120			0.00482	20
Sodium	1000	1020	1020	102	102	80.0-120			0.676	20
Vanadium	100	101	102	101	102	80.0-120			0.983	20
Zinc	100	99.6	99.7	99.6	99.7	80.0-120			0.0876	20

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3439360-2 08/11/19 19:30 • (LCSD) R3439360-3 08/11/19 19:32

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Thallium	100	103	103	103	103	80.0-120			0.258	20

L1126377-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1126377-01 08/10/19 11:24 • (MS) R3439319-6 08/10/19 11:31 • (MSD) R3439319-7 08/10/19 11:34

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Aluminum	1230	3270	4960	3910	137	52.1	1	75.0-125	J5	J3 J6	23.7	20
Antimony	123	1.67	63.0	72.4	49.7	57.3	1	75.0-125	J6	J6	13.9	20
Arsenic	123	24.3	118	118	75.8	76.0	1	75.0-125			0.257	20
Barium	123	199	299	307	81.4	87.8	1	75.0-125			2.60	20
Beryllium	123	U	89.0	91.4	72.2	74.1	1	75.0-125	J6	J6	2.60	20
Cadmium	123	1.47	95.9	98.4	76.5	78.5	1	75.0-125			2.57	20
Calcium	1230	103000	62800	77600	0.000	0.000	1	75.0-125	V	J3 V	21.1	20
Chromium	123	72.8	125	133	42.6	48.4	1	75.0-125	J6	J6	5.53	20
Cobalt	123	4.18	99.5	102	77.2	79.3	1	75.0-125			2.55	20

L1126377-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1126377-01 08/10/19 11:24 • (MS) R3439319-6 08/10/19 11:31 • (MSD) R3439319-7 08/10/19 11:34

	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Copper	123	1030	1570	1190	437	126	1	75.0-125	V	J3 V	27.8	20
Iron	1230	14000	13100	15500	0.000	117	1	75.0-125	V		16.4	20
Lead	123	20700	14400	16400	0.000	0.000	1	75.0-125	E V	E V	13.0	20
Magnesium	1230	8810	8940	8140	10.4	0.000	1	75.0-125	V	V	9.26	20
Manganese	123	309	320	320	8.75	8.80	1	75.0-125	J6	J6	0.0175	20
Nickel	123	53.9	134	141	64.9	70.4	1	75.0-125	J6	J6	5.01	20
Potassium	1230	520	1330	1280	65.3	61.7	1	75.0-125	J6	J6	3.39	20
Selenium	123	U	92.9	95.5	75.3	77.4	1	75.0-125			2.70	20
Silver	24.7	0.764	18.8	19.7	73.2	76.5	1	75.0-125	J6		4.28	20
Sodium	1230	456	1230	1270	62.4	65.7	1	75.0-125	J6	J6	3.19	20
Vanadium	123	39.8	122	122	66.5	66.7	1	75.0-125	J6	J6	0.210	20
Zinc	123	335	367	362	26.3	22.2	1	75.0-125	J6	J6	1.38	20

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

L1126377-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1126377-01 08/11/19 19:35 • (MS) R3439360-6 08/11/19 19:43 • (MSD) R3439360-7 08/11/19 19:45

	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Thallium	123	U	125	120	101	97.5	1	75.0-125			3.57	20



Method Blank (MB)

(MB) R3439480-2 08/11/19 13:58

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	100			77.0-120

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3439480-1 08/11/19 13:11

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	4.70	85.5	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			106	77.0-120	

L1127248-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1127248-08 08/12/19 00:40 • (MS) R3439480-3 08/12/19 01:52 • (MSD) R3439480-4 08/12/19 02:16

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	6.41	ND	44.1	45.1	27.5	28.1	25	10.0-151			2.04	28
(S) a,a,a-Trifluorotoluene(FID)					104	104		77.0-120				



Method Blank (MB)

(MB) R3439664-3 08/09/19 10:09

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		10.0	50.0
Benzene	U		0.331	1.00
Bromodichloromethane	U		0.380	1.00
Bromochloromethane	U		0.520	1.00
Bromoform	U		0.469	1.00
Bromomethane	U		0.866	5.00
Carbon disulfide	U		0.275	1.00
Carbon tetrachloride	U		0.379	1.00
Chlorobenzene	U		0.348	1.00
Chlorodibromomethane	U		0.327	1.00
Chloroethane	U		0.453	5.00
Chloroform	U		0.324	5.00
Chloromethane	U		0.276	2.50
Cyclohexane	U		0.390	1.00
1,2-Dibromo-3-Chloropropane	U		1.33	5.00
1,2-Dibromoethane	U		0.381	1.00
1,2-Dichlorobenzene	U		0.349	1.00
1,3-Dichlorobenzene	U		0.220	1.00
1,4-Dichlorobenzene	U		0.274	1.00
Dichlorodifluoromethane	U		0.551	5.00
1,1-Dichloroethane	U		0.259	1.00
1,2-Dichloroethane	U		0.361	1.00
1,1-Dichloroethene	U		0.398	1.00
cis-1,2-Dichloroethene	U		0.260	1.00
trans-1,2-Dichloroethene	U		0.396	1.00
1,2-Dichloropropane	U		0.306	1.00
cis-1,3-Dichloropropene	U		0.418	1.00
trans-1,3-Dichloropropene	U		0.419	1.00
Ethylbenzene	U		0.384	1.00
2-Hexanone	U		3.82	10.0
Isopropylbenzene	U		0.326	1.00
2-Butanone (MEK)	U		3.93	10.0
Methyl Acetate	U		4.30	20.0
Methyl Cyclohexane	U		0.380	1.00
Methylene Chloride	U		1.00	5.00
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0
Methyl tert-butyl ether	U		0.367	1.00
Styrene	U		0.307	1.00
1,1,2,2-Tetrachloroethane	U		0.130	1.00
Tetrachloroethene	U		0.372	1.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3439664-3 08/09/19 10:09

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Toluene	U		0.412	1.00
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.355	1.00
1,1,1-Trichloroethane	U		0.319	1.00
1,1,2-Trichloroethane	U		0.383	1.00
Trichloroethene	U		0.398	1.00
Trichlorofluoromethane	U		1.20	5.00
Vinyl chloride	U		0.259	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	102			80.0-120
(S) 4-Bromofluorobenzene	103			77.0-126
(S) 1,2-Dichloroethane-d4	110			70.0-130

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3439664-1 08/09/19 09:12 • (LCSD) R3439664-2 08/09/19 09:31

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	180	178	144	142	19.0-160			1.19	27
Benzene	25.0	24.2	24.6	96.7	98.5	70.0-123			1.85	20
Bromodichloromethane	25.0	27.2	27.0	109	108	75.0-120			0.534	20
Bromochloromethane	25.0	26.7	26.9	107	108	76.0-122			0.838	20
Bromoform	25.0	26.1	25.3	104	101	68.0-132			3.14	20
Bromomethane	25.0	24.2	25.2	96.7	101	10.0-160			4.09	25
Carbon disulfide	25.0	24.3	25.1	97.3	101	61.0-128			3.28	20
Carbon tetrachloride	25.0	27.8	28.7	111	115	68.0-126			3.07	20
Chlorobenzene	25.0	24.8	25.0	99.3	100	80.0-121			0.677	20
Chlorodibromomethane	25.0	26.1	26.3	104	105	77.0-125			0.729	20
Chloroethane	25.0	24.1	24.7	96.5	98.9	47.0-150			2.45	20
Chloroform	25.0	24.8	25.1	99.1	100	73.0-120			1.30	20
Chloromethane	25.0	28.7	29.9	115	120	41.0-142			4.23	20
Cyclohexane	25.0	24.6	25.5	98.2	102	71.0-124			3.62	20
1,2-Dibromo-3-Chloropropane	25.0	23.9	24.0	95.6	95.9	58.0-134			0.312	20
1,2-Dibromoethane	25.0	28.1	27.6	112	111	80.0-122			1.59	20
1,2-Dichlorobenzene	25.0	22.4	22.3	89.7	89.2	79.0-121			0.564	20
1,3-Dichlorobenzene	25.0	21.7	21.5	86.9	85.9	79.0-120			1.15	20
1,4-Dichlorobenzene	25.0	21.9	22.1	87.7	88.3	79.0-120			0.736	20
Dichlorodifluoromethane	25.0	28.0	28.2	112	113	51.0-149			0.768	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3439664-1 08/09/19 09:12 • (LCSD) R3439664-2 08/09/19 09:31

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
1,1-Dichloroethane	25.0	27.6	28.4	110	114	70.0-126			2.72	20
1,2-Dichloroethane	25.0	27.6	27.9	110	112	70.0-128			1.23	20
1,1-Dichloroethene	25.0	26.7	27.7	107	111	71.0-124			3.73	20
cis-1,2-Dichloroethene	25.0	24.8	25.0	99.2	100	73.0-120			0.856	20
trans-1,2-Dichloroethene	25.0	26.0	26.6	104	106	73.0-120			2.04	20
1,2-Dichloropropane	25.0	27.4	28.8	110	115	77.0-125			4.87	20
cis-1,3-Dichloropropene	25.0	25.8	26.0	103	104	80.0-123			0.878	20
trans-1,3-Dichloropropene	25.0	25.7	25.8	103	103	78.0-124			0.291	20
Ethylbenzene	25.0	25.1	24.9	100	99.7	79.0-123			0.538	20
2-Hexanone	125	162	157	130	126	67.0-149			3.12	20
Isopropylbenzene	25.0	25.8	25.4	103	101	76.0-127			1.68	20
2-Butanone (MEK)	125	171	159	137	127	44.0-160			7.70	20
Methyl Acetate	125	166	165	133	132	57.0-148			0.996	20
Methyl Cyclohexane	25.0	23.8	24.0	95.2	95.9	68.0-126			0.744	20
Methylene Chloride	25.0	24.0	24.5	96.1	97.9	67.0-120			1.84	20
4-Methyl-2-pentanone (MIBK)	125	152	146	121	117	68.0-142			3.76	20
Methyl tert-butyl ether	25.0	28.0	28.5	112	114	68.0-125			1.71	20
Styrene	25.0	26.5	26.4	106	106	73.0-130			0.329	20
1,1,2,2-Tetrachloroethane	25.0	24.2	24.2	96.8	96.9	65.0-130			0.151	20
Tetrachloroethene	25.0	21.5	21.8	86.0	87.3	72.0-132			1.56	20
Toluene	25.0	23.2	23.5	92.7	93.9	79.0-120			1.26	20
1,1,2-Trichlorotrifluoroethane	25.0	25.7	26.7	103	107	69.0-132			3.70	20
1,2,3-Trichlorobenzene	25.0	19.1	20.1	76.5	80.5	50.0-138			5.21	20
1,2,4-Trichlorobenzene	25.0	21.1	21.5	84.3	85.9	57.0-137			1.91	20
1,1,1-Trichloroethane	25.0	25.9	26.5	104	106	73.0-124			2.31	20
1,1,2-Trichloroethane	25.0	24.7	24.3	98.9	97.2	80.0-120			1.75	20
Trichloroethene	25.0	25.0	25.5	100	102	78.0-124			2.06	20
Trichlorofluoromethane	25.0	25.7	26.4	103	106	59.0-147			3.06	20
Vinyl chloride	25.0	28.5	29.9	114	120	67.0-131			4.81	20
Xylenes, Total	75.0	75.5	74.3	101	99.1	79.0-123			1.60	20
(S) Toluene-d8				102	101	80.0-120				
(S) 4-Bromofluorobenzene				105	102	77.0-126				
(S) 1,2-Dichloroethane-d4				120	119	70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



L1126145-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1126145-01 08/09/19 18:07 • (MS) R3439664-4 08/09/19 18:26 • (MSD) R3439664-5 08/09/19 18:45

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	125	ND	27.7	111	22.2	88.7	1	10.0-160		J3	120	35
Benzene	25.0	ND	5.15	21.1	20.6	84.5	1	17.0-158		J3	122	27
Bromodichloromethane	25.0	ND	5.23	22.0	20.9	87.8	1	31.0-150	J6	J3	123	27
Bromochloromethane	25.0	ND	5.15	20.8	20.6	83.1	1	38.0-142	J6	J3	121	26
Bromoform	25.0	ND	4.39	19.5	17.6	78.0	1	29.0-150	J6	J3	126	29
Bromomethane	25.0	ND	5.80	21.5	23.2	86.0	1	10.0-160		J3	115	38
Carbon disulfide	25.0	ND	5.17	21.0	20.7	83.9	1	10.0-156		J3	121	28
Carbon tetrachloride	25.0	ND	5.94	25.2	23.8	101	1	23.0-159		J3	124	28
Chlorobenzene	25.0	ND	4.92	20.9	19.7	83.4	1	33.0-152	J6	J3	124	27
Chlorodibromomethane	25.0	ND	4.71	20.0	18.8	79.9	1	37.0-149	J6	J3	124	27
Chloroethane	25.0	ND	5.81	22.0	23.2	88.1	1	10.0-160		J3	117	30
Chloroform	25.0	ND	5.30	20.9	21.2	83.7	1	29.0-154	J6	J3	119	28
Chloromethane	25.0	ND	6.72	25.4	26.9	101	1	10.0-160		J3	116	29
Cyclohexane	25.0	ND	5.36	23.0	21.4	92.2	1	19.0-160		J3	125	23
1,2-Dibromo-3-Chloropropane	25.0	ND	3.61	16.6	14.4	66.5	1	22.0-151	J6	J3	129	34
1,2-Dibromoethane	25.0	ND	4.89	21.3	19.6	85.1	1	34.0-147	J6	J3	125	27
1,2-Dichlorobenzene	25.0	ND	3.86	17.4	15.4	69.7	1	34.0-149	J6	J3	127	28
1,3-Dichlorobenzene	25.0	ND	3.98	17.6	15.9	70.4	1	36.0-146	J6	J3	126	27
1,4-Dichlorobenzene	25.0	ND	4.18	17.8	16.7	71.1	1	35.0-142	J6	J3	124	27
Dichlorodifluoromethane	25.0	ND	6.64	24.7	26.5	99.0	1	10.0-160		J3	115	29
1,1-Dichloroethane	25.0	ND	6.20	24.1	23.3	94.9	1	25.0-158	J6	J3	118	27
1,2-Dichloroethane	25.0	ND	5.56	21.9	22.2	87.6	1	29.0-151	J6	J3	119	27
1,1-Dichloroethene	25.0	ND	6.11	24.2	24.4	96.8	1	11.0-160		J3	119	29
cis-1,2-Dichloroethene	25.0	ND	5.33	20.4	21.3	81.6	1	10.0-160		J3	117	27
trans-1,2-Dichloroethene	25.0	ND	5.90	22.6	23.6	90.3	1	17.0-153		J3	117	27
1,2-Dichloropropane	25.0	ND	5.32	22.0	21.3	87.8	1	30.0-156	J6	J3	122	27
cis-1,3-Dichloropropene	25.0	ND	4.97	21.1	19.9	84.5	1	34.0-149	J6	J3	124	28
trans-1,3-Dichloropropene	25.0	ND	4.77	20.9	19.1	83.5	1	32.0-149	J6	J3	126	28
Ethylbenzene	25.0	ND	4.86	21.2	19.5	84.8	1	30.0-155	J6	J3	125	27
2-Hexanone	125	ND	25.6	115	20.5	92.1	1	21.0-160	J6	J3	127	29
Isopropylbenzene	25.0	ND	5.01	22.3	20.0	89.2	1	28.0-157	J6	J3	127	27
2-Butanone (MEK)	125	ND	27.8	114	22.2	91.4	1	10.0-160		J3	122	32
Methyl Acetate	125	ND	27.1	110	21.7	88.1	1	18.0-151		J3	121	30
Methyl Cyclohexane	25.0	ND	5.01	23.1	20.1	92.2	1	11.0-160		J3	129	24
Methylene Chloride	25.0	ND	5.00	19.6	20.0	78.4	1	23.0-144	J6	J3	119	28
4-Methyl-2-pentanone (MIBK)	125	ND	24.6	108	19.7	86.6	1	29.0-160	J6	J3	126	29
Methyl tert-butyl ether	25.0	ND	4.79	20.0	19.2	80.0	1	28.0-150	J6	J3	123	29
Styrene	25.0	ND	4.89	21.6	19.6	86.6	1	33.0-155	J6	J3	126	28
1,1,2,2-Tetrachloroethane	25.0	ND	4.74	19.6	19.0	78.4	1	33.0-150	J6	J3	122	28
Tetrachloroethene	25.0	ND	4.49	18.8	17.9	75.1	1	10.0-160		J3	123	27

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

L1126145-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1126145-01 08/09/19 18:07 • (MS) R3439664-4 08/09/19 18:26 • (MSD) R3439664-5 08/09/19 18:45

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Toluene	25.0	ND	4.58	19.4	18.3	77.5	1	26.0-154	J6	J3	124	28
1,1,2-Trichlorotrifluoroethane	25.0	ND	6.03	26.3	24.1	105	1	23.0-160		J3	125	30
1,2,3-Trichlorobenzene	25.0	ND	2.94	14.8	11.8	59.2	1	17.0-150	J6	J3	134	36
1,2,4-Trichlorobenzene	25.0	ND	3.38	16.3	13.5	65.2	1	24.0-150	J6	J3	131	33
1,1,1-Trichloroethane	25.0	ND	5.54	23.4	22.1	93.7	1	23.0-160	J6	J3	124	28
1,1,2-Trichloroethane	25.0	ND	4.37	18.8	17.5	75.3	1	35.0-147	J6	J3	125	27
Trichloroethene	25.0	ND	5.01	20.7	20.0	82.7	1	10.0-160		J3	122	25
Trichlorofluoromethane	25.0	ND	6.37	25.4	25.5	102	1	17.0-160		J3	120	31
Vinyl chloride	25.0	ND	6.55	25.3	26.2	101	1	10.0-160		J3	118	27
Xylenes, Total	75.0	ND	14.2	63.0	18.9	84.0	1	29.0-154	J6	J3	126	28
(S) Toluene-d8					100	102		80.0-120				
(S) 4-Bromofluorobenzene					101	106		77.0-126				
(S) 1,2-Dichloroethane-d4					111	118		70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1126377-01,02,04,05,06

Method Blank (MB)

(MB) R3439801-2 08/12/19 22:32

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0137	0.0250
Benzene	U		0.000400	0.00100
Bromodichloromethane	U		0.000788	0.00250
Bromochloromethane	U		0.00113	0.00500
Bromoform	U		0.00598	0.0250
Bromomethane	U		0.00370	0.0125
Carbon disulfide	U		0.00406	0.0125
Carbon tetrachloride	U		0.00108	0.00500
Chlorobenzene	U		0.000573	0.00250
Chlorodibromomethane	U		0.000450	0.00250
Chloroethane	U		0.00108	0.00500
Chloroform	U		0.000415	0.00250
Chloromethane	U		0.00139	0.0125
Cyclohexane	U		0.000508	0.00250
1,2-Dibromo-3-Chloropropane	U		0.00510	0.0250
1,2-Dibromoethane	U		0.000525	0.00250
1,2-Dichlorobenzene	U		0.00145	0.00500
1,3-Dichlorobenzene	U		0.00170	0.00500
1,4-Dichlorobenzene	U		0.00197	0.00500
Dichlorodifluoromethane	U		0.000818	0.00250
1,1-Dichloroethane	U		0.000575	0.00250
1,2-Dichloroethane	U		0.000475	0.00250
1,1-Dichloroethene	U		0.000500	0.00250
cis-1,2-Dichloroethene	U		0.000690	0.00250
trans-1,2-Dichloroethene	U		0.00143	0.00500
1,2-Dichloropropane	U		0.00127	0.00500
cis-1,3-Dichloropropene	U		0.000678	0.00250
trans-1,3-Dichloropropene	U		0.00153	0.00500
Ethylbenzene	U		0.000530	0.00250
2-Hexanone	U		0.0100	0.0250
Isopropylbenzene	U		0.000863	0.00250
2-Butanone (MEK)	U		0.0125	0.0250
Methyl Acetate	U		0.00210	0.00500
Methyl Cyclohexane	U		0.00103	0.00500
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.0100	0.0250
Methyl tert-butyl ether	U		0.000295	0.00100
Styrene	U		0.00273	0.0125
1,1,2,2-Tetrachloroethane	U		0.000390	0.00250
Tetrachloroethene	U		0.000700	0.00250

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



Method Blank (MB)

(MB) R3439801-2 08/12/19 22:32

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Toluene	U		0.00125	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000675	0.00250
1,2,3-Trichlorobenzene	U		0.000625	0.00250
1,2,4-Trichlorobenzene	U		0.00482	0.0125
1,1,1-Trichloroethane	U		0.000275	0.00250
1,1,2-Trichloroethane	U		0.000883	0.00250
Trichloroethene	U		0.000400	0.00100
Trichlorofluoromethane	U		0.000500	0.00250
Vinyl chloride	U		0.000683	0.00250
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	105			75.0-131
(S) 4-Bromofluorobenzene	101			67.0-138
(S) 1,2-Dichloroethane-d4	97.6			70.0-130

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3439801-1 08/12/19 21:31

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.625	0.789	126	10.0-160	
Benzene	0.125	0.106	84.8	70.0-123	
Bromodichloromethane	0.125	0.111	88.8	73.0-121	
Bromochloromethane	0.125	0.116	92.4	77.0-128	
Bromoform	0.125	0.0999	79.9	64.0-132	
Bromomethane	0.125	0.125	99.6	56.0-147	
Carbon disulfide	0.125	0.126	101	56.0-133	
Carbon tetrachloride	0.125	0.123	98.2	66.0-128	
Chlorobenzene	0.125	0.136	109	76.0-128	
Chlorodibromomethane	0.125	0.108	86.6	74.0-127	
Chloroethane	0.125	0.104	83.1	61.0-134	
Chloroform	0.125	0.121	96.8	72.0-123	
Chloromethane	0.125	0.122	97.3	51.0-138	
Cyclohexane	0.125	0.152	122	70.0-130	
1,2-Dibromo-3-Chloropropane	0.125	0.102	81.4	59.0-130	
1,2-Dibromoethane	0.125	0.118	94.0	74.0-128	
1,2-Dichlorobenzene	0.125	0.109	87.6	76.0-124	
1,3-Dichlorobenzene	0.125	0.113	90.0	76.0-125	
1,4-Dichlorobenzene	0.125	0.113	90.4	77.0-121	
Dichlorodifluoromethane	0.125	0.144	115	43.0-156	

L1126377-01,02,04,05,06

Laboratory Control Sample (LCS)

(LCS) R3439801-1 08/12/19 21:31

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
1,1-Dichloroethane	0.125	0.109	87.2	70.0-127	
1,2-Dichloroethane	0.125	0.133	107	65.0-131	
1,1-Dichloroethene	0.125	0.129	103	65.0-131	
cis-1,2-Dichloroethene	0.125	0.0979	78.3	73.0-125	
trans-1,2-Dichloroethene	0.125	0.105	84.4	71.0-125	
1,2-Dichloropropane	0.125	0.102	81.6	74.0-125	
cis-1,3-Dichloropropene	0.125	0.110	87.6	76.0-127	
trans-1,3-Dichloropropene	0.125	0.106	85.2	73.0-127	
Ethylbenzene	0.125	0.0995	79.6	74.0-126	
2-Hexanone	0.625	0.597	95.5	54.0-147	
Isopropylbenzene	0.125	0.123	98.3	72.0-127	
2-Butanone (MEK)	0.625	0.672	108	30.0-160	
Methyl Acetate	0.625	0.601	96.2	43.0-158	
Methyl Cyclohexane	0.125	0.0888	71.0	67.0-129	
Methylene Chloride	0.125	0.135	108	68.0-123	
4-Methyl-2-pentanone (MIBK)	0.625	0.631	101	56.0-143	
Methyl tert-butyl ether	0.125	0.104	83.5	66.0-132	
Styrene	0.125	0.102	81.6	72.0-127	
1,1,2,2-Tetrachloroethane	0.125	0.100	80.1	68.0-128	
Tetrachloroethene	0.125	0.146	117	70.0-136	
Toluene	0.125	0.123	98.4	75.0-121	
1,1,2-Trichlorotrifluoroethane	0.125	0.135	108	61.0-139	
1,2,3-Trichlorobenzene	0.125	0.116	92.4	59.0-139	
1,2,4-Trichlorobenzene	0.125	0.127	102	62.0-137	
1,1,1-Trichloroethane	0.125	0.117	93.6	69.0-126	
1,1,2-Trichloroethane	0.125	0.110	88.3	78.0-123	
Trichloroethene	0.125	0.131	105	76.0-126	
Trichlorofluoromethane	0.125	0.130	104	61.0-142	
Vinyl chloride	0.125	0.116	92.8	63.0-134	
Xylenes, Total	0.375	0.398	106	72.0-127	
(S) Toluene-d8			103	75.0-131	
(S) 4-Bromofluorobenzene			103	67.0-138	
(S) 1,2-Dichloroethane-d4			109	70.0-130	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1125739-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1125739-02 08/13/19 00:14 • (MS) R3439801-3 08/13/19 06:44 • (MSD) R3439801-4 08/13/19 07:04

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	0.625	ND	0.721	0.405	115	64.7	1	10.0-160		J3	56.2	40
Benzene	0.125	ND	0.112	0.0958	89.9	76.6	1	10.0-149			16.0	37
Bromodichloromethane	0.125	ND	0.111	0.0980	89.0	78.4	1	10.0-143			12.6	37
Bromochloromethane	0.125	ND	0.114	0.108	91.4	86.6	1	10.0-155			5.35	33
Bromoform	0.125	ND	0.0987	0.0864	79.0	69.1	1	10.0-146			13.4	36
Bromomethane	0.125	ND	0.108	0.0871	86.3	69.7	1	10.0-149			21.4	38
Carbon disulfide	0.125	ND	0.110	0.0967	88.0	77.3	1	10.0-145			12.9	39
Carbon tetrachloride	0.125	ND	0.136	0.116	108	93.0	1	10.0-145			15.4	37
Chlorobenzene	0.125	ND	0.144	0.130	115	104	1	10.0-152			10.3	39
Chlorodibromomethane	0.125	ND	0.116	0.0988	92.4	79.0	1	10.0-146			15.6	37
Chloroethane	0.125	ND	0.0857	0.0686	68.6	54.9	1	10.0-146			22.2	40
Chloroform	0.125	ND	0.125	0.112	100	89.4	1	10.0-146			11.5	37
Chloromethane	0.125	ND	0.103	0.0867	82.1	69.4	1	10.0-159			16.8	37
Cyclohexane	0.125	0.0121	0.177	0.153	132	113	1	10.0-157			14.9	32
1,2-Dibromo-3-Chloropropane	0.125	ND	0.102	0.0718	81.3	57.4	1	10.0-151			34.4	39
1,2-Dibromoethane	0.125	ND	0.118	0.105	94.0	83.7	1	10.0-148			11.7	34
1,2-Dichlorobenzene	0.125	ND	0.117	0.107	93.9	85.8	1	10.0-155			9.08	37
1,3-Dichlorobenzene	0.125	ND	0.113	0.104	90.1	83.5	1	10.0-153			7.65	38
1,4-Dichlorobenzene	0.125	ND	0.124	0.116	99.3	92.7	1	10.0-151			6.91	38
Dichlorodifluoromethane	0.125	ND	0.127	0.115	102	91.7	1	10.0-160			10.4	35
1,1-Dichloroethane	0.125	ND	0.116	0.0999	92.8	79.9	1	10.0-147			14.9	37
1,2-Dichloroethane	0.125	ND	0.136	0.122	109	97.9	1	10.0-148			10.8	35
1,1-Dichloroethene	0.125	ND	0.140	0.116	112	92.8	1	10.0-155			18.7	37
cis-1,2-Dichloroethene	0.125	ND	0.104	0.0915	83.5	73.2	1	10.0-149			13.1	37
trans-1,2-Dichloroethene	0.125	ND	0.108	0.101	86.7	81.1	1	10.0-150			6.73	37
1,2-Dichloropropane	0.125	ND	0.112	0.0938	89.4	75.0	1	10.0-148			17.5	37
cis-1,3-Dichloropropene	0.125	ND	0.114	0.0994	91.0	79.5	1	10.0-151			13.6	37
trans-1,3-Dichloropropene	0.125	ND	0.109	0.0970	87.5	77.6	1	10.0-148			12.0	37
Ethylbenzene	0.125	ND	0.109	0.0964	87.3	77.1	1	10.0-160			12.4	38
2-Hexanone	0.625	ND	0.574	0.494	91.9	79.0	1	10.0-160			15.0	36
Isopropylbenzene	0.125	ND	0.144	0.123	116	98.2	1	10.0-155			16.2	38
2-Butanone (MEK)	0.625	ND	0.703	0.567	112	90.7	1	10.0-160			21.4	40
Methyl Acetate	0.625	ND	0.694	0.575	111	92.1	1	10.0-160			18.6	40
Methyl Cyclohexane	0.125	ND	0.558	0.558	446	446	1	10.0-160	J5	J5	0.0411	33
Methylene Chloride	0.125	ND	0.130	0.115	104	92.3	1	10.0-141			12.2	37
4-Methyl-2-pentanone (MIBK)	0.625	ND	0.628	0.548	101	87.6	1	10.0-160			13.7	35
Methyl tert-butyl ether	0.125	ND	0.0928	0.0821	74.2	65.7	1	11.0-147			12.3	35
Styrene	0.125	ND	0.113	0.103	90.4	82.6	1	10.0-160			9.00	40
1,1,2,2-Tetrachloroethane	0.125	ND	0.0981	0.0938	78.5	75.1	1	10.0-160			4.46	35
Tetrachloroethene	0.125	ND	0.150	0.141	120	113	1	10.0-156			6.04	39

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



L1125739-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1125739-02 08/13/19 00:14 • (MS) R3439801-3 08/13/19 06:44 • (MSD) R3439801-4 08/13/19 07:04

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Toluene	0.125	ND	0.133	0.119	106	95.0	1	10.0-156			11.3	38
1,1,2-Trichlorotrifluoroethane	0.125	ND	0.150	0.137	120	109	1	10.0-160			9.09	36
1,2,3-Trichlorobenzene	0.125	ND	0.131	0.106	105	85.0	1	10.0-160			20.7	40
1,2,4-Trichlorobenzene	0.125	ND	0.144	0.120	115	95.6	1	10.0-160			18.7	40
1,1,1-Trichloroethane	0.125	ND	0.144	0.118	115	94.2	1	10.0-144			20.1	35
1,1,2-Trichloroethane	0.125	ND	0.120	0.105	96.2	83.8	1	10.0-160			13.7	35
Trichloroethene	0.125	ND	0.142	0.122	113	97.5	1	10.0-156			15.0	38
Trichlorofluoromethane	0.125	ND	0.144	0.124	115	99.6	1	10.0-160			14.7	40
Vinyl chloride	0.125	ND	0.0906	0.0870	72.5	69.6	1	10.0-160			4.08	37
Xylenes, Total	0.375	ND	0.429	0.378	114	101	1	10.0-160			12.6	38
(S) Toluene-d8					102	103		75.0-131				
(S) 4-Bromofluorobenzene					105	103		67.0-138				
(S) 1,2-Dichloroethane-d4					106	104		70.0-130				

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



Method Blank (MB)

(MB) R3440401-1 08/14/19 12:30

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	0.812	J	0.274	4.00
(S) o-Terphenyl	77.5			18.0-148

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3440401-2 08/14/19 12:43

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	44.8	89.6	50.0-150	
(S) o-Terphenyl			108	18.0-148	

L1126363-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1126363-01 08/15/19 01:49 • (MS) R3440668-1 08/15/19 02:03 • (MSD) R3440668-2 08/15/19 02:16

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	57.1	20.1	61.3	61.0	72.2	71.8	1	50.0-150			0.373	20
(S) o-Terphenyl					82.1	82.9		18.0-148				



Method Blank (MB)

(MB) R3440275-1 08/14/19 08:56

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
PCB 1016	U		0.00350	0.0170
PCB 1221	U		0.00537	0.0170
PCB 1232	U		0.00417	0.0170
PCB 1242	U		0.00318	0.0170
PCB 1248	U		0.00315	0.0170
PCB 1254	U		0.00472	0.0170
PCB 1260	U		0.00494	0.0170
(S) Decachlorobiphenyl	94.1			10.0-135
(S) Tetrachloro-m-xylene	96.4			10.0-139

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3440275-2 08/14/19 09:08

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
PCB 1260	0.167	0.150	89.8	37.0-145	
PCB 1016	0.167	0.159	95.2	36.0-141	
(S) Decachlorobiphenyl			102	10.0-135	
(S) Tetrachloro-m-xylene			100	10.0-139	

L1126151-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1126151-04 08/14/19 09:58 • (MS) R3440275-3 08/14/19 10:10 • (MSD) R3440275-4 08/14/19 10:23

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
PCB 1260	0.200	U	0.201	0.184	101	92.2	1	10.0-160			8.70	38
PCB 1016	0.200	U	0.199	0.191	99.4	95.8	1	10.0-160			3.68	37
(S) Decachlorobiphenyl					87.2	93.2		10.0-135				
(S) Tetrachloro-m-xylene					77.6	84.8		10.0-139				

Method Blank (MB)

(MB) R3440177-2 08/14/19 04:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00642	0.0333
Acenaphthylene	U		0.00671	0.0333
Acetophenone	U		0.0752	0.333
Anthracene	U		0.00632	0.0333
Atrazine	U		0.0938	0.333
Benzaldehyde	U		0.0532	0.333
Benzo(a)anthracene	U		0.00428	0.0333
Benzo(b)fluoranthene	U		0.00695	0.0333
Benzo(k)fluoranthene	U		0.00582	0.0333
Benzo(g,h,i)perylene	U		0.00721	0.0333
Benzo(a)pyrene	U		0.00548	0.0333
Biphenyl	U		0.00588	0.333
Bis(2-chlorethoxy)methane	U		0.00770	0.333
Bis(2-chloroethyl)ether	U		0.00896	0.333
Bis(2-chloroisopropyl)ether	U		0.00760	0.333
4-Bromophenyl-phenylether	U		0.0114	0.333
Caprolactam	U		0.104	0.333
Carbazole	U		0.00524	0.333
4-Chloroaniline	U		0.0352	0.333
2-Chloronaphthalene	U		0.00639	0.0333
4-Chlorophenyl-phenylether	U		0.00627	0.333
Chrysene	U		0.00555	0.0333
Dibenz(a,h)anthracene	U		0.00821	0.0333
Dibenzofuran	U		0.00518	0.333
3,3-Dichlorobenzidine	U		0.0794	0.333
2,4-Dinitrotoluene	U		0.00607	0.333
2,6-Dinitrotoluene	U		0.00737	0.333
Fluoranthene	U		0.00496	0.0333
Fluorene	U		0.00682	0.0333
Hexachlorobenzene	U		0.00856	0.333
Hexachloro-1,3-butadiene	U		0.0100	0.333
Hexachlorocyclopentadiene	U		0.0587	0.333
Hexachloroethane	U		0.0134	0.333
Indeno(1,2,3-cd)pyrene	U		0.00772	0.0333
Isophorone	U		0.00522	0.333
2-Methylnaphthalene	U		0.00861	0.0333
Naphthalene	U		0.00889	0.0333
2-Nitroaniline	U		0.00755	0.333
3-Nitroaniline	U		0.00850	0.333
4-Nitroaniline	U		0.00639	0.333

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Cp

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Tc

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Ss

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Cn

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Sr

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Qc

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Gl

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Al

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Sc

Method Blank (MB)

(MB) R3440177-2 08/14/19 04:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Nitrobenzene	U		0.00695	0.333
n-Nitrosodiphenylamine	U		0.0900	0.333
n-Nitrosodi-n-propylamine	U		0.00906	0.333
Phenanthrene	U		0.00528	0.0333
Benzylbutyl phthalate	U		0.0103	0.333
Bis(2-ethylhexyl)phthalate	U		0.0120	0.333
Di-n-butyl phthalate	U		0.0109	0.333
Diethyl phthalate	U		0.00691	0.333
Dimethyl phthalate	U		0.00540	0.333
Di-n-octyl phthalate	U		0.00907	0.333
Pyrene	U		0.0123	0.0333
4-Chloro-3-methylphenol	U		0.00477	0.333
2-Chlorophenol	U		0.00831	0.333
2-Methylphenol	U		0.00986	0.333
3&4-Methyl Phenol	U		0.00783	0.333
2,4-Dichlorophenol	U		0.00746	0.333
2,4-Dimethylphenol	U		0.0471	0.333
4,6-Dinitro-2-methylphenol	U		0.124	0.333
2,4-Dinitrophenol	U		0.0980	0.333
2-Nitrophenol	U		0.0130	0.333
4-Nitrophenol	U		0.0525	0.333
Pentachlorophenol	U		0.0480	0.333
Phenol	U		0.00695	0.333
1,2,4,5-Tetrachlorobenzene	U		0.0762	0.333
2,4,5-Trichlorophenol	U		0.0104	0.333
2,4,6-Trichlorophenol	U		0.00779	0.333
(S) Nitrobenzene-d5	63.1			10.0-122
(S) 2-Fluorobiphenyl	64.9			15.0-120
(S) p-Terphenyl-d14	74.8			10.0-120
(S) Phenol-d5	66.4			10.0-120
(S) 2-Fluorophenol	75.2			12.0-120
(S) 2,4,6-Tribromophenol	65.5			10.0-127

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3440177-5 08/14/19 15:27

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00642	0.0333
Acenaphthylene	U		0.00671	0.0333
Acetophenone	U		0.0752	0.333
Anthracene	U		0.00632	0.0333
Atrazine	U		0.0938	0.333
Benzaldehyde	U		0.0532	0.333
Benzo(a)anthracene	U		0.00428	0.0333
Benzo(b)fluoranthene	U		0.00695	0.0333
Benzo(k)fluoranthene	U		0.00582	0.0333
Benzo(g,h,i)perylene	U		0.00721	0.0333
Benzo(a)pyrene	U		0.00548	0.0333
Biphenyl	U		0.00588	0.333
Bis(2-chlorethoxy)methane	U		0.00770	0.333
Bis(2-chloroethyl)ether	U		0.00896	0.333
Bis(2-chloroisopropyl)ether	U		0.00760	0.333
4-Bromophenyl-phenylether	U		0.0114	0.333
Caprolactam	U		0.104	0.333
Carbazole	U		0.00524	0.333
4-Chloroaniline	U		0.0352	0.333
2-Chloronaphthalene	U		0.00639	0.0333
4-Chlorophenyl-phenylether	U		0.00627	0.333
Chrysene	U		0.00555	0.0333
Dibenz(a,h)anthracene	U		0.00821	0.0333
Dibenzofuran	U		0.00518	0.333
3,3-Dichlorobenzidine	U		0.0794	0.333
2,4-Dinitrotoluene	U		0.00607	0.333
2,6-Dinitrotoluene	U		0.00737	0.333
Fluoranthene	U		0.00496	0.0333
Fluorene	U		0.00682	0.0333
Hexachlorobenzene	U		0.00856	0.333
Hexachloro-1,3-butadiene	U		0.0100	0.333
Hexachlorocyclopentadiene	U		0.0587	0.333
Hexachloroethane	U		0.0134	0.333
Indeno(1,2,3-cd)pyrene	U		0.00772	0.0333
Isophorone	U		0.00522	0.333
2-Methylnaphthalene	U		0.00861	0.0333
Naphthalene	U		0.00889	0.0333
2-Nitroaniline	U		0.00755	0.333
3-Nitroaniline	U		0.00850	0.333
4-Nitroaniline	U		0.00639	0.333

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Cp

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Tc

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Ss

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Cn

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Sr

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Qc

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Gl

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Al

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Sc

Method Blank (MB)

(MB) R3440177-5 08/14/19 15:27

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Nitrobenzene	U		0.00695	0.333
n-Nitrosodiphenylamine	U		0.0900	0.333
n-Nitrosodi-n-propylamine	U		0.00906	0.333
Phenanthrene	U		0.00528	0.0333
Benzylbutyl phthalate	U		0.0103	0.333
Bis(2-ethylhexyl)phthalate	U		0.0120	0.333
Di-n-butyl phthalate	U		0.0109	0.333
Diethyl phthalate	U		0.00691	0.333
Dimethyl phthalate	U		0.00540	0.333
Di-n-octyl phthalate	U		0.00907	0.333
Pyrene	U		0.0123	0.0333
4-Chloro-3-methylphenol	U		0.00477	0.333
2-Chlorophenol	U		0.00831	0.333
2-Methylphenol	U		0.00986	0.333
3&4-Methyl Phenol	U		0.00783	0.333
2,4-Dichlorophenol	U		0.00746	0.333
2,4-Dimethylphenol	U		0.0471	0.333
4,6-Dinitro-2-methylphenol	U		0.124	0.333
2,4-Dinitrophenol	U		0.0980	0.333
2-Nitrophenol	U		0.0130	0.333
4-Nitrophenol	U		0.0525	0.333
Pentachlorophenol	U		0.0480	0.333
Phenol	U		0.00695	0.333
1,2,4,5-Tetrachlorobenzene	U		0.0762	0.333
2,4,5-Trichlorophenol	U		0.0104	0.333
2,4,6-Trichlorophenol	U		0.00779	0.333
(S) Nitrobenzene-d5	61.9			10.0-122
(S) 2-Fluorobiphenyl	62.5			15.0-120
(S) p-Terphenyl-d14	76.3			10.0-120
(S) Phenol-d5	67.9			10.0-120
(S) 2-Fluorophenol	76.3			12.0-120
(S) 2,4,6-Tribromophenol	70.4			10.0-127

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3440177-1 08/14/19 04:07

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Acenaphthene	0.666	0.397	59.6	38.0-120	
Acenaphthylene	0.666	0.408	61.3	40.0-120	
Acetophenone	0.666	0.405	60.8	29.0-120	
Anthracene	0.666	0.443	66.5	42.0-120	
Atrazine	0.666	0.484	72.7	43.0-120	
Benzaldehyde	0.666	0.217	32.6	10.0-160	
Benzo(a)anthracene	0.666	0.482	72.4	44.0-120	
Benzo(b)fluoranthene	0.666	0.463	69.5	43.0-120	
Benzo(k)fluoranthene	0.666	0.470	70.6	44.0-120	
Benzo(g,h,i)perylene	0.666	0.450	67.6	43.0-120	
Benzo(a)pyrene	0.666	0.462	69.4	45.0-120	
Biphenyl	0.666	0.401	60.2	39.0-120	
Bis(2-chlorethoxy)methane	0.666	0.399	59.9	20.0-120	
Bis(2-chloroethyl)ether	0.666	0.392	58.9	16.0-120	
Bis(2-chloroisopropyl)ether	0.666	0.375	56.3	23.0-120	
4-Bromophenyl-phenylether	0.666	0.443	66.5	40.0-120	
Caprolactam	0.666	0.483	72.5	38.0-120	
Carbazole	0.666	0.458	68.8	48.0-120	
4-Chloroaniline	0.666	0.369	55.4	18.0-120	
2-Chloronaphthalene	0.666	0.397	59.6	35.0-120	
4-Chlorophenyl-phenylether	0.666	0.429	64.4	40.0-120	
Chrysene	0.666	0.455	68.3	43.0-120	
Dibenz(a,h)anthracene	0.666	0.442	66.4	44.0-120	
Dibenzofuran	0.666	0.411	61.7	44.0-120	
3,3-Dichlorobenzidine	1.33	0.872	65.6	28.0-120	
2,4-Dinitrotoluene	0.666	0.470	70.6	45.0-120	
2,6-Dinitrotoluene	0.666	0.426	64.0	42.0-120	
Fluoranthene	0.666	0.463	69.5	44.0-120	
Fluorene	0.666	0.431	64.7	41.0-120	
Hexachlorobenzene	0.666	0.432	64.9	39.0-120	
Hexachloro-1,3-butadiene	0.666	0.399	59.9	15.0-120	
Hexachlorocyclopentadiene	0.666	0.363	54.5	15.0-120	
Hexachloroethane	0.666	0.352	52.9	17.0-120	
Indeno(1,2,3-cd)pyrene	0.666	0.438	65.8	45.0-120	
Isophorone	0.666	0.391	58.7	23.0-120	
2-Methylnaphthalene	0.666	0.381	57.2	34.0-120	
Naphthalene	0.666	0.391	58.7	18.0-120	
2-Nitroaniline	0.666	0.442	66.4	46.0-120	
3-Nitroaniline	0.666	0.442	66.4	36.0-120	
4-Nitroaniline	0.666	0.449	67.4	36.0-120	

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Cp

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Tc

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Ss

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Cn

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Sr

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Qc

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Gl

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Al

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Sc

Laboratory Control Sample (LCS)

(LCS) R3440177-1 08/14/19 04:07

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Nitrobenzene	0.666	0.388	58.3	17.0-120	
n-Nitrosodiphenylamine	0.666	0.443	66.5	40.0-120	
n-Nitrosodi-n-propylamine	0.666	0.381	57.2	26.0-120	
Phenanthrene	0.666	0.441	66.2	42.0-120	
Benzylbutyl phthalate	0.666	0.470	70.6	40.0-120	
Bis(2-ethylhexyl)phthalate	0.666	0.471	70.7	41.0-120	
Di-n-butyl phthalate	0.666	0.467	70.1	43.0-120	
Diethyl phthalate	0.666	0.450	67.6	43.0-120	
Dimethyl phthalate	0.666	0.434	65.2	43.0-120	
Di-n-octyl phthalate	0.666	0.464	69.7	40.0-120	
Pyrene	0.666	0.456	68.5	41.0-120	
4-Chloro-3-methylphenol	0.666	0.454	68.2	28.0-120	
2-Chlorophenol	0.666	0.425	63.8	28.0-120	
2-Methylphenol	0.666	0.471	70.7	35.0-120	
3&4-Methyl Phenol	0.666	0.362	54.4	42.0-120	
2,4-Dichlorophenol	0.666	0.451	67.7	25.0-120	
2,4-Dimethylphenol	0.666	0.419	62.9	15.0-120	
4,6-Dinitro-2-methylphenol	0.666	0.421	63.2	16.0-120	
2,4-Dinitrophenol	0.666	0.373	56.0	10.0-120	
2-Nitrophenol	0.666	0.387	58.1	20.0-120	
4-Nitrophenol	0.666	0.458	68.8	27.0-120	
Pentachlorophenol	0.666	0.463	69.5	29.0-120	
Phenol	0.666	0.430	64.6	28.0-120	
1,2,4,5-Tetrachlorobenzene	0.666	0.410	61.6	30.0-120	
2,4,5-Trichlorophenol	0.666	0.467	70.1	38.0-120	
2,4,6-Trichlorophenol	0.666	0.414	62.2	37.0-120	
(S) Nitrobenzene-d5			61.0	10.0-122	
(S) 2-Fluorobiphenyl			60.7	15.0-120	
(S) p-Terphenyl-d14			71.8	10.0-120	
(S) Phenol-d5			69.2	10.0-120	
(S) 2-Fluorophenol			73.1	12.0-120	
(S) 2,4,6-Tribromophenol			72.1	10.0-127	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1126377-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1126377-04 08/14/19 10:09 • (MS) R3440177-3 08/14/19 10:31 • (MSD) R3440177-4 08/14/19 10:54

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.835	U	0.450	0.480	53.9	58.2	5	18.0-120			6.47	32
Acenaphthylene	0.835	U	0.466	0.500	55.9	60.6	5	25.0-120			7.00	32
Acetophenone	0.835	U	0.473	ND	56.6	0.000	5	10.0-120		J3 J6	200	37
Anthracene	0.835	U	0.512	0.533	61.3	64.6	5	22.0-120			4.08	29
Atrazine	0.835	U	ND	ND	0.000	0.000	5	20.0-131	J6	J6	0.000	28
Benzaldehyde	0.835	U	0.692	0.642	82.9	77.8	5	10.0-160			7.52	40
Benzo(a)anthracene	0.835	0.118	0.554	0.596	52.2	57.9	5	25.0-120			7.20	29
Benzo(b)fluoranthene	0.835	0.138	0.518	0.576	45.5	53.0	5	19.0-122			10.6	31
Benzo(k)fluoranthene	0.835	U	0.470	0.520	56.3	63.1	5	23.0-120			10.1	30
Benzo(g,h,i)perylene	0.835	0.772	0.594	0.685	0.000	0.000	5	10.0-120	J6	J6	14.1	33
Benzo(a)pyrene	0.835	0.138	0.508	0.566	44.3	51.8	5	24.0-120			10.7	30
Biphenyl	0.835	U	0.435	0.472	52.1	57.1	5	15.0-120			8.02	33
Bis(2-chlorethoxy)methane	0.835	U	0.440	0.436	52.7	52.9	5	10.0-120			0.858	34
Bis(2-chloroethyl)ether	0.835	U	0.405	0.413	48.5	50.0	5	10.0-120			1.84	40
Bis(2-chloroisopropyl)ether	0.835	U	0.382	0.411	45.8	49.8	5	10.0-120			7.27	40
4-Bromophenyl-phenylether	0.835	U	0.503	0.527	60.2	63.8	5	27.0-120			4.63	30
Caprolactam	0.835	U	ND	ND	0.000	0.000	5	11.0-141	J6	J6	0.000	31
Carbazole	0.835	U	0.535	0.535	64.1	64.9	5	31.0-120			0.000	24
4-Chloroaniline	0.835	U	0.460	0.474	55.1	57.4	5	10.0-120			2.95	36
2-Chloronaphthalene	0.835	U	0.445	0.484	53.3	58.7	5	20.0-120			8.37	32
4-Chlorophenyl-phenylether	0.835	U	0.478	0.510	57.2	61.9	5	24.0-120			6.60	29
Chrysene	0.835	0.403	0.515	0.660	13.5	31.2	5	21.0-120	J6		24.5	29
Dibenz(a,h)anthracene	0.835	0.120	0.488	0.548	44.1	51.9	5	10.0-120			11.6	32
Dibenzofuran	0.835	U	0.464	0.517	55.6	62.6	5	24.0-120			10.7	30
3,3-Dichlorobenzidine	1.67	U	1.01	1.00	60.3	60.6	5	10.0-120			0.250	34
2,4-Dinitrotoluene	0.835	U	0.494	0.499	59.2	60.5	5	30.0-120			1.01	31
2,6-Dinitrotoluene	0.835	U	0.480	0.512	57.5	62.0	5	25.0-120			6.32	31
Fluoranthene	0.835	0.0761	0.535	0.568	55.0	59.6	5	18.0-126			5.91	32
Fluorene	0.835	U	0.475	0.532	56.9	64.4	5	25.0-120			11.2	30
Hexachlorobenzene	0.835	U	0.488	0.544	58.4	66.0	5	27.0-120			10.9	28
Hexachloro-1,3-butadiene	0.835	U	0.354	0.431	42.3	52.3	5	10.0-120			19.8	38
Hexachlorocyclopentadiene	0.835	U	ND	ND	0.000	0.000	5	10.0-120	J6	J6	0.000	40
Hexachloroethane	0.835	U	0.265	0.350	31.7	42.4	5	10.0-120			27.8	40
Indeno(1,2,3-cd)pyrene	0.835	0.116	0.500	0.542	46.1	51.6	5	10.0-120			7.94	32
Isophorone	0.835	U	0.453	0.438	54.2	53.0	5	13.0-120			3.38	34
2-Methylnaphthalene	0.835	0.154	0.425	0.484	32.4	40.0	5	10.0-120			13.0	37
Naphthalene	0.835	0.0772	0.411	0.449	40.0	45.0	5	10.0-120			8.75	35
2-Nitroaniline	0.835	U	0.497	0.538	59.5	65.2	5	24.0-120			8.00	30
3-Nitroaniline	0.835	U	0.505	0.553	60.5	67.0	5	11.0-120			9.00	32

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1126377-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1126377-04 08/14/19 10:09 • (MS) R3440177-3 08/14/19 10:31 • (MSD) R3440177-4 08/14/19 10:54

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
4-Nitroaniline	0.835	U	0.500	0.518	59.9	62.8	5	15.0-120			3.45	31
Nitrobenzene	0.835	U	0.405	0.410	48.5	49.7	5	10.0-120			1.23	36
n-Nitrosodiphenylamine	0.835	U	ND	ND	0.000	0.000	5	17.0-120	J6	J6	0.000	29
n-Nitrosodi-n-propylamine	0.835	U	0.431	0.431	51.7	52.3	5	10.0-120			0.000	37
Phenanthrene	0.835	0.0927	0.512	0.561	50.2	56.7	5	17.0-120			9.12	31
Benzylbutyl phthalate	0.835	U	0.522	0.573	62.5	69.5	5	23.0-120			9.39	30
Bis(2-ethylhexyl)phthalate	0.835	U	0.502	0.553	60.1	67.0	5	17.0-126			9.75	30
Di-n-butyl phthalate	0.835	U	0.504	0.537	60.4	65.0	5	30.0-120			6.27	29
Diethyl phthalate	0.835	U	0.502	0.525	60.1	63.7	5	26.0-120			4.64	28
Dimethyl phthalate	0.835	U	0.485	0.510	58.1	61.9	5	25.0-120			5.04	29
Di-n-octyl phthalate	0.835	U	0.530	0.574	63.5	69.6	5	21.0-123			7.95	29
Pyrene	0.835	0.116	0.520	0.572	48.4	55.2	5	16.0-121			9.41	32
4-Chloro-3-methylphenol	0.835	U	0.532	0.577	63.7	69.9	5	15.0-120			8.14	30
2-Chlorophenol	0.835	U	0.492	0.483	58.9	58.5	5	15.0-120			1.80	37
2-Methylphenol	0.835	U	0.676	0.696	80.9	84.3	5	11.0-120			2.93	40
3&4-Methyl Phenol	0.835	U	0.636	0.635	76.1	76.9	5	12.0-123			0.197	38
2,4-Dichlorophenol	0.835	U	0.524	0.532	62.8	64.4	5	20.0-120			1.43	31
2,4-Dimethylphenol	0.835	U	0.498	0.507	59.6	61.4	5	10.0-120			1.75	33
4,6-Dinitro-2-methylphenol	0.835	U	ND	ND	0.000	0.000	5	10.0-120	J6	J6	0.000	39
2,4-Dinitrophenol	0.835	U	ND	ND	0.000	0.000	5	10.0-121	J6	J6	0.000	40
2-Nitrophenol	0.835	U	0.451	0.474	54.1	57.4	5	12.0-120			4.88	39
4-Nitrophenol	0.835	U	0.561	0.574	67.1	69.6	5	10.0-137			2.43	32
Pentachlorophenol	0.835	U	0.544	0.576	65.2	69.8	5	10.0-160			5.60	31
Phenol	0.835	U	0.547	0.542	65.5	65.7	5	12.0-120			0.922	38
1,2,4,5-Tetrachlorobenzene	0.835	U	ND	0.493	0.000	59.7	5	14.0-120	J6	J3	200	36
2,4,5-Trichlorophenol	0.835	U	0.567	0.608	67.9	73.7	5	20.0-120			7.04	30
2,4,6-Trichlorophenol	0.835	U	0.512	0.525	61.3	63.7	5	19.0-120			2.66	32
(S) Nitrobenzene-d5					55.3	51.1		10.0-122				
(S) 2-Fluorobiphenyl					56.2	58.4		15.0-120				
(S) p-Terphenyl-d14					63.1	67.5		10.0-120				
(S) Phenol-d5					64.1	65.5		10.0-120				
(S) 2-Fluorophenol					66.4	64.1		12.0-120				
(S) 2,4,6-Tribromophenol					67.7	70.7		10.0-127				

Sample Narrative:
OS: Dilution due to matrix.

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

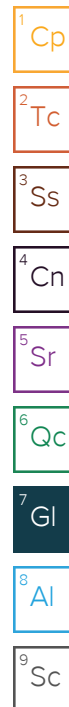
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

B	The same analyte is found in the associated blank.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.





Qualifier	Description
O1	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.
V	The sample concentration is too high to evaluate accurate spike recoveries.

- ¹Cp
- ²Tc
- ³Ss
- ⁴Cn
- ⁵Sr
- ⁶Qc
- ⁷Gl
- ⁸Al
- ⁹Sc



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico ¹	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1 6}	90010	South Carolina	84004
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana ¹	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

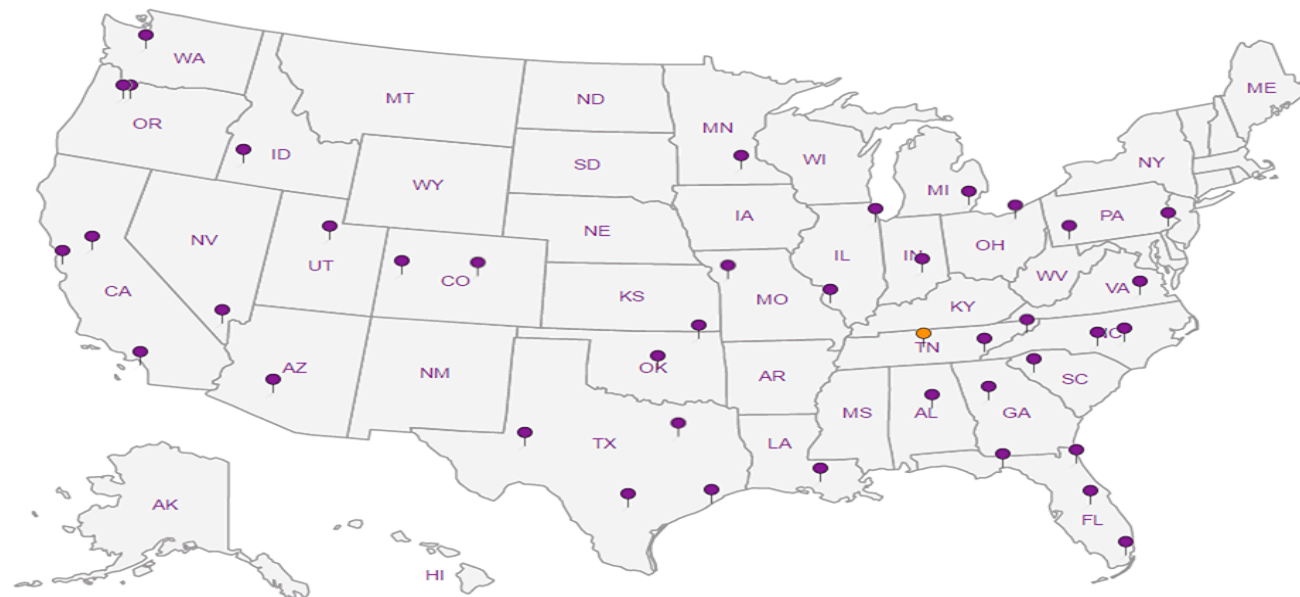
Third Party Federal Accreditations

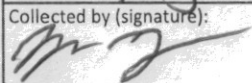
A2LA – ISO 17025	1461.01	AIHA-LAP, LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



GHD - Glenn Springs Holdings 2055 Niagara Falls Blvd. #3 Niagara Falls, NY 14034				Billing Information: Accounts Payable PO Box 2148 Houston, TX 77252-2148				Chain of Custody Page <u>1</u> of <u>1</u>	
				Report to: Angela Bown				Email To: Angela.Bown@ghd.com, Paul.Fowler@ghd.com, GSH-LabDataMgmt-	
Project Description: Cline Avenue Ditch				City/State Collected:				 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859	
Phone: 716-297-6150 Fax:		Client Project # 11129311 Y4 11198545		Lab Project # GHDGSH-11129311		DRO/ORO 8015 4ozClr-NoPres GRO 40m/NaHSO4/Syr/MeOH M6010TAL 4ozClr-NoPres SV8082, SV8270TCL 4ozClr-NoPres V8260TCL 40m/NaHSO4/Syr/MeOH		L# L1126377 J137	
Collected by (print): Yan Yang		Site/Facility ID # Cline Avenue		P.O. # 4502201561				Acctnum: GHDGSH Template: T153500 Prelogin: P721166 TSR: 134 - Mark W. Beasley PB:	
Collected by (signature): 		Rush? (Lab MUST Be Notified) ☐ Same Day ☐ Five Day ☐ Next Day ☐ 5 Day (Rad Only) ☐ Two Day ☐ 10 Day (Rad Only) ☐ Three Day		Quote #				Shipped Via: FedEX Ground	
Immediately Packed on Ice N ☐ Y ☒		Date Results Needed STP		No. of Cntrs				Remarks Sample # (lab only)	
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time				
SO-11198545-0805A-Y4-001	G	SS	2.5-5	8/5/2019	11:25	6	X X X X X	odor -01	
SO-11198585-080514-Y4-002	G	SS	1.5-3	8/5/2019	14:30	6	X X X X X	odor 02	
TB-11198545-080514-Y4-01	G	SS-WT	-	8/5/2019	08:00	1	X X X X X	03	
SO-11198545-0806A-Y4-003	G	SS	2.5-5	8/6/2019	11:45	6	X X X X X	04	
SO-11198545-0806A-Y4-004	G	SS	2.5-5	8/6/2019	13:45	6	X X X X X	05	
SO-11198545-080619-Y4-005	G	SS	2.5-5	8/6/2019	14:00	6	X X X X X	06	
		SS							
		SS							
		SS							
		SS							

* Matrix:

SS - Soil AIR - Air F - Filter

GW - Groundwater B - Bioassay

WW - WasteWater

DW - Drinking Water

OT - Other **WT**

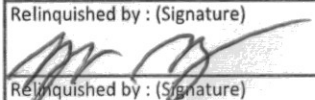
Remarks: ****Level IV data package (5%)****

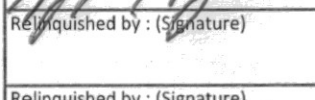
Samples returned via:
☐ UPS ☒ FedEx ☐ Courier

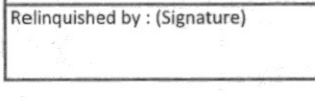
Tracking # **1082 5993 8000**

pH _____ Temp _____

Flow _____ Other _____

Relinquished by: (Signature)


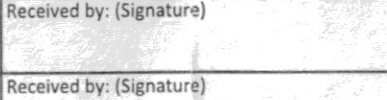
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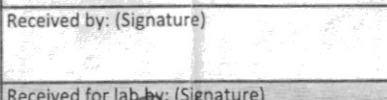
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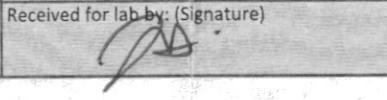
Date: **8/6/2019** Time: **1830**

Date: Time:

Date: Time:

Received by: (Signature)


Received by: (Signature)


Received for lab by: (Signature)


Trip Blank Received: Yes/No
☒ HCL / MeOH
☐ TBR

Temp: **31.1=33.2** °C Bottles Received: **30+**

Date: **8/7/19** Time: **8:45**

Sample Receipt Checklist

COC Seal Present/Intact: ☒ NP ☐ Y ☐ N

COC Signed/Accurate: ☒ ☐ Y ☐ N

Bottles arrive intact: ☒ ☐ Y ☐ N

Correct bottles used: ☒ ☐ Y ☐ N

Sufficient volume sent: ☒ ☐ Y ☐ N

If Applicable

VOA Zero Headspace: ☐ Y ☒ N

Preservation Correct/Checked: ☐ Y ☒ N

RAD SCREEN: <0.5 mR/hr

If preservation required by Login: Date/Time

Hold:

Condition: **NCF / OK**

GHD - Glenn Springs Holdings

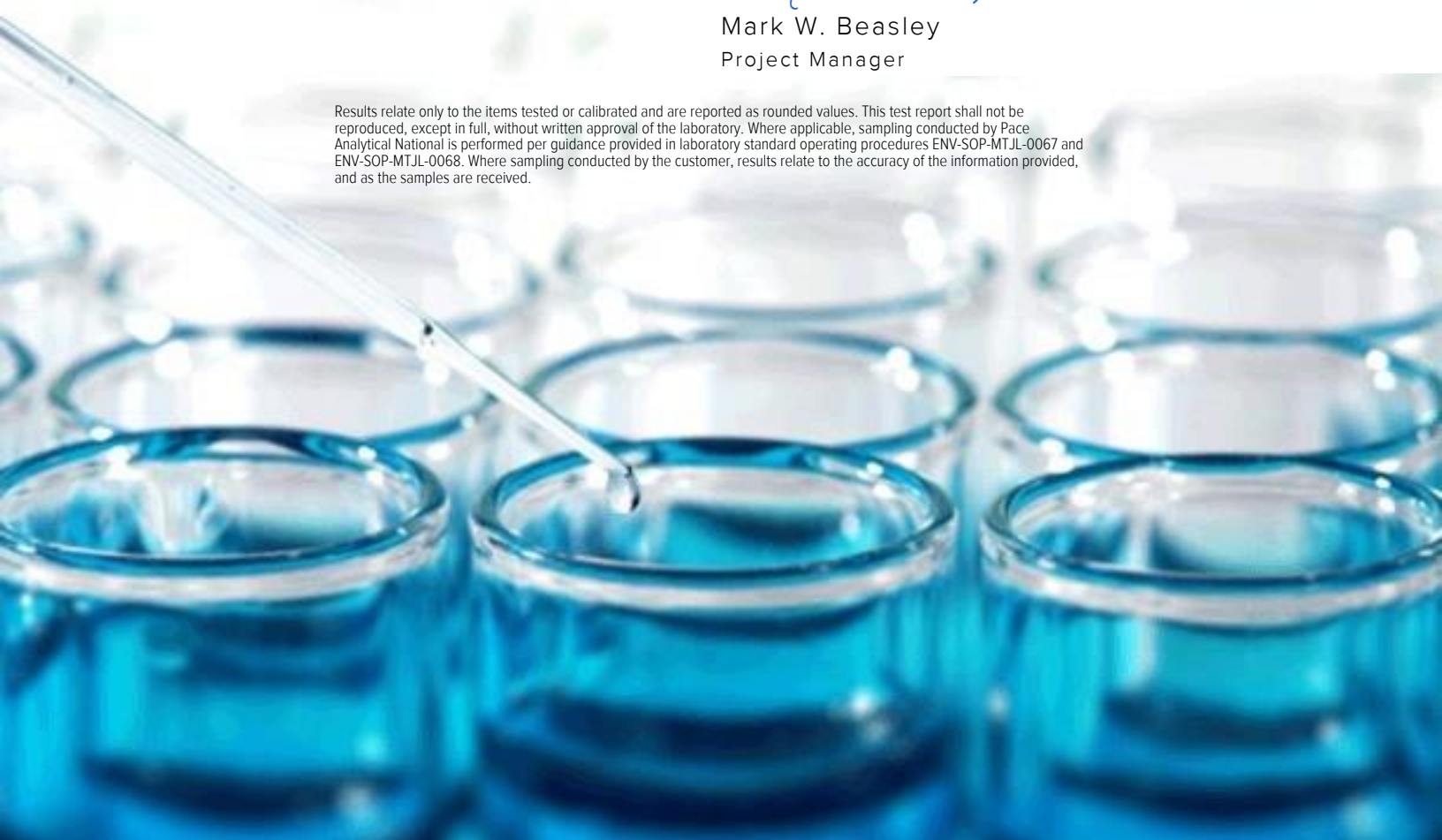
Sample Delivery Group: L1134090
Samples Received: 08/29/2019
Project Number: 11198545
Description: Cline Avenue Ditch
Site: CLINE AVE
Report To: Angela Bown
2055 Niagara Falls Blvd. #3
Niagara Falls, NY 14034

Entire Report Reviewed By:



Mark W. Beasley
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.





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SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



SO-11198545-082819-YY-006 L1134090-01 Solid

Collected by
Youa Yang

Collected date/time
08/28/19 10:35

Received date/time
08/29/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1340339	1	09/06/19 06:29	09/06/19 06:29	KBC	Mt. Juliet, TN
Mercury by Method 7471A	WG1339012	1	09/03/19 19:36	09/04/19 12:39	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1338880	1	09/02/19 19:47	09/04/19 11:29	TRB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1339782	1	08/28/19 10:35	09/05/19 14:33	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1339640	8	08/28/19 10:35	09/05/19 08:55	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1339453	100	09/04/19 05:54	09/05/19 10:12	JDG	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082	WG1339471	1	09/04/19 06:24	09/04/19 20:15	MTJ	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1339215	100	09/03/19 17:20	09/05/19 22:49	LEA	Mt. Juliet, TN

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

TRIP BLANK 8-28-19 L1134090-02 GW

Collected by
Youa Yang

Collected date/time
08/28/19 00:00

Received date/time
08/29/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1338916	1	09/03/19 01:12	09/03/19 01:12	ZJM	Mt. Juliet, TN



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Mark W. Beasley
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	79.4		1	09/06/2019 06:29	WG1340339

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	0.147		0.00352	0.0378	1	09/04/2019 12:39	WG1339012

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Aluminum	2390		4.41	12.6	1	09/04/2019 11:29	WG1338880
Antimony	U		0.944	2.52	1	09/04/2019 11:29	WG1338880
Arsenic	1.27	J	0.579	2.52	1	09/04/2019 11:29	WG1338880
Barium	11.9		0.214	0.629	1	09/04/2019 11:29	WG1338880
Beryllium	0.184	J	0.0881	0.252	1	09/04/2019 11:29	WG1338880
Cadmium	0.215	J	0.0881	0.629	1	09/04/2019 11:29	WG1338880
Calcium	14500		5.83	126	1	09/04/2019 11:29	WG1338880
Chromium	3.67		0.176	1.26	1	09/04/2019 11:29	WG1338880
Cobalt	2.12		0.290	1.26	1	09/04/2019 11:29	WG1338880
Copper	5.52		0.667	2.52	1	09/04/2019 11:29	WG1338880
Iron	3480		1.77	12.6	1	09/04/2019 11:29	WG1338880
Lead	26.8		0.239	0.629	1	09/04/2019 11:29	WG1338880
Magnesium	7360		1.40	126	1	09/04/2019 11:29	WG1338880
Manganese	93.1		0.151	1.26	1	09/04/2019 11:29	WG1338880
Nickel	3.37		0.617	2.52	1	09/04/2019 11:29	WG1338880
Potassium	335		12.8	126	1	09/04/2019 11:29	WG1338880
Selenium	U		0.780	2.52	1	09/04/2019 11:29	WG1338880
Silver	U		0.151	1.26	1	09/04/2019 11:29	WG1338880
Sodium	192	B	12.4	126	1	09/04/2019 11:29	WG1338880
Thallium	U		0.818	2.52	1	09/04/2019 11:29	WG1338880
Vanadium	5.79		0.302	2.52	1	09/04/2019 11:29	WG1338880
Zinc	36.0		0.743	6.29	1	09/04/2019 11:29	WG1338880

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	1.48		0.0273	0.126	1	09/05/2019 14:33	WG1339782
(S) a,a,a-Trifluorotoluene(FID)	85.8			77.0-120		09/05/2019 14:33	WG1339782

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.138	0.252	8	09/05/2019 08:55	WG1339640
Benzene	0.00550	J	0.00403	0.0101	8	09/05/2019 08:55	WG1339640
Bromochloromethane	U		0.0114	0.0504	8	09/05/2019 08:55	WG1339640
Bromodichloromethane	U		0.00793	0.0252	8	09/05/2019 08:55	WG1339640
Bromoform	U		0.0602	0.252	8	09/05/2019 08:55	WG1339640
Bromomethane	U		0.0373	0.126	8	09/05/2019 08:55	WG1339640
Carbon disulfide	U		0.0409	0.126	8	09/05/2019 08:55	WG1339640
Carbon tetrachloride	U		0.0109	0.0504	8	09/05/2019 08:55	WG1339640
Chlorobenzene	U		0.00577	0.0252	8	09/05/2019 08:55	WG1339640
Chlorodibromomethane	U		0.00453	0.0252	8	09/05/2019 08:55	WG1339640
Chloroethane	U		0.0109	0.0504	8	09/05/2019 08:55	WG1339640
Chloroform	0.00439	J	0.00418	0.0252	8	09/05/2019 08:55	WG1339640



Volatile Organic Compounds (GC/MS) by Method 8260B

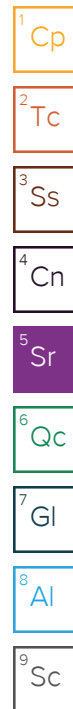
Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloromethane	U		0.0140	0.126	8	09/05/2019 08:55	WG1339640
Cyclohexane	U		0.00511	0.0252	8	09/05/2019 08:55	WG1339640
1,2-Dibromo-3-Chloropropane	U		0.0514	0.252	8	09/05/2019 08:55	WG1339640
1,2-Dibromoethane	U		0.00529	0.0252	8	09/05/2019 08:55	WG1339640
Dichlorodifluoromethane	U		0.00823	0.0252	8	09/05/2019 08:55	WG1339640
1,1-Dichloroethane	U		0.00579	0.0252	8	09/05/2019 08:55	WG1339640
1,2-Dichloroethane	U		0.00478	0.0252	8	09/05/2019 08:55	WG1339640
1,2-Dichlorobenzene	U		0.0146	0.0504	8	09/05/2019 08:55	WG1339640
1,3-Dichlorobenzene	U		0.0171	0.0504	8	09/05/2019 08:55	WG1339640
1,4-Dichlorobenzene	U		0.0199	0.0504	8	09/05/2019 08:55	WG1339640
1,1-Dichloroethene	U		0.00504	0.0252	8	09/05/2019 08:55	WG1339640
cis-1,2-Dichloroethene	U		0.00695	0.0252	8	09/05/2019 08:55	WG1339640
trans-1,2-Dichloroethene	U		0.0143	0.0504	8	09/05/2019 08:55	WG1339640
1,2-Dichloropropane	U		0.0128	0.0504	8	09/05/2019 08:55	WG1339640
cis-1,3-Dichloropropene	U		0.00682	0.0252	8	09/05/2019 08:55	WG1339640
trans-1,3-Dichloropropene	U		0.0154	0.0504	8	09/05/2019 08:55	WG1339640
Ethylbenzene	U		0.00534	0.0252	8	09/05/2019 08:55	WG1339640
2-Hexanone	U		0.101	0.252	8	09/05/2019 08:55	WG1339640
Isopropylbenzene	U		0.00869	0.0252	8	09/05/2019 08:55	WG1339640
2-Butanone (MEK)	U		0.126	0.252	8	09/05/2019 08:55	WG1339640
Methyl Acetate	0.0649	J3	0.0211	0.0504	8	09/05/2019 08:55	WG1339640
Methyl Cyclohexane	U		0.0104	0.0504	8	09/05/2019 08:55	WG1339640
Methylene Chloride	U		0.0668	0.252	8	09/05/2019 08:55	WG1339640
4-Methyl-2-pentanone (MIBK)	U		0.101	0.252	8	09/05/2019 08:55	WG1339640
Methyl tert-butyl ether	U	J4	0.00297	0.0101	8	09/05/2019 08:55	WG1339640
Styrene	U		0.0274	0.126	8	09/05/2019 08:55	WG1339640
1,1,2,2-Tetrachloroethane	U		0.00393	0.0252	8	09/05/2019 08:55	WG1339640
Tetrachloroethene	U	J4	0.00705	0.0252	8	09/05/2019 08:55	WG1339640
Toluene	0.0182	J	0.0126	0.0504	8	09/05/2019 08:55	WG1339640
1,2,3-Trichlorobenzene	U		0.00629	0.0252	8	09/05/2019 08:55	WG1339640
1,2,4-Trichlorobenzene	U		0.0486	0.126	8	09/05/2019 08:55	WG1339640
1,1,1-Trichloroethane	U		0.00277	0.0252	8	09/05/2019 08:55	WG1339640
1,1,2-Trichloroethane	U		0.00889	0.0252	8	09/05/2019 08:55	WG1339640
Trichloroethene	U	J4	0.00403	0.0101	8	09/05/2019 08:55	WG1339640
Trichlorofluoromethane	U		0.00504	0.0252	8	09/05/2019 08:55	WG1339640
1,1,2-Trichlorotrifluoroethane	U		0.00680	0.0252	8	09/05/2019 08:55	WG1339640
Vinyl chloride	U		0.00687	0.0252	8	09/05/2019 08:55	WG1339640
Xylenes, Total	0.0753		0.0481	0.0655	8	09/05/2019 08:55	WG1339640
(S) Toluene-d8	101			75.0-131		09/05/2019 08:55	WG1339640
(S) 4-Bromofluorobenzene	96.1			67.0-138		09/05/2019 08:55	WG1339640
(S) 1,2-Dichloroethane-d4	103			70.0-130		09/05/2019 08:55	WG1339640

Sample Narrative:

L1134090-01 WG1339640: Lowest possible dilution due to limited sample volume.

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	2110		203	504	100	09/05/2019 10:12	WG1339453
C28-C40 Oil Range	2230		34.5	504	100	09/05/2019 10:12	WG1339453
(S) o-Terphenyl	118	J7		18.0-148		09/05/2019 10:12	WG1339453





Collected date/time: 08/28/19 10:35

L1134090

Polychlorinated Biphenyls (GC) by Method 8082

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.00441	0.0214	1	09/04/2019 20:15	WG1339471
PCB 1221	U		0.00676	0.0214	1	09/04/2019 20:15	WG1339471
PCB 1232	U		0.00525	0.0214	1	09/04/2019 20:15	WG1339471
PCB 1242	U		0.00400	0.0214	1	09/04/2019 20:15	WG1339471
PCB 1248	U		0.00397	0.0214	1	09/04/2019 20:15	WG1339471
PCB 1254	U		0.00594	0.0214	1	09/04/2019 20:15	WG1339471
PCB 1260	U		0.00622	0.0214	1	09/04/2019 20:15	WG1339471
(S) Decachlorobiphenyl	37.3			10.0-135		09/04/2019 20:15	WG1339471
(S) Tetrachloro-m-xylene	41.0			10.0-139		09/04/2019 20:15	WG1339471

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.808	4.19	100	09/05/2019 22:49	WG1339215
Acenaphthylene	U		0.845	4.19	100	09/05/2019 22:49	WG1339215
Acetophenone	U		9.47	41.9	100	09/05/2019 22:49	WG1339215
Anthracene	U		0.796	4.19	100	09/05/2019 22:49	WG1339215
Atrazine	U		11.8	41.9	100	09/05/2019 22:49	WG1339215
Benzaldehyde	U		6.70	41.9	100	09/05/2019 22:49	WG1339215
Benzo(a)anthracene	1.41	U	0.539	4.19	100	09/05/2019 22:49	WG1339215
Benzo(b)fluoranthene	5.70		0.875	4.19	100	09/05/2019 22:49	WG1339215
Benzo(k)fluoranthene	U		0.733	4.19	100	09/05/2019 22:49	WG1339215
Benzo(g,h,i)perylene	U		0.908	4.19	100	09/05/2019 22:49	WG1339215
Benzo(a)pyrene	4.96		0.690	4.19	100	09/05/2019 22:49	WG1339215
Biphenyl	U		0.740	41.9	100	09/05/2019 22:49	WG1339215
Bis(2-chlorethoxy)methane	U		0.969	41.9	100	09/05/2019 22:49	WG1339215
Bis(2-chloroethyl)ether	U		1.13	41.9	100	09/05/2019 22:49	WG1339215
Bis(2-chloroisopropyl)ether	U		0.957	41.9	100	09/05/2019 22:49	WG1339215
4-Bromophenyl-phenylether	U		1.43	41.9	100	09/05/2019 22:49	WG1339215
Caprolactam	U		13.1	41.9	100	09/05/2019 22:49	WG1339215
Carbazole	U		0.660	41.9	100	09/05/2019 22:49	WG1339215
4-Chloroaniline	U		4.43	41.9	100	09/05/2019 22:49	WG1339215
2-Chloronaphthalene	U		0.804	4.19	100	09/05/2019 22:49	WG1339215
4-Chlorophenyl-phenylether	U		0.789	41.9	100	09/05/2019 22:49	WG1339215
Chrysene	2.20	U	0.699	4.19	100	09/05/2019 22:49	WG1339215
Dibenz(a,h)anthracene	U		1.03	4.19	100	09/05/2019 22:49	WG1339215
Dibenzofuran	U		0.652	41.9	100	09/05/2019 22:49	WG1339215
3,3-Dichlorobenzidine	U		9.99	41.9	100	09/05/2019 22:49	WG1339215
2,4-Dinitrotoluene	U		0.764	41.9	100	09/05/2019 22:49	WG1339215
2,6-Dinitrotoluene	U		0.928	41.9	100	09/05/2019 22:49	WG1339215
Fluoranthene	U		0.624	4.19	100	09/05/2019 22:49	WG1339215
Fluorene	U		0.858	4.19	100	09/05/2019 22:49	WG1339215
Hexachlorobenzene	U		1.08	41.9	100	09/05/2019 22:49	WG1339215
Hexachloro-1,3-butadiene	U		1.26	41.9	100	09/05/2019 22:49	WG1339215
Hexachlorocyclopentadiene	U		7.39	41.9	100	09/05/2019 22:49	WG1339215
Hexachloroethane	U		1.69	41.9	100	09/05/2019 22:49	WG1339215
Indeno(1,2,3-cd)pyrene	1.15	U	0.972	4.19	100	09/05/2019 22:49	WG1339215
Isophorone	U		0.657	41.9	100	09/05/2019 22:49	WG1339215
2-Methylnaphthalene	U		1.08	4.19	100	09/05/2019 22:49	WG1339215
Naphthalene	U		1.12	4.19	100	09/05/2019 22:49	WG1339215
2-Nitroaniline	U		0.950	41.9	100	09/05/2019 22:49	WG1339215
3-Nitroaniline	U		1.07	41.9	100	09/05/2019 22:49	WG1339215
4-Nitroaniline	U		0.804	41.9	100	09/05/2019 22:49	WG1339215
Nitrobenzene	U		0.875	41.9	100	09/05/2019 22:49	WG1339215
n-Nitrosodiphenylamine	U		11.3	41.9	100	09/05/2019 22:49	WG1339215
n-Nitrosodi-n-propylamine	U		1.14	41.9	100	09/05/2019 22:49	WG1339215

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc



Collected date/time: 08/28/19 10:35

L1134090

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Phenanthrene	0.858	J	0.665	4.19	100	09/05/2019 22:49	WG1339215
Benzylbutyl phthalate	U		1.30	41.9	100	09/05/2019 22:49	WG1339215
Bis(2-ethylhexyl)phthalate	U		1.51	41.9	100	09/05/2019 22:49	WG1339215
Di-n-butyl phthalate	U		1.37	41.9	100	09/05/2019 22:49	WG1339215
Diethyl phthalate	U		0.870	41.9	100	09/05/2019 22:49	WG1339215
Dimethyl phthalate	U		0.680	41.9	100	09/05/2019 22:49	WG1339215
Di-n-octyl phthalate	U		1.14	41.9	100	09/05/2019 22:49	WG1339215
Pyrene	2.01	J	1.55	4.19	100	09/05/2019 22:49	WG1339215
1,2,4,5-Tetrachlorobenzene	U		9.59	41.9	100	09/05/2019 22:49	WG1339215
4-Chloro-3-methylphenol	U		0.600	41.9	100	09/05/2019 22:49	WG1339215
2-Chlorophenol	U		1.05	41.9	100	09/05/2019 22:49	WG1339215
2-Methylphenol	U		1.24	41.9	100	09/05/2019 22:49	WG1339215
3&4-Methyl Phenol	U		0.986	41.9	100	09/05/2019 22:49	WG1339215
2,4-Dichlorophenol	U		0.939	41.9	100	09/05/2019 22:49	WG1339215
2,4-Dimethylphenol	U		5.93	41.9	100	09/05/2019 22:49	WG1339215
4,6-Dinitro-2-methylphenol	U		15.6	41.9	100	09/05/2019 22:49	WG1339215
2,4-Dinitrophenol	U		12.3	41.9	100	09/05/2019 22:49	WG1339215
2-Nitrophenol	U		1.64	41.9	100	09/05/2019 22:49	WG1339215
4-Nitrophenol	U		6.61	41.9	100	09/05/2019 22:49	WG1339215
Pentachlorophenol	U		6.04	41.9	100	09/05/2019 22:49	WG1339215
Phenol	U		0.875	41.9	100	09/05/2019 22:49	WG1339215
2,4,5-Trichlorophenol	U		1.31	41.9	100	09/05/2019 22:49	WG1339215
2,4,6-Trichlorophenol	U		0.981	41.9	100	09/05/2019 22:49	WG1339215
(S) 2-Fluorophenol	74.8	J7		12.0-120		09/05/2019 22:49	WG1339215
(S) Phenol-d5	60.2	J7		10.0-120		09/05/2019 22:49	WG1339215
(S) Nitrobenzene-d5	0.000	J7		10.0-122		09/05/2019 22:49	WG1339215
(S) 2-Fluorobiphenyl	72.7	J7		15.0-120		09/05/2019 22:49	WG1339215
(S) 2,4,6-Tribromophenol	0.000	J7		10.0-127		09/05/2019 22:49	WG1339215
(S) p-Terphenyl-d14	102	J7		10.0-120		09/05/2019 22:49	WG1339215

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 08/28/19 00:00

L1134090

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		10.0	50.0	1	09/03/2019 01:12	WG1338916
Benzene	U		0.331	1.00	1	09/03/2019 01:12	WG1338916
Bromochloromethane	U		0.520	1.00	1	09/03/2019 01:12	WG1338916
Bromodichloromethane	U		0.380	1.00	1	09/03/2019 01:12	WG1338916
Bromoform	U		0.469	1.00	1	09/03/2019 01:12	WG1338916
Bromomethane	U		0.866	5.00	1	09/03/2019 01:12	WG1338916
Carbon disulfide	U	J4	0.275	1.00	1	09/03/2019 01:12	WG1338916
Carbon tetrachloride	U		0.379	1.00	1	09/03/2019 01:12	WG1338916
Chlorobenzene	U		0.348	1.00	1	09/03/2019 01:12	WG1338916
Chlorodibromomethane	U		0.327	1.00	1	09/03/2019 01:12	WG1338916
Chloroethane	U		0.453	5.00	1	09/03/2019 01:12	WG1338916
Chloroform	U		0.324	5.00	1	09/03/2019 01:12	WG1338916
Chloromethane	U		0.276	2.50	1	09/03/2019 01:12	WG1338916
Cyclohexane	U	J4	0.390	1.00	1	09/03/2019 01:12	WG1338916
1,2-Dibromo-3-Chloropropane	U		1.33	5.00	1	09/03/2019 01:12	WG1338916
1,2-Dibromoethane	U		0.381	1.00	1	09/03/2019 01:12	WG1338916
1,2-Dichlorobenzene	U		0.349	1.00	1	09/03/2019 01:12	WG1338916
1,3-Dichlorobenzene	U		0.220	1.00	1	09/03/2019 01:12	WG1338916
1,4-Dichlorobenzene	U		0.274	1.00	1	09/03/2019 01:12	WG1338916
Dichlorodifluoromethane	U		0.551	5.00	1	09/03/2019 01:12	WG1338916
1,1-Dichloroethane	U		0.259	1.00	1	09/03/2019 01:12	WG1338916
1,2-Dichloroethane	U		0.361	1.00	1	09/03/2019 01:12	WG1338916
1,1-Dichloroethene	U		0.398	1.00	1	09/03/2019 01:12	WG1338916
cis-1,2-Dichloroethene	U		0.260	1.00	1	09/03/2019 01:12	WG1338916
trans-1,2-Dichloroethene	U		0.396	1.00	1	09/03/2019 01:12	WG1338916
1,2-Dichloropropane	U		0.306	1.00	1	09/03/2019 01:12	WG1338916
cis-1,3-Dichloropropene	U		0.418	1.00	1	09/03/2019 01:12	WG1338916
trans-1,3-Dichloropropene	U		0.419	1.00	1	09/03/2019 01:12	WG1338916
Ethylbenzene	U		0.384	1.00	1	09/03/2019 01:12	WG1338916
2-Hexanone	U		3.82	10.0	1	09/03/2019 01:12	WG1338916
Isopropylbenzene	U		0.326	1.00	1	09/03/2019 01:12	WG1338916
2-Butanone (MEK)	U		3.93	10.0	1	09/03/2019 01:12	WG1338916
Methyl Acetate	U		4.30	20.0	1	09/03/2019 01:12	WG1338916
Methyl Cyclohexane	U	J4	0.380	1.00	1	09/03/2019 01:12	WG1338916
Methylene Chloride	U		1.00	5.00	1	09/03/2019 01:12	WG1338916
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	09/03/2019 01:12	WG1338916
Methyl tert-butyl ether	U		0.367	1.00	1	09/03/2019 01:12	WG1338916
Styrene	U		0.307	1.00	1	09/03/2019 01:12	WG1338916
1,1,2,2-Tetrachloroethane	U		0.130	1.00	1	09/03/2019 01:12	WG1338916
Tetrachloroethene	U		0.372	1.00	1	09/03/2019 01:12	WG1338916
Toluene	U		0.412	1.00	1	09/03/2019 01:12	WG1338916
1,2,3-Trichlorobenzene	U		0.230	1.00	1	09/03/2019 01:12	WG1338916
1,2,4-Trichlorobenzene	U		0.355	1.00	1	09/03/2019 01:12	WG1338916
1,1,1-Trichloroethane	U		0.319	1.00	1	09/03/2019 01:12	WG1338916
1,1,2-Trichloroethane	U		0.383	1.00	1	09/03/2019 01:12	WG1338916
Trichloroethene	U		0.398	1.00	1	09/03/2019 01:12	WG1338916
Trichlorofluoromethane	U		1.20	5.00	1	09/03/2019 01:12	WG1338916
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00	1	09/03/2019 01:12	WG1338916
Vinyl chloride	U		0.259	1.00	1	09/03/2019 01:12	WG1338916
Xylenes, Total	U		1.06	3.00	1	09/03/2019 01:12	WG1338916
(S) Toluene-d8	108			80.0-120		09/03/2019 01:12	WG1338916
(S) 4-Bromofluorobenzene	96.8			77.0-126		09/03/2019 01:12	WG1338916
(S) 1,2-Dichloroethane-d4	91.4			70.0-130		09/03/2019 01:12	WG1338916

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3447911-1 09/06/19 06:29

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	%		%	%
Total Solids	0.00100			

L1134639-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1134639-01 09/06/19 06:29 • (DUP) R3447911-3 09/06/19 06:29

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	91.0	93.0	1	2.18		10

Laboratory Control Sample (LCS)

(LCS) R3447911-2 09/06/19 06:29

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



Method Blank (MB)

(MB) R3447178-1 09/04/19 12:19

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Mercury	0.00500	⬇	0.00280	0.0300

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3447178-2 09/04/19 12:21 • (LCSD) R3447178-3 09/04/19 12:30

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Mercury	0.500	0.497	0.500	99.3	100	80.0-120			0.669	20

L1134368-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1134368-06 09/04/19 12:32 • (MS) R3447178-4 09/04/19 12:34 • (MSD) R3447178-5 09/04/19 12:37

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.500	ND	0.565	0.505	111	99.2	1	75.0-125			11.1	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3447159-1 09/04/19 11:09

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Aluminum	U		3.50	10.0
Antimony	U		0.750	2.00
Arsenic	U		0.460	2.00
Barium	U		0.170	0.500
Beryllium	U		0.0700	0.200
Cadmium	U		0.0700	0.500
Calcium	12.0	U	4.63	100
Chromium	U		0.140	1.00
Cobalt	U		0.230	1.00
Copper	U		0.530	2.00
Iron	U		1.41	10.0
Lead	U		0.190	0.500
Magnesium	U		1.11	100
Manganese	U		0.120	1.00
Nickel	U		0.490	2.00
Potassium	U		10.2	100
Selenium	U		0.620	2.00
Silver	U		0.120	1.00
Sodium	28.5	U	9.85	100
Thallium	U		0.650	2.00
Vanadium	U		0.240	2.00
Zinc	0.775	U	0.590	5.00

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3447159-2 09/04/19 11:11 • (LCSD) R3447159-3 09/04/19 11:13

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Aluminum	1000	976	958	97.6	95.8	80.0-120			1.90	20
Antimony	100	101	99.3	101	99.3	80.0-120			1.85	20
Arsenic	100	96.8	95.1	96.8	95.1	80.0-120			1.81	20
Barium	100	104	101	104	101	80.0-120			2.35	20
Beryllium	100	99.1	96.6	99.1	96.6	80.0-120			2.57	20
Cadmium	100	99.2	96.7	99.2	96.7	80.0-120			2.50	20
Calcium	1000	1010	984	101	98.4	80.0-120			2.32	20
Chromium	100	104	101	104	101	80.0-120			2.96	20
Cobalt	100	104	102	104	102	80.0-120			2.45	20
Copper	100	97.8	95.0	97.8	95.0	80.0-120			2.82	20
Iron	1000	990	967	99.0	96.7	80.0-120			2.33	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3447159-2 09/04/19 11:11 • (LCSD) R3447159-3 09/04/19 11:13

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Lead	100	99.1	98.0	99.1	98.0	80.0-120			1.06	20
Magnesium	1000	996	963	99.6	96.3	80.0-120			3.30	20
Manganese	100	99.9	96.9	99.9	96.9	80.0-120			3.00	20
Nickel	100	105	103	105	103	80.0-120			2.52	20
Potassium	1000	965	944	96.5	94.4	80.0-120			2.18	20
Selenium	100	96.3	94.7	96.3	94.7	80.0-120			1.66	20
Silver	20.0	18.6	18.1	92.9	90.3	80.0-120			2.77	20
Sodium	1000	1010	987	101	98.7	80.0-120			2.24	20
Thallium	100	97.4	95.4	97.4	95.4	80.0-120			2.08	20
Vanadium	100	99.8	97.4	99.8	97.4	80.0-120			2.47	20
Zinc	100	99.0	96.5	99.0	96.5	80.0-120			2.54	20

L1134801-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1134801-03 09/04/19 11:16 • (MS) R3447159-6 09/04/19 11:24 • (MSD) R3447159-7 09/04/19 11:26

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Aluminum	1000	18500	22300	21500	386	306	1	75.0-125	V	V	3.69	20
Antimony	100	ND	23.4	23.3	21.5	21.4	1	75.0-125	J6	J6	0.686	20
Arsenic	100	ND	85.6	83.8	84.2	82.3	1	75.0-125			2.21	20
Barium	100	114	212	197	97.7	83.1	1	75.0-125			7.14	20
Beryllium	100	1.23	88.3	86.5	87.1	85.3	1	75.0-125			2.07	20
Cadmium	100	ND	88.1	86.0	88.1	86.0	1	75.0-125			2.38	20
Calcium	1000	14900	16900	14600	199	0.000	1	75.0-125	V	V	14.7	20
Chromium	100	26.2	115	114	89.1	88.3	1	75.0-125			0.680	20
Cobalt	100	17.1	118	115	100	97.9	1	75.0-125			2.23	20
Copper	100	16.2	105	103	88.8	86.7	1	75.0-125			2.03	20
Iron	1000	35100	35600	37200	49.5	211	1	75.0-125	V	V	4.43	20
Lead	100	12.8	108	105	94.8	92.7	1	75.0-125			1.95	20
Magnesium	1000	3140	4040	3960	89.8	81.7	1	75.0-125			2.03	20
Manganese	100	483	605	565	123	82.3	1	75.0-125			6.91	20
Nickel	100	34.6	136	133	102	98.0	1	75.0-125			2.68	20
Potassium	1000	1390	2310	2160	91.9	76.8	1	75.0-125			6.72	20
Selenium	100	ND	83.4	81.8	83.4	81.8	1	75.0-125			1.87	20
Silver	20.0	ND	16.2	15.7	80.8	78.4	1	75.0-125			2.93	20
Sodium	1000	ND	963	943	88.2	86.1	1	75.0-125			2.16	20
Thallium	100	ND	89.4	87.3	89.4	87.3	1	75.0-125			2.44	20
Vanadium	100	26.9	114	114	87.3	87.3	1	75.0-125			0.0255	20
Zinc	100	97.4	181	176	83.9	79.0	1	75.0-125			2.72	20

1

Cp

2

Tc

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Ss

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Cn

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Sr

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Qc

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Gl

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Al

9

Sc

Method Blank (MB)

(MB) R3447907-2 09/05/19 11:45

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	99.1			77.0-120

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Laboratory Control Sample (LCS)

(LCS) R3447907-1 09/05/19 10:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.16	93.8	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			103	77.0-120	

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Method Blank (MB)

(MB) R3447498-2 09/03/19 00:52

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		10.0	50.0
Benzene	U		0.331	1.00
Bromodichloromethane	U		0.380	1.00
Bromochloromethane	U		0.520	1.00
Bromoform	U		0.469	1.00
Bromomethane	U		0.866	5.00
Carbon disulfide	U		0.275	1.00
Carbon tetrachloride	U		0.379	1.00
Chlorobenzene	U		0.348	1.00
Chlorodibromomethane	U		0.327	1.00
Chloroethane	U		0.453	5.00
Chloroform	U		0.324	5.00
Chloromethane	U		0.276	2.50
Cyclohexane	U		0.390	1.00
1,2-Dibromo-3-Chloropropane	U		1.33	5.00
1,2-Dibromoethane	U		0.381	1.00
1,2-Dichlorobenzene	U		0.349	1.00
1,3-Dichlorobenzene	U		0.220	1.00
1,4-Dichlorobenzene	U		0.274	1.00
Dichlorodifluoromethane	U		0.551	5.00
1,1-Dichloroethane	U		0.259	1.00
1,2-Dichloroethane	U		0.361	1.00
1,1-Dichloroethene	U		0.398	1.00
cis-1,2-Dichloroethene	U		0.260	1.00
trans-1,2-Dichloroethene	U		0.396	1.00
1,2-Dichloropropane	U		0.306	1.00
cis-1,3-Dichloropropene	U		0.418	1.00
trans-1,3-Dichloropropene	U		0.419	1.00
Ethylbenzene	U		0.384	1.00
2-Hexanone	U		3.82	10.0
Isopropylbenzene	U		0.326	1.00
2-Butanone (MEK)	U		3.93	10.0
Methyl Acetate	U		4.30	20.0
Methyl Cyclohexane	U		0.380	1.00
Methylene Chloride	U		1.00	5.00
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0
Methyl tert-butyl ether	U		0.367	1.00
Styrene	U		0.307	1.00
1,1,2,2-Tetrachloroethane	U		0.130	1.00
Tetrachloroethene	U		0.372	1.00

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Method Blank (MB)

(MB) R3447498-2 09/03/19 00:52

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Toluene	U		0.412	1.00
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00
1,2,3-Trichlorobenzene	0.268	J	0.230	1.00
1,2,4-Trichlorobenzene	U		0.355	1.00
1,1,1-Trichloroethane	U		0.319	1.00
1,1,2-Trichloroethane	U		0.383	1.00
Trichloroethene	U		0.398	1.00
Trichlorofluoromethane	U		1.20	5.00
Vinyl chloride	U		0.259	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	107			80.0-120
(S) 4-Bromofluorobenzene	98.4			77.0-126
(S) 1,2-Dichloroethane-d4	92.5			70.0-130

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3447498-1 09/02/19 23:30

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	125	128	102	19.0-160	
Benzene	25.0	26.8	107	70.0-123	
Bromodichloromethane	25.0	27.1	109	75.0-120	
Bromochloromethane	25.0	27.9	111	76.0-122	
Bromoform	25.0	23.8	95.1	68.0-132	
Bromomethane	25.0	19.1	76.6	10.0-160	
Carbon disulfide	25.0	32.7	131	61.0-128	J4
Carbon tetrachloride	25.0	28.0	112	68.0-126	
Chlorobenzene	25.0	22.6	90.3	80.0-121	
Chlorodibromomethane	25.0	26.6	106	77.0-125	
Chloroethane	25.0	21.5	85.9	47.0-150	
Chloroform	25.0	26.1	104	73.0-120	
Chloromethane	25.0	21.7	86.7	41.0-142	
Cyclohexane	25.0	31.6	127	71.0-124	J4
1,2-Dibromo-3-Chloropropane	25.0	19.1	76.4	58.0-134	
1,2-Dibromoethane	25.0	24.2	97.0	80.0-122	
1,2-Dichlorobenzene	25.0	21.4	85.8	79.0-121	
1,3-Dichlorobenzene	25.0	22.7	90.7	79.0-120	
1,4-Dichlorobenzene	25.0	22.0	88.1	79.0-120	
Dichlorodifluoromethane	25.0	24.7	98.7	51.0-149	

Laboratory Control Sample (LCS)

(LCS) R3447498-1 09/02/19 23:30

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
1,1-Dichloroethane	25.0	25.9	104	70.0-126	
1,2-Dichloroethane	25.0	22.3	89.3	70.0-128	
1,1-Dichloroethene	25.0	29.6	119	71.0-124	
cis-1,2-Dichloroethene	25.0	25.5	102	73.0-120	
trans-1,2-Dichloroethene	25.0	26.5	106	73.0-120	
1,2-Dichloropropane	25.0	27.8	111	77.0-125	
cis-1,3-Dichloropropene	25.0	28.7	115	80.0-123	
trans-1,3-Dichloropropene	25.0	25.2	101	78.0-124	
Ethylbenzene	25.0	22.9	91.6	79.0-123	
2-Hexanone	125	126	101	67.0-149	
Isopropylbenzene	25.0	23.4	93.6	76.0-127	
2-Butanone (MEK)	125	136	109	44.0-160	
Methyl Acetate	125	133	106	57.0-148	
Methyl Cyclohexane	25.0	32.4	130	68.0-126	J4
Methylene Chloride	25.0	24.7	98.6	67.0-120	
4-Methyl-2-pentanone (MIBK)	125	115	92.3	68.0-142	
Methyl tert-butyl ether	25.0	25.8	103	68.0-125	
Styrene	25.0	24.7	98.7	73.0-130	
1,1,2,2-Tetrachloroethane	25.0	28.0	112	65.0-130	
Tetrachloroethene	25.0	24.9	99.7	72.0-132	
Toluene	25.0	23.1	92.6	79.0-120	
1,1,2-Trichlorotrifluoroethane	25.0	31.7	127	69.0-132	
1,2,3-Trichlorobenzene	25.0	15.8	63.4	50.0-138	
1,2,4-Trichlorobenzene	25.0	19.4	77.6	57.0-137	
1,1,1-Trichloroethane	25.0	26.3	105	73.0-124	
1,1,2-Trichloroethane	25.0	25.2	101	80.0-120	
Trichloroethene	25.0	25.8	103	78.0-124	
Trichlorofluoromethane	25.0	25.0	100	59.0-147	
Vinyl chloride	25.0	22.7	91.0	67.0-131	
Xylenes, Total	75.0	68.6	91.5	79.0-123	
(S) Toluene-d8			102	80.0-120	
(S) 4-Bromofluorobenzene			93.6	77.0-126	
(S) 1,2-Dichloroethane-d4			104	70.0-130	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3448204-3 09/05/19 02:07

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0137	0.0250
Benzene	U		0.000400	0.00100
Bromodichloromethane	U		0.000788	0.00250
Bromochloromethane	U		0.00113	0.00500
Bromoform	U		0.00598	0.0250
Bromomethane	U		0.00370	0.0125
Carbon disulfide	U		0.00406	0.0125
Carbon tetrachloride	U		0.00108	0.00500
Chlorobenzene	U		0.000573	0.00250
Chlorodibromomethane	U		0.000450	0.00250
Chloroethane	U		0.00108	0.00500
Chloroform	U		0.000415	0.00250
Chloromethane	U		0.00139	0.0125
Cyclohexane	U		0.000508	0.00250
1,2-Dibromo-3-Chloropropane	U		0.00510	0.0250
1,2-Dibromoethane	U		0.000525	0.00250
1,2-Dichlorobenzene	U		0.00145	0.00500
1,3-Dichlorobenzene	U		0.00170	0.00500
1,4-Dichlorobenzene	U		0.00197	0.00500
Dichlorodifluoromethane	U		0.000818	0.00250
1,1-Dichloroethane	U		0.000575	0.00250
1,2-Dichloroethane	U		0.000475	0.00250
1,1-Dichloroethene	U		0.000500	0.00250
cis-1,2-Dichloroethene	U		0.000690	0.00250
trans-1,2-Dichloroethene	U		0.00143	0.00500
1,2-Dichloropropane	U		0.00127	0.00500
cis-1,3-Dichloropropene	U		0.000678	0.00250
trans-1,3-Dichloropropene	U		0.00153	0.00500
Ethylbenzene	U		0.000530	0.00250
2-Hexanone	U		0.0100	0.0250
Isopropylbenzene	U		0.000863	0.00250
2-Butanone (MEK)	U		0.0125	0.0250
Methyl Acetate	U		0.00210	0.00500
Methyl Cyclohexane	U		0.00103	0.00500
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.0100	0.0250
Methyl tert-butyl ether	U		0.000295	0.00100
Styrene	U		0.00273	0.0125
1,1,2,2-Tetrachloroethane	U		0.000390	0.00250
Tetrachloroethene	U		0.000700	0.00250

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



Method Blank (MB)

(MB) R3448204-3 09/05/19 02:07

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Toluene	U		0.00125	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000675	0.00250
1,2,3-Trichlorobenzene	U		0.000625	0.00250
1,2,4-Trichlorobenzene	U		0.00482	0.0125
1,1,1-Trichloroethane	U		0.000275	0.00250
1,1,2-Trichloroethane	U		0.000883	0.00250
Trichloroethene	U		0.000400	0.00100
Trichlorofluoromethane	U		0.000500	0.00250
Vinyl chloride	U		0.000683	0.00250
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	103			75.0-131
(S) 4-Bromofluorobenzene	99.8			67.0-138
(S) 1,2-Dichloroethane-d4	101			70.0-130

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3448204-1 09/05/19 00:53 • (LCSD) R3448204-2 09/05/19 01:11

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.625	0.453	0.427	72.4	68.3	10.0-160			5.92	31
Benzene	0.125	0.118	0.108	94.1	86.3	70.0-123			8.69	20
Bromodichloromethane	0.125	0.130	0.123	104	98.3	73.0-121			5.80	20
Bromochloromethane	0.125	0.136	0.133	109	106	77.0-128			2.13	20
Bromoform	0.125	0.135	0.129	108	103	64.0-132			4.71	20
Bromomethane	0.125	0.160	0.154	128	123	56.0-147			3.76	20
Carbon disulfide	0.125	0.126	0.115	101	92.2	56.0-133			8.93	20
Carbon tetrachloride	0.125	0.158	0.142	126	114	66.0-128			10.5	20
Chlorobenzene	0.125	0.128	0.118	103	94.4	76.0-128			8.31	20
Chlorodibromomethane	0.125	0.138	0.135	111	108	74.0-127			2.36	20
Chloroethane	0.125	0.137	0.133	110	106	61.0-134			3.59	20
Chloroform	0.125	0.125	0.120	99.9	96.3	72.0-123			3.68	20
Chloromethane	0.125	0.142	0.131	114	105	51.0-138			8.18	20
Cyclohexane	0.125	0.130	0.120	104	95.9	70.0-130			7.78	20
1,2-Dibromo-3-Chloropropane	0.125	0.0928	0.0908	74.2	72.7	59.0-130			2.16	20
1,2-Dibromoethane	0.125	0.123	0.112	98.5	89.6	74.0-128			9.44	20
1,2-Dichlorobenzene	0.125	0.134	0.120	107	96.2	76.0-124			10.5	20
1,3-Dichlorobenzene	0.125	0.117	0.106	93.3	84.8	76.0-125			9.55	20
1,4-Dichlorobenzene	0.125	0.122	0.116	97.4	92.5	77.0-121			5.11	20
Dichlorodifluoromethane	0.125	0.124	0.117	98.9	94.0	43.0-156			5.10	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3448204-1 09/05/19 00:53 • (LCSD) R3448204-2 09/05/19 01:11

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,1-Dichloroethane	0.125	0.122	0.117	97.9	93.7	70.0-127			4.37	20
1,2-Dichloroethane	0.125	0.131	0.137	105	110	65.0-131			4.94	20
1,1-Dichloroethene	0.125	0.140	0.127	112	102	65.0-131			9.46	20
cis-1,2-Dichloroethene	0.125	0.148	0.144	118	115	73.0-125			2.65	20
trans-1,2-Dichloroethene	0.125	0.116	0.105	92.4	84.2	71.0-125			9.26	20
1,2-Dichloropropane	0.125	0.121	0.120	97.1	96.3	74.0-125			0.792	20
cis-1,3-Dichloropropene	0.125	0.153	0.147	122	118	76.0-127			3.58	20
trans-1,3-Dichloropropene	0.125	0.149	0.143	119	114	73.0-127			4.33	20
Ethylbenzene	0.125	0.136	0.120	109	95.9	74.0-126			12.6	20
2-Hexanone	0.625	0.711	0.681	114	109	54.0-147			4.24	20
Isopropylbenzene	0.125	0.151	0.137	121	110	72.0-127			9.17	20
2-Butanone (MEK)	0.625	0.561	0.542	89.8	86.7	30.0-160			3.51	24
Methyl Acetate	0.625	0.563	0.791	90.1	127	43.0-158		J3	33.6	20
Methyl Cyclohexane	0.125	0.135	0.131	108	105	67.0-129			2.87	20
Methylene Chloride	0.125	0.118	0.114	94.1	91.1	68.0-123			3.24	20
4-Methyl-2-pentanone (MIBK)	0.625	0.809	0.745	129	119	56.0-143			8.25	20
Methyl tert-butyl ether	0.125	0.167	0.161	133	129	66.0-132	J4		3.13	20
Styrene	0.125	0.128	0.120	103	96.3	72.0-127			6.35	20
1,1,2,2-Tetrachloroethane	0.125	0.105	0.0991	84.2	79.3	68.0-128			6.04	20
Tetrachloroethene	0.125	0.194	0.175	155	140	70.0-136	J4	J4	10.4	20
Toluene	0.125	0.132	0.120	106	96.2	75.0-121			9.30	20
1,1,2-Trichlorotrifluoroethane	0.125	0.139	0.137	111	110	61.0-139			1.30	20
1,2,3-Trichlorobenzene	0.125	0.110	0.107	88.0	85.7	59.0-139			2.64	20
1,2,4-Trichlorobenzene	0.125	0.134	0.122	107	97.3	62.0-137			9.59	20
1,1,1-Trichloroethane	0.125	0.136	0.130	109	104	69.0-126			4.15	20
1,1,2-Trichloroethane	0.125	0.105	0.0999	84.1	79.9	78.0-123			5.14	20
Trichloroethene	0.125	0.190	0.167	152	134	76.0-126	J4	J4	12.7	20
Trichlorofluoromethane	0.125	0.139	0.129	111	103	61.0-142			6.92	20
Vinyl chloride	0.125	0.162	0.140	130	112	63.0-134			14.6	20
Xylenes, Total	0.375	0.371	0.350	98.9	93.3	72.0-127			5.83	20
(S) Toluene-d8				101	100	75.0-131				
(S) 4-Bromofluorobenzene				99.8	102	67.0-138				
(S) 1,2-Dichloroethane-d4				106	107	70.0-130				

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc



L1134351-15 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1134351-15 09/05/19 06:27 • (MS) R3448204-4 09/05/19 09:14 • (MSD) R3448204-5 09/05/19 09:32

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	0.803	ND	0.304	0.310	37.9	38.6	1	10.0-160			1.67	40
Benzene	0.161	ND	0.105	0.105	65.7	65.3	1	10.0-149			0.639	37
Bromodichloromethane	0.161	ND	0.121	0.124	75.6	77.3	1	10.0-143			2.21	37
Bromochloromethane	0.161	ND	0.122	0.120	75.9	75.0	1	10.0-155			1.32	33
Bromoform	0.161	ND	0.108	0.117	67.0	72.6	1	10.0-146			8.08	36
Bromomethane	0.161	ND	0.0706	0.0709	44.0	44.2	1	10.0-149			0.383	38
Carbon disulfide	0.161	ND	0.0759	0.0760	47.3	47.3	1	10.0-145			0.0507	39
Carbon tetrachloride	0.161	ND	0.137	0.131	85.4	81.5	1	10.0-145			4.61	37
Chlorobenzene	0.161	ND	0.115	0.119	71.6	73.9	1	10.0-152			3.12	39
Chlorodibromomethane	0.161	ND	0.127	0.128	79.2	80.0	1	10.0-146			1.06	37
Chloroethane	0.161	ND	0.0607	0.0587	37.8	36.6	1	10.0-146			3.38	40
Chloroform	0.161	ND	0.116	0.116	71.8	71.3	1	10.0-146			0.629	37
Chloromethane	0.161	ND	0.0980	0.0905	61.0	56.4	1	10.0-159			7.86	37
Cyclohexane	0.161	ND	0.110	0.111	68.4	69.3	1	10.0-157			1.26	32
1,2-Dibromo-3-Chloropropane	0.161	ND	0.0751	0.0793	46.8	49.4	1	10.0-151			5.47	39
1,2-Dibromoethane	0.161	ND	0.112	0.116	69.5	72.5	1	10.0-148			4.34	34
1,2-Dichlorobenzene	0.161	ND	0.117	0.114	73.1	71.2	1	10.0-155			2.67	37
1,3-Dichlorobenzene	0.161	ND	0.106	0.103	65.8	64.5	1	10.0-153			1.99	38
1,4-Dichlorobenzene	0.161	ND	0.114	0.113	71.2	70.5	1	10.0-151			1.05	38
Dichlorodifluoromethane	0.161	ND	0.113	0.105	70.4	65.4	1	10.0-160			7.34	35
1,1-Dichloroethane	0.161	ND	0.116	0.111	72.0	69.0	1	10.0-147			4.28	37
1,2-Dichloroethane	0.161	ND	0.127	0.127	79.0	79.2	1	10.0-148			0.257	35
1,1-Dichloroethene	0.161	ND	0.121	0.114	75.1	70.9	1	10.0-155			5.71	37
cis-1,2-Dichloroethene	0.161	ND	0.137	0.129	85.3	80.6	1	10.0-149			5.70	37
trans-1,2-Dichloroethene	0.161	ND	0.0965	0.0907	60.1	56.5	1	10.0-150			6.16	37
1,2-Dichloropropane	0.161	ND	0.122	0.117	76.2	72.9	1	10.0-148			4.38	37
cis-1,3-Dichloropropene	0.161	ND	0.138	0.138	85.9	85.8	1	10.0-151			0.142	37
trans-1,3-Dichloropropene	0.161	ND	0.148	0.148	91.9	92.4	1	10.0-148			0.483	37
Ethylbenzene	0.161	ND	0.122	0.118	75.8	73.3	1	10.0-160			3.37	38
2-Hexanone	0.803	ND	0.567	0.599	70.6	74.6	1	10.0-160			5.43	36
Isopropylbenzene	0.161	ND	0.129	0.127	80.2	79.0	1	10.0-155			1.43	38
2-Butanone (MEK)	0.803	ND	0.426	0.548	50.8	66.1	1	10.0-160			25.1	40
Methyl Acetate	0.803	0.00722	0.966	1.07	119	132	1	10.0-160			9.95	40
Methyl Cyclohexane	0.161	ND	0.117	0.111	72.6	68.9	1	10.0-160			5.36	33
Methylene Chloride	0.161	ND	0.129	0.122	80.3	76.2	1	10.0-141			5.19	37
4-Methyl-2-pentanone (MIBK)	0.803	ND	0.674	0.728	84.0	90.6	1	10.0-160			7.63	35
Methyl tert-butyl ether	0.161	ND	0.161	0.156	101	97.3	1	11.0-147			3.29	35
Styrene	0.161	ND	0.113	0.115	70.6	71.3	1	10.0-160			1.12	40
1,1,2,2-Tetrachloroethane	0.161	ND	0.0795	0.0834	49.5	51.9	1	10.0-160			4.80	35

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



L1134351-15 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1134351-15 09/05/19 06:27 • (MS) R3448204-4 09/05/19 09:14 • (MSD) R3448204-5 09/05/19 09:32

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Tetrachloroethene	0.161	ND	0.149	0.149	92.6	92.6	1	10.0-156			0.0829	39
Toluene	0.161	ND	0.128	0.127	76.0	75.3	1	10.0-156			0.914	38
1,1,2-Trichlorotrifluoroethane	0.161	ND	0.137	0.136	85.7	84.5	1	10.0-160			1.32	36
1,2,3-Trichlorobenzene	0.161	ND	0.0743	0.0936	46.3	58.3	1	10.0-160			23.0	40
1,2,4-Trichlorobenzene	0.161	ND	0.0879	0.0925	54.8	57.6	1	10.0-160			5.07	40
1,1,1-Trichloroethane	0.161	ND	0.122	0.121	75.9	75.1	1	10.0-144			1.04	35
1,1,2-Trichloroethane	0.161	ND	0.102	0.107	63.5	66.7	1	10.0-160			4.92	35
Trichloroethene	0.161	ND	0.196	0.188	122	117	1	10.0-156			4.47	38
Trichlorofluoromethane	0.161	ND	0.0626	0.0663	39.0	41.3	1	10.0-160			5.67	40
Vinyl chloride	0.161	ND	0.114	0.107	71.1	66.4	1	10.0-160			6.92	37
Xylenes, Total	0.482	ND	0.333	0.336	69.2	69.7	1	10.0-160			0.730	38
(S) Toluene-d8					102	105		75.0-131				
(S) 4-Bromofluorobenzene					94.4	95.5		67.0-138				
(S) 1,2-Dichloroethane-d4					103	99.1		70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3447370-1 09/04/19 23:16

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	0.401	⬇	0.274	4.00
(S) o-Terphenyl	85.0			18.0-148

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Laboratory Control Sample (LCS)

(LCS) R3447370-2 09/04/19 23:29

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	34.0	68.0	50.0-150	
(S) o-Terphenyl			91.4	18.0-148	

L1133880-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1133880-01 09/05/19 14:42 • (MS) R3447370-3 09/05/19 09:34 • (MSD) R3447370-4 09/05/19 09:47

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	50.0	ND	36.8	35.4	73.6	70.8	10	50.0-150			3.88	20
(S) o-Terphenyl					97.3	109		18.0-148				

Sample Narrative:

OS: Dilution due to matrix impact during extraction procedure

Method Blank (MB)

(MB) R3447476-1 09/04/19 17:58

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
PCB 1016	U		0.00350	0.0170
PCB 1221	U		0.00537	0.0170
PCB 1232	U		0.00417	0.0170
PCB 1242	U		0.00318	0.0170
PCB 1248	U		0.00315	0.0170
PCB 1254	U		0.00472	0.0170
PCB 1260	U		0.00494	0.0170
(S) Decachlorobiphenyl	45.3			10.0-135
(S) Tetrachloro-m-xylene	43.8			10.0-139

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3447476-2 09/04/19 18:10

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
PCB 1260	0.167	0.0840	50.3	37.0-145	
PCB 1016	0.167	0.0882	52.8	36.0-141	
(S) Decachlorobiphenyl			68.5	10.0-135	
(S) Tetrachloro-m-xylene			65.3	10.0-139	

L1133997-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1133997-01 09/04/19 19:38 • (MS) R3447476-3 09/04/19 19:50 • (MSD) R3447476-4 09/04/19 20:03

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
PCB 1260	0.167	0.123	0.213	0.177	53.9	32.3	1	10.0-160			18.5	38
PCB 1016	0.167	ND	0.143	0.119	85.6	71.3	1	10.0-160			18.3	37
(S) Decachlorobiphenyl					88.3	71.9		10.0-135				
(S) Tetrachloro-m-xylene					64.6	57.1		10.0-139				

Method Blank (MB)

(MB) R3447194-2 09/03/19 23:13

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00642	0.0333
Acenaphthylene	U		0.00671	0.0333
Acetophenone	U		0.0752	0.333
Anthracene	U		0.00632	0.0333
Atrazine	U		0.0938	0.333
Benzaldehyde	U		0.0532	0.333
Benzo(a)anthracene	U		0.00428	0.0333
Benzo(b)fluoranthene	U		0.00695	0.0333
Benzo(k)fluoranthene	U		0.00582	0.0333
Benzo(g,h,i)perylene	U		0.00721	0.0333
Benzo(a)pyrene	U		0.00548	0.0333
Biphenyl	U		0.00588	0.333
Bis(2-chlorethoxy)methane	U		0.00770	0.333
Bis(2-chloroethyl)ether	U		0.00896	0.333
Bis(2-chloroisopropyl)ether	U		0.00760	0.333
4-Bromophenyl-phenylether	U		0.0114	0.333
Caprolactam	U		0.104	0.333
Carbazole	U		0.00524	0.333
4-Chloroaniline	U		0.0352	0.333
2-Chloronaphthalene	U		0.00639	0.0333
4-Chlorophenyl-phenylether	U		0.00627	0.333
Chrysene	U		0.00555	0.0333
Dibenz(a,h)anthracene	U		0.00821	0.0333
Dibenzofuran	U		0.00518	0.333
3,3-Dichlorobenzidine	U		0.0794	0.333
2,4-Dinitrotoluene	U		0.00607	0.333
2,6-Dinitrotoluene	U		0.00737	0.333
Fluoranthene	U		0.00496	0.0333
Fluorene	U		0.00682	0.0333
Hexachlorobenzene	U		0.00856	0.333
Hexachloro-1,3-butadiene	U		0.0100	0.333
Hexachlorocyclopentadiene	U		0.0587	0.333
Hexachloroethane	U		0.0134	0.333
Indeno(1,2,3-cd)pyrene	U		0.00772	0.0333
Isophorone	U		0.00522	0.333
2-Methylnaphthalene	U		0.00861	0.0333
Naphthalene	U		0.00889	0.0333
2-Nitroaniline	U		0.00755	0.333
3-Nitroaniline	U		0.00850	0.333
4-Nitroaniline	U		0.00639	0.333

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3447194-2 09/03/19 23:13

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Nitrobenzene	U		0.00695	0.333
n-Nitrosodiphenylamine	U		0.0900	0.333
n-Nitrosodi-n-propylamine	U		0.00906	0.333
Phenanthrene	U		0.00528	0.0333
Benzylbutyl phthalate	U		0.0103	0.333
Bis(2-ethylhexyl)phthalate	U		0.0120	0.333
Di-n-butyl phthalate	U		0.0109	0.333
Diethyl phthalate	U		0.00691	0.333
Dimethyl phthalate	U		0.00540	0.333
Di-n-octyl phthalate	U		0.00907	0.333
Pyrene	U		0.0123	0.0333
4-Chloro-3-methylphenol	U		0.00477	0.333
2-Chlorophenol	U		0.00831	0.333
2-Methylphenol	U		0.00986	0.333
3&4-Methyl Phenol	U		0.00783	0.333
2,4-Dichlorophenol	U		0.00746	0.333
2,4-Dimethylphenol	U		0.0471	0.333
4,6-Dinitro-2-methylphenol	U		0.124	0.333
2,4-Dinitrophenol	U		0.0980	0.333
2-Nitrophenol	U		0.0130	0.333
4-Nitrophenol	U		0.0525	0.333
Pentachlorophenol	U		0.0480	0.333
Phenol	U		0.00695	0.333
1,2,4,5-Tetrachlorobenzene	U		0.0762	0.333
2,4,5-Trichlorophenol	U		0.0104	0.333
2,4,6-Trichlorophenol	U		0.00779	0.333
(S) Nitrobenzene-d5	64.9			10.0-122
(S) 2-Fluorobiphenyl	73.3			15.0-120
(S) p-Terphenyl-d14	80.8			10.0-120
(S) Phenol-d5	67.4			10.0-120
(S) 2-Fluorophenol	80.8			12.0-120
(S) 2,4,6-Tribromophenol	68.0			10.0-127

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3447507-2 09/05/19 09:02

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00642	0.0333
Acenaphthylene	U		0.00671	0.0333
Acetophenone	U		0.0752	0.333
Anthracene	U		0.00632	0.0333
Atrazine	U		0.0938	0.333
Benzaldehyde	U		0.0532	0.333
Benzo(a)anthracene	U		0.00428	0.0333
Benzo(b)fluoranthene	U		0.00695	0.0333
Benzo(k)fluoranthene	U		0.00582	0.0333
Benzo(g,h,i)perylene	U		0.00721	0.0333
Benzo(a)pyrene	U		0.00548	0.0333
Biphenyl	U		0.00588	0.333
Bis(2-chlorethoxy)methane	U		0.00770	0.333
Bis(2-chloroethyl)ether	U		0.00896	0.333
Bis(2-chloroisopropyl)ether	U		0.00760	0.333
4-Bromophenyl-phenylether	U		0.0114	0.333
Caprolactam	U		0.104	0.333
Carbazole	U		0.00524	0.333
4-Chloroaniline	U		0.0352	0.333
2-Chloronaphthalene	U		0.00639	0.0333
4-Chlorophenyl-phenylether	U		0.00627	0.333
Chrysene	U		0.00555	0.0333
Dibenz(a,h)anthracene	U		0.00821	0.0333
Dibenzofuran	U		0.00518	0.333
3,3-Dichlorobenzidine	U		0.0794	0.333
2,4-Dinitrotoluene	U		0.00607	0.333
2,6-Dinitrotoluene	U		0.00737	0.333
Fluoranthene	U		0.00496	0.0333
Fluorene	U		0.00682	0.0333
Hexachlorobenzene	U		0.00856	0.333
Hexachloro-1,3-butadiene	U		0.0100	0.333
Hexachlorocyclopentadiene	U		0.0587	0.333
Hexachloroethane	U		0.0134	0.333
Indeno(1,2,3-cd)pyrene	U		0.00772	0.0333
Isophorone	U		0.00522	0.333
2-Methylnaphthalene	U		0.00861	0.0333
Naphthalene	U		0.00889	0.0333
2-Nitroaniline	U		0.00755	0.333
3-Nitroaniline	U		0.00850	0.333
4-Nitroaniline	U		0.00639	0.333

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3447507-2 09/05/19 09:02

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Nitrobenzene	U		0.00695	0.333
n-Nitrosodiphenylamine	U		0.0900	0.333
n-Nitrosodi-n-propylamine	U		0.00906	0.333
Phenanthrene	U		0.00528	0.0333
Benzylbutyl phthalate	U		0.0103	0.333
Bis(2-ethylhexyl)phthalate	U		0.0120	0.333
Di-n-butyl phthalate	U		0.0109	0.333
Diethyl phthalate	U		0.00691	0.333
Dimethyl phthalate	U		0.00540	0.333
Di-n-octyl phthalate	U		0.00907	0.333
Pyrene	U		0.0123	0.0333
4-Chloro-3-methylphenol	U		0.00477	0.333
2-Chlorophenol	U		0.00831	0.333
2-Methylphenol	U		0.00986	0.333
3&4-Methyl Phenol	U		0.00783	0.333
2,4-Dichlorophenol	U		0.00746	0.333
2,4-Dimethylphenol	U		0.0471	0.333
4,6-Dinitro-2-methylphenol	U		0.124	0.333
2,4-Dinitrophenol	U		0.0980	0.333
2-Nitrophenol	U		0.0130	0.333
4-Nitrophenol	U		0.0525	0.333
Pentachlorophenol	U		0.0480	0.333
Phenol	U		0.00695	0.333
1,2,4,5-Tetrachlorobenzene	U		0.0762	0.333
2,4,5-Trichlorophenol	U		0.0104	0.333
2,4,6-Trichlorophenol	U		0.00779	0.333
(S) Nitrobenzene-d5	66.7			10.0-122
(S) 2-Fluorobiphenyl	73.0			15.0-120
(S) p-Terphenyl-d14	82.0			10.0-120
(S) Phenol-d5	72.4			10.0-120
(S) 2-Fluorophenol	84.1			12.0-120
(S) 2,4,6-Tribromophenol	70.3			10.0-127

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3447194-1 09/03/19 22:51

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Acenaphthene	0.666	0.454	68.2	38.0-120	
Acenaphthylene	0.666	0.483	72.5	40.0-120	
Acetophenone	0.666	0.456	68.5	29.0-120	
Anthracene	0.666	0.480	72.1	42.0-120	
Atrazine	0.666	0.507	76.1	43.0-120	
Benzaldehyde	0.666	0.182	27.3	10.0-160	
Benzo(a)anthracene	0.666	0.540	81.1	44.0-120	
Benzo(b)fluoranthene	0.666	0.543	81.5	43.0-120	
Benzo(k)fluoranthene	0.666	0.524	78.7	44.0-120	
Benzo(g,h,i)perylene	0.666	0.510	76.6	43.0-120	
Benzo(a)pyrene	0.666	0.543	81.5	45.0-120	
Biphenyl	0.666	0.480	72.1	39.0-120	
Bis(2-chlorethoxy)methane	0.666	0.457	68.6	20.0-120	
Bis(2-chloroethyl)ether	0.666	0.461	69.2	16.0-120	
Bis(2-chloroisopropyl)ether	0.666	0.427	64.1	23.0-120	
4-Bromophenyl-phenylether	0.666	0.509	76.4	40.0-120	
Caprolactam	0.666	0.426	64.0	38.0-120	
Carbazole	0.666	0.494	74.2	48.0-120	
4-Chloroaniline	0.666	0.375	56.3	18.0-120	
2-Chloronaphthalene	0.666	0.485	72.8	35.0-120	
4-Chlorophenyl-phenylether	0.666	0.477	71.6	40.0-120	
Chrysene	0.666	0.509	76.4	43.0-120	
Dibenz(a,h)anthracene	0.666	0.517	77.6	44.0-120	
Dibenzofuran	0.666	0.478	71.8	44.0-120	
3,3-Dichlorobenzidine	1.33	0.951	71.5	28.0-120	
2,4-Dinitrotoluene	0.666	0.480	72.1	45.0-120	
2,6-Dinitrotoluene	0.666	0.464	69.7	42.0-120	
Fluoranthene	0.666	0.497	74.6	44.0-120	
Fluorene	0.666	0.480	72.1	41.0-120	
Hexachlorobenzene	0.666	0.500	75.1	39.0-120	
Hexachloro-1,3-butadiene	0.666	0.497	74.6	15.0-120	
Hexachlorocyclopentadiene	0.666	0.493	74.0	15.0-120	
Hexachloroethane	0.666	0.426	64.0	17.0-120	
Indeno(1,2,3-cd)pyrene	0.666	0.515	77.3	45.0-120	
Isophorone	0.666	0.435	65.3	23.0-120	
2-Methylnaphthalene	0.666	0.440	66.1	34.0-120	
Naphthalene	0.666	0.456	68.5	18.0-120	
2-Nitroaniline	0.666	0.481	72.2	46.0-120	
3-Nitroaniline	0.666	0.457	68.6	36.0-120	
4-Nitroaniline	0.666	0.453	68.0	36.0-120	

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Cp

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Tc

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Ss

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Cn

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Sr

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Qc

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Gl

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Al

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Sc



Laboratory Control Sample (LCS)

(LCS) R3447194-1 09/03/19 22:51

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Nitrobenzene	0.666	0.467	70.1	17.0-120	
n-Nitrosodiphenylamine	0.666	0.487	73.1	40.0-120	
n-Nitrosodi-n-propylamine	0.666	0.433	65.0	26.0-120	
Phenanthrene	0.666	0.474	71.2	42.0-120	
Benzylbutyl phthalate	0.666	0.534	80.2	40.0-120	
Bis(2-ethylhexyl)phthalate	0.666	0.529	79.4	41.0-120	
Di-n-butyl phthalate	0.666	0.510	76.6	43.0-120	
Diethyl phthalate	0.666	0.485	72.8	43.0-120	
Dimethyl phthalate	0.666	0.422	63.4	43.0-120	
Di-n-octyl phthalate	0.666	0.524	78.7	40.0-120	
Pyrene	0.666	0.510	76.6	41.0-120	
4-Chloro-3-methylphenol	0.666	0.467	70.1	28.0-120	
2-Chlorophenol	0.666	0.477	71.6	28.0-120	
2-Methylphenol	0.666	0.460	69.1	35.0-120	
3&4-Methyl Phenol	0.666	0.531	79.7	42.0-120	
2,4-Dichlorophenol	0.666	0.490	73.6	25.0-120	
2,4-Dimethylphenol	0.666	0.456	68.5	15.0-120	
4,6-Dinitro-2-methylphenol	0.666	0.409	61.4	16.0-120	
2,4-Dinitrophenol	0.666	0.281	42.2	10.0-120	
2-Nitrophenol	0.666	0.460	69.1	20.0-120	
4-Nitrophenol	0.666	0.450	67.6	27.0-120	
Pentachlorophenol	0.666	0.477	71.6	29.0-120	
Phenol	0.666	0.455	68.3	28.0-120	
1,2,4,5-Tetrachlorobenzene	0.666	0.476	71.5	30.0-120	
2,4,5-Trichlorophenol	0.666	0.552	82.9	38.0-120	
2,4,6-Trichlorophenol	0.666	0.474	71.2	37.0-120	
(S) Nitrobenzene-d5			66.4	10.0-122	
(S) 2-Fluorobiphenyl			71.8	15.0-120	
(S) p-Terphenyl-d14			79.6	10.0-120	
(S) Phenol-d5			68.9	10.0-120	
(S) 2-Fluorophenol			83.3	12.0-120	
(S) 2,4,6-Tribromophenol			77.0	10.0-127	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3447507-1 09/05/19 08:43

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Acenaphthene	0.666	0.461	69.2	38.0-120	
Acenaphthylene	0.666	0.499	74.9	40.0-120	
Acetophenone	0.666	0.453	68.0	29.0-120	
Anthracene	0.666	0.495	74.3	42.0-120	
Atrazine	0.666	0.539	80.9	43.0-120	
Benzaldehyde	0.666	0.202	30.3	10.0-160	
Benzo(a)anthracene	0.666	0.580	87.1	44.0-120	
Benzo(b)fluoranthene	0.666	0.625	93.8	43.0-120	
Benzo(k)fluoranthene	0.666	0.519	77.9	44.0-120	
Benzo(g,h,i)perylene	0.666	0.547	82.1	43.0-120	
Benzo(a)pyrene	0.666	0.594	89.2	45.0-120	
Biphenyl	0.666	0.472	70.9	39.0-120	
Bis(2-chlorethoxy)methane	0.666	0.386	58.0	20.0-120	
Bis(2-chloroethyl)ether	0.666	0.487	73.1	16.0-120	
Bis(2-chloroisopropyl)ether	0.666	0.454	68.2	23.0-120	
4-Bromophenyl-phenylether	0.666	0.526	79.0	40.0-120	
Caprolactam	0.666	0.528	79.3	38.0-120	
Carbazole	0.666	0.528	79.3	48.0-120	
4-Chloroaniline	0.666	0.344	51.7	18.0-120	
2-Chloronaphthalene	0.666	0.475	71.3	35.0-120	
4-Chlorophenyl-phenylether	0.666	0.506	76.0	40.0-120	
Chrysene	0.666	0.515	77.3	43.0-120	
Dibenz(a,h)anthracene	0.666	0.526	79.0	44.0-120	
Dibenzofuran	0.666	0.484	72.7	44.0-120	
3,3-Dichlorobenzidine	1.33	0.990	74.4	28.0-120	
2,4-Dinitrotoluene	0.666	0.533	80.0	45.0-120	
2,6-Dinitrotoluene	0.666	0.504	75.7	42.0-120	
Fluoranthene	0.666	0.536	80.5	44.0-120	
Fluorene	0.666	0.492	73.9	41.0-120	
Hexachlorobenzene	0.666	0.492	73.9	39.0-120	
Hexachloro-1,3-butadiene	0.666	0.413	62.0	15.0-120	
Hexachlorocyclopentadiene	0.666	0.523	78.5	15.0-120	
Hexachloroethane	0.666	0.468	70.3	17.0-120	
Indeno(1,2,3-cd)pyrene	0.666	0.588	88.3	45.0-120	
Isophorone	0.666	0.392	58.9	23.0-120	
2-Methylnaphthalene	0.666	0.382	57.4	34.0-120	
Naphthalene	0.666	0.384	57.7	18.0-120	
2-Nitroaniline	0.666	0.543	81.5	46.0-120	
3-Nitroaniline	0.666	0.502	75.4	36.0-120	
4-Nitroaniline	0.666	0.502	75.4	36.0-120	

1

Cp

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Tc

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Ss

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Cn

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Sr

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Qc

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Gl

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Al

9

Sc



Laboratory Control Sample (LCS)

(LCS) R3447507-1 09/05/19 08:43

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Nitrobenzene	0.666	0.406	61.0	17.0-120	
n-Nitrosodiphenylamine	0.666	0.517	77.6	40.0-120	
n-Nitrosodi-n-propylamine	0.666	0.491	73.7	26.0-120	
Phenanthrene	0.666	0.487	73.1	42.0-120	
Benzylbutyl phthalate	0.666	0.679	102	40.0-120	
Bis(2-ethylhexyl)phthalate	0.666	0.659	98.9	41.0-120	
Di-n-butyl phthalate	0.666	0.587	88.1	43.0-120	
Diethyl phthalate	0.666	0.508	76.3	43.0-120	
Dimethyl phthalate	0.666	0.500	75.1	43.0-120	
Di-n-octyl phthalate	0.666	0.648	97.3	40.0-120	
Pyrene	0.666	0.527	79.1	41.0-120	
4-Chloro-3-methylphenol	0.666	0.427	64.1	28.0-120	
2-Chlorophenol	0.666	0.510	76.6	28.0-120	
2-Methylphenol	0.666	0.500	75.1	35.0-120	
3&4-Methyl Phenol	0.666	0.578	86.8	42.0-120	
2,4-Dichlorophenol	0.666	0.437	65.6	25.0-120	
2,4-Dimethylphenol	0.666	0.408	61.3	15.0-120	
4,6-Dinitro-2-methylphenol	0.666	0.522	78.4	16.0-120	
2,4-Dinitrophenol	0.666	0.463	69.5	10.0-120	
2-Nitrophenol	0.666	0.451	67.7	20.0-120	
4-Nitrophenol	0.666	0.544	81.7	27.0-120	
Pentachlorophenol	0.666	0.557	83.6	29.0-120	
Phenol	0.666	0.491	73.7	28.0-120	
1,2,4,5-Tetrachlorobenzene	0.666	0.516	77.5	30.0-120	
2,4,5-Trichlorophenol	0.666	0.559	83.9	38.0-120	
2,4,6-Trichlorophenol	0.666	0.542	81.4	37.0-120	
(S) Nitrobenzene-d5			63.1	10.0-122	
(S) 2-Fluorobiphenyl			72.4	15.0-120	
(S) p-Terphenyl-d14			82.3	10.0-120	
(S) Phenol-d5			77.6	10.0-120	
(S) 2-Fluorophenol			88.6	12.0-120	
(S) 2,4,6-Tribromophenol			84.1	10.0-127	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1134037-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1134037-03 09/04/19 04:38 • (MS) R3447194-3 09/04/19 05:00 • (MSD) R3447194-4 09/04/19 05:23

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.761	U	0.421	0.441	55.3	58.6	1	18.0-120			4.56	32
Acenaphthylene	0.761	U	0.445	0.471	58.5	62.6	1	25.0-120			5.56	32
Acetophenone	0.761	U	0.389	0.398	51.1	52.9	1	10.0-120			2.35	37
Anthracene	0.761	U	0.514	0.492	67.5	65.4	1	22.0-120			4.37	29
Atrazine	0.761	U	0.561	0.530	73.7	70.5	1	20.0-131			5.73	28
Benzaldehyde	0.761	U	0.471	0.441	61.9	58.6	1	10.0-160			6.60	40
Benzo(a)anthracene	0.761	U	0.578	0.539	76.0	71.7	1	25.0-120			7.04	29
Benzo(b)fluoranthene	0.761	U	0.552	0.514	72.5	68.3	1	19.0-122			7.17	31
Benzo(k)fluoranthene	0.761	U	0.529	0.480	69.5	63.8	1	23.0-120			9.63	30
Benzo(g,h,i)perylene	0.761	U	0.505	0.467	66.4	62.2	1	10.0-120			7.85	33
Benzo(a)pyrene	0.761	U	0.569	0.516	74.8	68.6	1	24.0-120			9.81	30
Biphenyl	0.761	0.0184	0.428	0.460	53.8	58.8	1	15.0-120			7.29	33
Bis(2-chlorethoxy)methane	0.761	U	0.394	0.404	51.8	53.7	1	10.0-120			2.32	34
Bis(2-chloroethyl)ether	0.761	U	0.381	0.392	50.0	52.2	1	10.0-120			2.99	40
Bis(2-chloroisopropyl)ether	0.761	U	0.341	0.369	44.8	49.1	1	10.0-120			7.82	40
4-Bromophenyl-phenylether	0.761	U	0.525	0.529	69.0	70.3	1	27.0-120			0.659	30
Caprolactam	0.761	U	0.475	0.423	62.5	56.3	1	11.0-141			11.6	31
Carbazole	0.761	U	0.540	0.507	71.0	67.4	1	31.0-120			6.41	24
4-Chloroaniline	0.761	U	0.342	0.296	45.0	39.4	1	10.0-120			14.5	36
2-Chloronaphthalene	0.761	U	0.428	0.451	56.2	60.0	1	20.0-120			5.26	32
4-Chlorophenyl-phenylether	0.761	U	0.466	0.476	61.2	63.4	1	24.0-120			2.21	29
Chrysene	0.761	U	0.531	0.504	69.8	67.1	1	21.0-120			5.14	29
Dibenz(a,h)anthracene	0.761	U	0.512	0.470	67.3	62.5	1	10.0-120			8.72	32
Dibenzofuran	0.761	0.0585	0.524	0.505	61.2	59.4	1	24.0-120			3.60	30
3,3-Dichlorobenzidine	1.53	U	0.922	0.692	60.4	46.0	1	10.0-120			28.5	34
2,4-Dinitrotoluene	0.761	U	0.478	0.475	62.8	63.2	1	30.0-120			0.485	31
2,6-Dinitrotoluene	0.761	U	0.457	0.470	60.0	62.5	1	25.0-120			2.75	31
Fluoranthene	0.761	0.0104	0.560	0.539	72.2	70.3	1	18.0-126			3.79	32
Fluorene	0.761	U	0.468	0.470	61.6	62.5	1	25.0-120			0.247	30
Hexachlorobenzene	0.761	U	0.527	0.519	69.3	69.1	1	27.0-120			1.55	28
Hexachloro-1,3-butadiene	0.761	U	0.404	0.430	53.0	57.2	1	10.0-120			6.38	38
Hexachlorocyclopentadiene	0.761	U	0.222	0.242	29.2	32.2	1	10.0-120			8.48	40
Hexachloroethane	0.761	U	0.333	0.346	43.8	46.0	1	10.0-120			3.75	40
Indeno(1,2,3-cd)pyrene	0.761	U	0.523	0.480	68.7	63.8	1	10.0-120			8.54	32
Isophorone	0.761	U	0.389	0.391	51.1	52.0	1	13.0-120			0.593	34
2-Methylnaphthalene	0.761	U	0.392	0.406	51.5	54.0	1	10.0-120			3.48	37
Naphthalene	0.761	0.0115	0.399	0.419	50.9	54.2	1	10.0-120			4.81	35
2-Nitroaniline	0.761	U	0.480	0.483	63.1	64.3	1	24.0-120			0.720	30
3-Nitroaniline	0.761	U	0.437	0.406	57.4	54.0	1	11.0-120			7.41	32

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Cp

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Tc

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Ss

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Cn

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Sr

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Qc

7

Gl

8

Al

9

Sc

L1134037-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1134037-03 09/04/19 04:38 • (MS) R3447194-3 09/04/19 05:00 • (MSD) R3447194-4 09/04/19 05:23

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
4-Nitroaniline	0.761	U	0.437	0.353	57.4	46.9	1	15.0-120			21.4	31
Nitrobenzene	0.761	U	0.377	0.383	49.5	50.9	1	10.0-120			1.52	36
n-Nitrosodiphenylamine	0.761	U	0.507	0.495	66.6	65.8	1	17.0-120			2.31	29
n-Nitrosodi-n-propylamine	0.761	U	0.370	0.374	48.6	49.7	1	10.0-120			0.933	37
Phenanthrene	0.761	0.0254	0.535	0.518	67.0	65.5	1	17.0-120			3.29	31
Benzylbutyl phthalate	0.761	U	0.635	0.590	83.4	78.5	1	23.0-120			7.37	30
Bis(2-ethylhexyl)phthalate	0.761	U	0.627	0.576	82.4	76.6	1	17.0-126			8.46	30
Di-n-butyl phthalate	0.761	U	0.581	0.545	76.3	72.5	1	30.0-120			6.37	29
Diethyl phthalate	0.761	U	0.489	0.480	64.3	63.8	1	26.0-120			1.91	28
Dimethyl phthalate	0.761	U	0.411	0.416	54.0	55.4	1	25.0-120			1.40	29
Di-n-octyl phthalate	0.761	U	0.660	0.610	86.8	81.1	1	21.0-123			8.01	29
Pyrene	0.761	U	0.571	0.544	75.1	72.3	1	16.0-121			4.98	32
4-Chloro-3-methylphenol	0.761	U	0.492	0.485	64.6	64.5	1	15.0-120			1.42	30
2-Chlorophenol	0.761	U	0.423	0.427	55.6	56.8	1	15.0-120			0.816	37
2-Methylphenol	0.761	U	0.446	0.464	58.7	61.7	1	11.0-120			3.81	40
3&4-Methyl Phenol	0.761	U	0.490	0.482	64.4	64.2	1	12.0-123			1.66	38
2,4-Dichlorophenol	0.761	U	0.475	0.460	62.5	61.2	1	20.0-120			3.21	31
2,4-Dimethylphenol	0.761	U	0.416	0.427	54.7	56.8	1	10.0-120			2.47	33
4,6-Dinitro-2-methylphenol	0.761	U	0.459	0.434	60.3	57.7	1	10.0-120			5.70	39
2,4-Dinitrophenol	0.761	U	0.370	0.384	48.6	51.1	1	10.0-121			3.68	40
2-Nitrophenol	0.761	U	0.399	0.414	52.4	55.1	1	12.0-120			3.70	39
4-Nitrophenol	0.761	U	0.523	0.502	68.7	66.8	1	10.0-137			4.06	32
Pentachlorophenol	0.761	0.0887	0.740	0.687	85.6	79.6	1	10.0-160			7.46	31
Phenol	0.761	U	0.422	0.419	55.5	55.7	1	12.0-120			0.825	38
1,2,4,5-Tetrachlorobenzene	0.761	U	0.422	0.437	55.5	58.2	1	14.0-120			3.50	36
2,4,5-Trichlorophenol	0.761	U	0.566	0.560	74.3	74.5	1	20.0-120			1.03	30
2,4,6-Trichlorophenol	0.761	U	0.482	0.510	63.4	67.8	1	19.0-120			5.59	32
(S) Nitrobenzene-d5					48.0	50.2		10.0-122				
(S) 2-Fluorobiphenyl					53.8	58.5		15.0-120				
(S) p-Terphenyl-d14					75.7	73.2		10.0-120				
(S) Phenol-d5					56.2	56.6		10.0-120				
(S) 2-Fluorophenol					61.6	64.6		12.0-120				
(S) 2,4,6-Tribromophenol					78.1	77.5		10.0-127				

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.
V	The sample concentration is too high to evaluate accurate spike recoveries.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico ¹	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1 6}	90010	South Carolina	84004
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana ¹	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

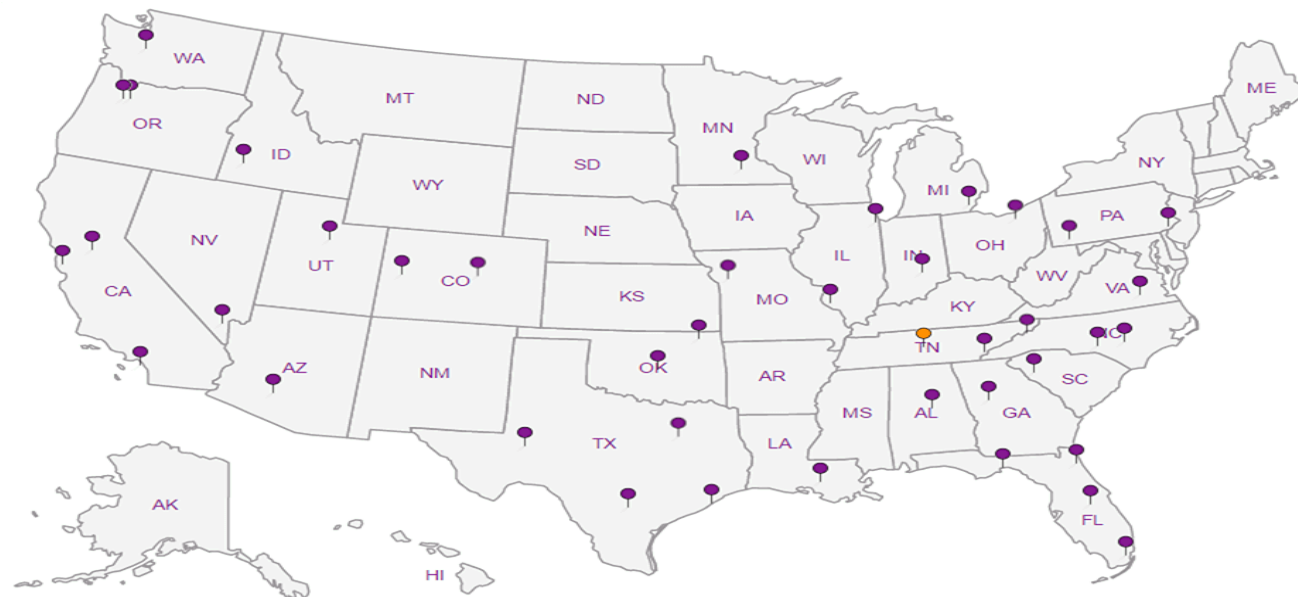
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP, LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



GHD - Glenn Springs Holdings

2055 Niagara Falls Blvd. #3
Niagara Falls, NY 14034

Billing Information:

Accounts Payable
PO Box 2148
Houston, TX 77252-2148

Report to:
Angela Bown

Email To: Angela.Bown@ghd.com,
Paul.Fowler@ghd.com, GSH-LabDataMgmt-

Project
Description: **Cline Avenue Ditch**

City/State
Collected:

Phone: **716-297-6150**
Fax:

Client Project #
11129311

Lab Project #
GHDGSH-11129311

Collected by (print):
Yona Yang

Site/Facility ID #
Cline Ave

P.O. #
4502201561

Collected by (signature):

Rush? (Lab MUST Be Notified)

Quote #

Immediately
Packed on Ice N ☐ Y ☒

☐ Same Day ☒ Next Day ☐ 5 Day (Rad Only)
☐ Two Day ☐ 10 Day (Rad Only)
☐ Three Day

Date Results Needed
STD

No.
of
Cntrs

Analysis / Container / Preservative

Chain of Custody Page of



12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



L# **1134090**
B231

Acctnum: **GHDGSH**

Template: **T153500**

Prelogin: **P721166**

TSR: **134 - Mark W. Beasley**

PB:

Shipped Via: **FedEX Ground**

Remarks Sample # (lab only)

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DRO/ORO 8015 4ozClr-NoPres	GRO 40ml/NaHSO4/Syr/MeOH	M6010TAL 4ozClr-NoPres	SV8082, SV8270TCL 4ozClr-NoPres	V8260TCL 40ml/NaHSO4/Syr/MeOH								
50-11198545-082819-yy-006	G	SS	1-2'	8/28/19	10:35	6	X	X	X	X	X								
TRIP BLANK 8-28-19	G	SS				1					X								
		SS																	
		SS																	
		SS																	
		SS																	

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks:****Level IV data package (5%)****

Samples returned via:

☐ UPS ☒ FedEx ☐ Courier

Tracking #

1082 5993 8010

pH Temp

Flow Other

Sample Receipt Checklist
COC Seal Present/Intact: ☐ NP ☒ Y ☐ N
COC Signed/Accurate: ☒ Y ☐ N
Bottles arrive intact: ☒ Y ☐ N
Correct bottles used: ☒ Y ☐ N
Sufficient volume sent: ☒ Y ☐ N
If Applicable
VOA Zero Headspace: ☐ Y ☐ N
Preservation Correct/Checked: ☐ Y ☐ N
RAD SCREEN: <0.5 mR/hr

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Trip Blank Received: Yes ☐ No ☒

HCL/MeOH

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Temp: **A30°C**

Bottles Received: **6**

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date:

Time:

Hold:

Condition:
NCF / OK

September 17, 2019

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

GHD - Glenn Springs Holdings

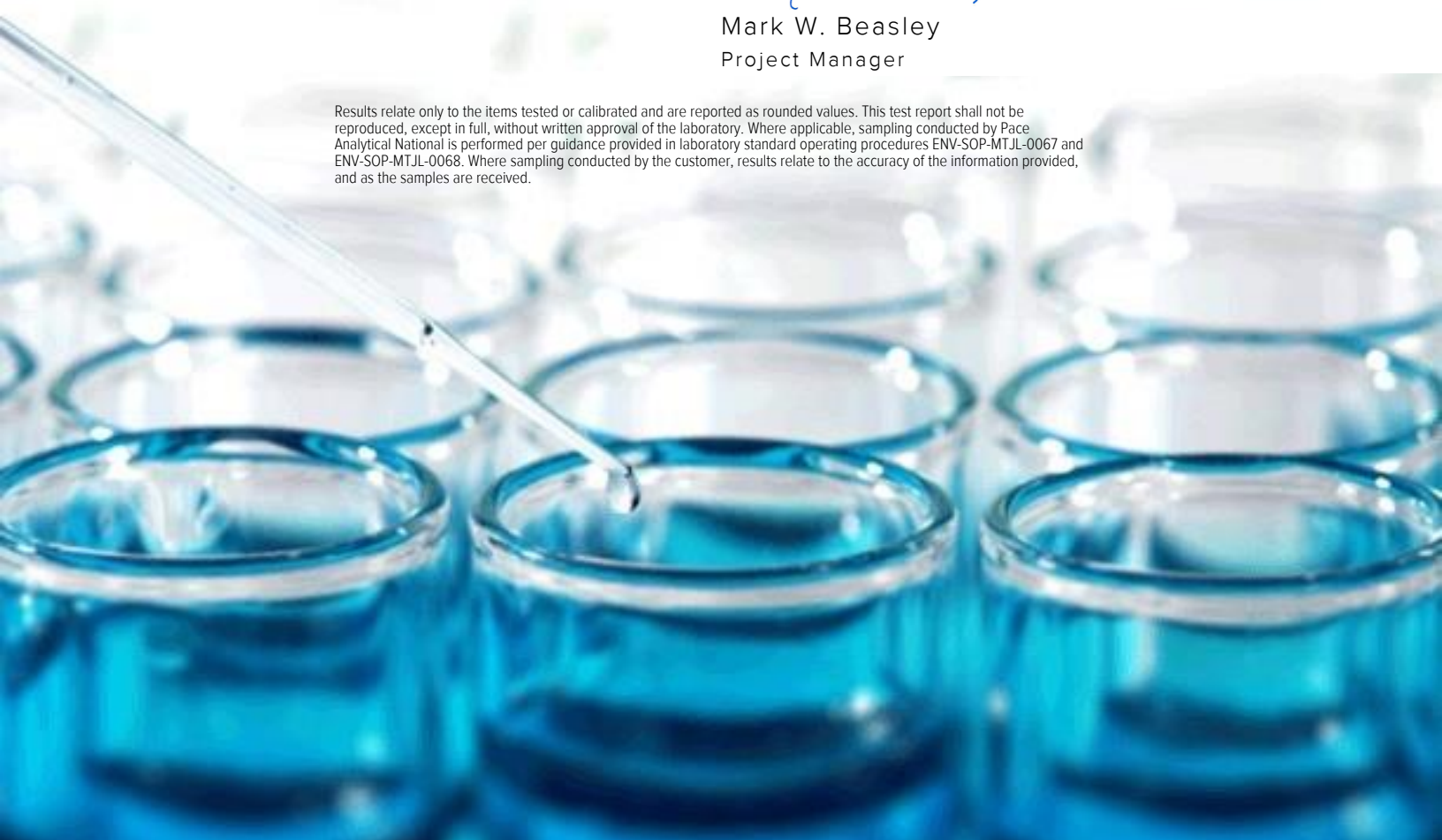
Sample Delivery Group: L1136948
Samples Received: 09/07/2019
Project Number: 11198545
Description: Cline Avenue Ditch
Site: CLINE AVENUE
Report To: Angela Bown
2055 Niagara Falls Blvd. #3
Niagara Falls, NY 14034

Entire Report Reviewed By:



Mark W. Beasley
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.





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SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



GW-11198545-090519-YY-001 L1136948-01 GW

Collected by Youa Yang
Collected date/time 09/05/19 09:40
Received date/time 09/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Mercury by Method 7470A	WG1342092	1	09/09/19 11:24	09/09/19 18:22	TCT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1342142	1	09/10/19 06:58	09/13/19 15:56	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1345565	1	09/13/19 23:47	09/13/19 23:47	DWR	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082	WG1342044	1	09/09/19 16:40	09/10/19 14:41	MTJ	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1343097	1	09/10/19 17:00	09/11/19 17:05	JNJ	Mt. Juliet, TN

¹ Cp

² Tc

³ Ss

⁴ Cn

GW-11198545-090519-YY-002 L1136948-02 GW

Collected by Youa Yang
Collected date/time 09/05/19 11:22
Received date/time 09/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Mercury by Method 7470A	WG1342092	1	09/09/19 11:24	09/09/19 18:24	TCT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1342142	1	09/10/19 06:58	09/13/19 15:59	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1345565	1	09/14/19 00:07	09/14/19 00:07	DWR	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082	WG1342044	1	09/09/19 16:40	09/10/19 14:57	MTJ	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1343097	5	09/10/19 17:00	09/11/19 22:59	JNJ	Mt. Juliet, TN

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

GW-11198545-090519-YY-003 L1136948-03 GW

Collected by Youa Yang
Collected date/time 09/05/19 13:53
Received date/time 09/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Mercury by Method 7470A	WG1342092	1	09/09/19 11:24	09/09/19 18:26	TCT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1342142	1	09/10/19 06:58	09/13/19 16:03	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1345565	1	09/14/19 00:27	09/14/19 00:27	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1346102	5	09/16/19 17:38	09/16/19 17:38	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1346102	5	09/16/19 18:59	09/16/19 18:59	BMB	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082	WG1342044	1	09/09/19 16:40	09/10/19 15:13	MTJ	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1343097	5	09/10/19 17:00	09/11/19 23:21	JNJ	Mt. Juliet, TN

⁹ Sc

GW-11198545-090519-YY-004 L1136948-04 GW

Collected by Youa Yang
Collected date/time 09/05/19 13:55
Received date/time 09/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Mercury by Method 7470A	WG1342092	1	09/09/19 11:24	09/09/19 18:28	TCT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1342142	1	09/10/19 06:58	09/13/19 16:07	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1345565	1	09/14/19 00:47	09/14/19 00:47	DWR	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082	WG1342044	1	09/09/19 16:40	09/10/19 15:29	MTJ	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1343097	5	09/10/19 17:00	09/11/19 23:42	JNJ	Mt. Juliet, TN

GW-11198545-090519-YY-005 L1136948-05 GW

Collected by Youa Yang
Collected date/time 09/05/19 15:08
Received date/time 09/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Mercury by Method 7470A	WG1342092	1	09/09/19 11:24	09/09/19 18:31	TCT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1342142	1	09/10/19 06:58	09/13/19 16:10	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1345565	1	09/14/19 01:08	09/14/19 01:08	DWR	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082	WG1342044	1	09/09/19 16:40	09/10/19 15:45	MTJ	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1343097	1.04	09/10/19 17:00	09/11/19 17:27	JNJ	Mt. Juliet, TN

ACCOUNT:

GHD - Glenn Springs Holdings

PROJECT:

11198545

SDG:

L1136948

DATE/TIME:

09/17/19 13:08

PAGE:

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SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



GW-11198545-090519-YY-006 L1136948-06 GW				Collected by Youa Yang	Collected date/time 09/05/19 16:18	Received date/time 09/07/19 09:00	1 Cp
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location	2 Tc
Mercury by Method 7470A	WG1342092	1	09/09/19 11:24	09/09/19 18:33	TCT	Mt. Juliet, TN	3 Ss
Metals (ICPMS) by Method 6020	WG1342142	1	09/10/19 06:58	09/13/19 16:14	JPD	Mt. Juliet, TN	4 Cn
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1345565	5	09/14/19 01:28	09/14/19 01:28	DWR	Mt. Juliet, TN	5 Sr
Polychlorinated Biphenyls (GC) by Method 8082	WG1342044	1	09/09/19 16:40	09/10/19 16:17	MTJ	Mt. Juliet, TN	6 Qc
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1343097	5.15	09/10/19 17:00	09/12/19 00:03	JNJ	Mt. Juliet, TN	7 Gl
GW-11198545-090519-YY-007 L1136948-07 GW				Collected by Youa Yang	Collected date/time 09/05/19 17:43	Received date/time 09/07/19 09:00	8 Al
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location	9 Sc
Mercury by Method 7470A	WG1342092	1	09/09/19 11:24	09/09/19 18:39	TCT	Mt. Juliet, TN	
Metals (ICPMS) by Method 6020	WG1342142	1	09/10/19 06:58	09/13/19 16:18	JPD	Mt. Juliet, TN	
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1345565	5	09/14/19 01:49	09/14/19 01:49	DWR	Mt. Juliet, TN	
Polychlorinated Biphenyls (GC) by Method 8082	WG1342044	1	09/09/19 16:40	09/10/19 16:49	MTJ	Mt. Juliet, TN	
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1343097	1	09/10/19 17:00	09/11/19 22:16	JNJ	Mt. Juliet, TN	
TRIP BLANK-1 L1136948-08 GW				Collected by Youa Yang	Collected date/time 09/05/19 08:00	Received date/time 09/07/19 09:00	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location	
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1345565	1	09/13/19 21:46	09/13/19 21:46	DWR	Mt. Juliet, TN	
GW-11198545-090519-YY-008 L1136948-09 GW				Collected by Youa Yang	Collected date/time 09/05/19 18:45	Received date/time 09/07/19 09:00	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location	
Mercury by Method 7470A	WG1342094	1	09/10/19 10:11	09/10/19 18:19	TCT	Mt. Juliet, TN	
Metals (ICPMS) by Method 6020	WG1342142	1	09/10/19 06:58	09/13/19 16:21	JPD	Mt. Juliet, TN	
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1345565	1	09/14/19 02:10	09/14/19 02:10	DWR	Mt. Juliet, TN	
Polychlorinated Biphenyls (GC) by Method 8082	WG1342044	1	09/09/19 16:40	09/10/19 17:05	MTJ	Mt. Juliet, TN	
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1343097	5	09/10/19 17:00	09/11/19 22:38	JNJ	Mt. Juliet, TN	
GW-11198545-090619-YY-009 L1136948-10 GW				Collected by Youa Yang	Collected date/time 09/06/19 09:38	Received date/time 09/07/19 09:00	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location	
Mercury by Method 7470A	WG1342094	1	09/10/19 10:11	09/10/19 18:21	TCT	Mt. Juliet, TN	
Metals (ICPMS) by Method 6020	WG1342142	1	09/10/19 06:58	09/13/19 16:25	JPD	Mt. Juliet, TN	
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1345565	1	09/14/19 02:30	09/14/19 02:30	DWR	Mt. Juliet, TN	
Polychlorinated Biphenyls (GC) by Method 8082	WG1342044	1	09/09/19 16:40	09/10/19 17:21	MTJ	Mt. Juliet, TN	
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1343097	1	09/10/19 17:00	09/11/19 21:32	JNJ	Mt. Juliet, TN	
GW-11198545-090619-YY-010 L1136948-11 GW				Collected by Youa Yang	Collected date/time 09/06/19 10:50	Received date/time 09/07/19 09:00	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location	
Mercury by Method 7470A	WG1342094	1	09/10/19 10:11	09/10/19 18:23	TCT	Mt. Juliet, TN	
Metals (ICPMS) by Method 6020	WG1342142	1	09/10/19 06:58	09/13/19 16:29	JDG	Mt. Juliet, TN	
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1345565	1	09/14/19 02:51	09/14/19 02:51	DWR	Mt. Juliet, TN	
Polychlorinated Biphenyls (GC) by Method 8082	WG1342044	1	09/09/19 16:40	09/10/19 17:36	MTJ	Mt. Juliet, TN	
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1343097	1	09/10/19 17:00	09/11/19 21:54	JNJ	Mt. Juliet, TN	

ACCOUNT:

GHD - Glenn Springs Holdings

PROJECT:

11198545

SDG:

L1136948

DATE/TIME:

09/17/19 13:08

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SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



GW-11198545-090619-YY-011 L1136948-12 GW

Collected by
Youa Yang

Collected date/time
09/06/19 11:55

Received date/time
09/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Mercury by Method 7470A	WG1342094	1	09/10/19 10:11	09/10/19 18:25	TCT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1342142	1	09/10/19 06:58	09/13/19 16:40	JDG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1345579	1	09/14/19 01:06	09/14/19 01:06	ACG	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082	WG1342044	1	09/09/19 16:40	09/10/19 17:52	MTJ	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1343097	1.01	09/10/19 17:00	09/11/19 17:49	JNJ	Mt. Juliet, TN

¹ Cp

² Tc

³ Ss

⁴ Cn

GW-11198545-090619-YY-012 L1136948-13 GW

Collected by
Youa Yang

Collected date/time
09/06/19 13:53

Received date/time
09/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Mercury by Method 7470A	WG1342094	1	09/10/19 10:11	09/10/19 17:57	TCT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1342142	1	09/10/19 06:58	09/12/19 18:29	TM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1345579	1	09/14/19 01:26	09/14/19 01:26	ACG	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082	WG1342044	1	09/09/19 16:40	09/10/19 18:08	MTJ	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1343097	1.1	09/10/19 17:00	09/11/19 19:19	JNJ	Mt. Juliet, TN

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

TRIP BLANK-2 L1136948-14 GW

Collected by
Youa Yang

Collected date/time
09/05/19 00:00

Received date/time
09/07/19 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1345579	1	09/13/19 21:19	09/13/19 21:19	ACG	Mt. Juliet, TN

⁹ Sc

ACCOUNT:

GHD - Glenn Springs Holdings

PROJECT:

11198545

SDG:

L1136948

DATE/TIME:

09/17/19 13:08

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All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Mark W. Beasley
Project Manager

Sample Delivery Group (SDG) Narrative

VOC pH outside of method requirement.

<u>Lab Sample ID</u>	<u>Project Sample ID</u>	<u>Method</u>
L1136948-02	GW-11198545-090519-YY-002	8260B

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury,Dissolved	U		0.0490	0.200	1	09/09/2019 18:22	WG1342092

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	152		5.15	100	1	09/13/2019 15:56	WG1342142
Antimony,Dissolved	1.05	J	0.754	2.00	1	09/13/2019 15:56	WG1342142
Arsenic,Dissolved	6.77		0.250	2.00	1	09/13/2019 15:56	WG1342142
Barium,Dissolved	64.2		0.360	5.00	1	09/13/2019 15:56	WG1342142
Beryllium,Dissolved	U		0.120	2.00	1	09/13/2019 15:56	WG1342142
Cadmium,Dissolved	0.846	J	0.160	1.00	1	09/13/2019 15:56	WG1342142
Calcium,Dissolved	135000		46.0	1000	1	09/13/2019 15:56	WG1342142
Chromium,Dissolved	1.26	B J	0.540	2.00	1	09/13/2019 15:56	WG1342142
Copper,Dissolved	1.76	J	0.520	5.00	1	09/13/2019 15:56	WG1342142
Cobalt,Dissolved	3.90		0.260	2.00	1	09/13/2019 15:56	WG1342142
Iron,Dissolved	6400		15.0	100	1	09/13/2019 15:56	WG1342142
Lead,Dissolved	1.58	B J	0.240	2.00	1	09/13/2019 15:56	WG1342142
Magnesium,Dissolved	21400		100	1000	1	09/13/2019 15:56	WG1342142
Manganese,Dissolved	2150		0.250	5.00	1	09/13/2019 15:56	WG1342142
Nickel,Dissolved	4.71		0.350	2.00	1	09/13/2019 15:56	WG1342142
Potassium,Dissolved	2670		37.0	1000	1	09/13/2019 15:56	WG1342142
Selenium,Dissolved	0.582	J	0.380	2.00	1	09/13/2019 15:56	WG1342142
Silver,Dissolved	U		0.310	2.00	1	09/13/2019 15:56	WG1342142
Sodium,Dissolved	12200		110	1000	1	09/13/2019 15:56	WG1342142
Thallium,Dissolved	U		0.190	2.00	1	09/13/2019 15:56	WG1342142
Vanadium,Dissolved	1.61	J	0.180	5.00	1	09/13/2019 15:56	WG1342142
Zinc,Dissolved	18.4	J	2.56	25.0	1	09/13/2019 15:56	WG1342142

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		10.0	50.0	1	09/13/2019 23:47	WG1345565
Benzene	U		0.331	1.00	1	09/13/2019 23:47	WG1345565
Bromochloromethane	U		0.520	1.00	1	09/13/2019 23:47	WG1345565
Bromodichloromethane	0.519	J	0.380	1.00	1	09/13/2019 23:47	WG1345565
Bromoform	2.28		0.469	1.00	1	09/13/2019 23:47	WG1345565
Bromomethane	U		0.866	5.00	1	09/13/2019 23:47	WG1345565
Carbon disulfide	U		0.275	1.00	1	09/13/2019 23:47	WG1345565
Carbon tetrachloride	U		0.379	1.00	1	09/13/2019 23:47	WG1345565
Chlorobenzene	U		0.348	1.00	1	09/13/2019 23:47	WG1345565
Chlorodibromomethane	0.825	J	0.327	1.00	1	09/13/2019 23:47	WG1345565
Chloroethane	U		0.453	5.00	1	09/13/2019 23:47	WG1345565
Chloroform	0.883	J	0.324	5.00	1	09/13/2019 23:47	WG1345565
Chloromethane	U		0.276	2.50	1	09/13/2019 23:47	WG1345565
Cyclohexane	U		0.390	1.00	1	09/13/2019 23:47	WG1345565
1,2-Dibromo-3-Chloropropane	U		1.33	5.00	1	09/13/2019 23:47	WG1345565
1,2-Dibromoethane	U		0.381	1.00	1	09/13/2019 23:47	WG1345565
1,2-Dichlorobenzene	U		0.349	1.00	1	09/13/2019 23:47	WG1345565
1,3-Dichlorobenzene	U		0.220	1.00	1	09/13/2019 23:47	WG1345565
1,4-Dichlorobenzene	U		0.274	1.00	1	09/13/2019 23:47	WG1345565
Dichlorodifluoromethane	U		0.551	5.00	1	09/13/2019 23:47	WG1345565
1,1-Dichloroethane	U		0.259	1.00	1	09/13/2019 23:47	WG1345565
1,2-Dichloroethane	U		0.361	1.00	1	09/13/2019 23:47	WG1345565
1,1-Dichloroethene	U		0.398	1.00	1	09/13/2019 23:47	WG1345565
cis-1,2-Dichloroethene	U		0.260	1.00	1	09/13/2019 23:47	WG1345565





Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
trans-1,2-Dichloroethene	U		0.396	1.00	1	09/13/2019 23:47	WG1345565
1,2-Dichloropropane	U		0.306	1.00	1	09/13/2019 23:47	WG1345565
cis-1,3-Dichloropropene	U		0.418	1.00	1	09/13/2019 23:47	WG1345565
trans-1,3-Dichloropropene	U		0.419	1.00	1	09/13/2019 23:47	WG1345565
Ethylbenzene	U		0.384	1.00	1	09/13/2019 23:47	WG1345565
2-Hexanone	U		3.82	10.0	1	09/13/2019 23:47	WG1345565
Isopropylbenzene	U		0.326	1.00	1	09/13/2019 23:47	WG1345565
2-Butanone (MEK)	U		3.93	10.0	1	09/13/2019 23:47	WG1345565
Methyl Acetate	U		4.30	20.0	1	09/13/2019 23:47	WG1345565
Methyl Cyclohexane	U		0.380	1.00	1	09/13/2019 23:47	WG1345565
Methylene Chloride	U		1.00	5.00	1	09/13/2019 23:47	WG1345565
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	09/13/2019 23:47	WG1345565
Methyl tert-butyl ether	U		0.367	1.00	1	09/13/2019 23:47	WG1345565
Styrene	U		0.307	1.00	1	09/13/2019 23:47	WG1345565
1,1,2,2-Tetrachloroethane	U		0.130	1.00	1	09/13/2019 23:47	WG1345565
Tetrachloroethene	U		0.372	1.00	1	09/13/2019 23:47	WG1345565
Toluene	U		0.412	1.00	1	09/13/2019 23:47	WG1345565
1,2,3-Trichlorobenzene	U		0.230	1.00	1	09/13/2019 23:47	WG1345565
1,2,4-Trichlorobenzene	U		0.355	1.00	1	09/13/2019 23:47	WG1345565
1,1,1-Trichloroethane	U		0.319	1.00	1	09/13/2019 23:47	WG1345565
1,1,2-Trichloroethane	U		0.383	1.00	1	09/13/2019 23:47	WG1345565
Trichloroethene	U		0.398	1.00	1	09/13/2019 23:47	WG1345565
Trichlorofluoromethane	U		1.20	5.00	1	09/13/2019 23:47	WG1345565
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00	1	09/13/2019 23:47	WG1345565
Vinyl chloride	U		0.259	1.00	1	09/13/2019 23:47	WG1345565
Xylenes, Total	U		1.06	3.00	1	09/13/2019 23:47	WG1345565
(S) Toluene-d8	108			80.0-120		09/13/2019 23:47	WG1345565
(S) 4-Bromofluorobenzene	95.6			77.0-126		09/13/2019 23:47	WG1345565
(S) 1,2-Dichloroethane-d4	92.3			70.0-130		09/13/2019 23:47	WG1345565

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Polychlorinated Biphenyls (GC) by Method 8082

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
PCB 1016	U		0.100	0.500	1	09/10/2019 14:41	WG1342044
PCB 1221	U		0.0730	0.500	1	09/10/2019 14:41	WG1342044
PCB 1232	U		0.0420	0.500	1	09/10/2019 14:41	WG1342044
PCB 1242	U		0.0470	0.500	1	09/10/2019 14:41	WG1342044
PCB 1248	U		0.0860	0.500	1	09/10/2019 14:41	WG1342044
PCB 1254	U		0.0470	0.500	1	09/10/2019 14:41	WG1342044
PCB 1260	U		0.120	0.500	1	09/10/2019 14:41	WG1342044
(S) Decachlorobiphenyl	41.6			10.0-128		09/10/2019 14:41	WG1342044
(S) Tetrachloro-m-xylene	26.7			10.0-127		09/10/2019 14:41	WG1342044

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.316	1.00	1	09/11/2019 17:05	WG1343097
Acenaphthylene	U		0.309	1.00	1	09/11/2019 17:05	WG1343097
Acetophenone	U		2.71	10.0	1	09/11/2019 17:05	WG1343097
Anthracene	U		0.291	1.00	1	09/11/2019 17:05	WG1343097
Atrazine	U		0.260	10.0	1	09/11/2019 17:05	WG1343097
Benzaldehyde	U		1.40	10.0	1	09/11/2019 17:05	WG1343097
Benzo(a)anthracene	U		0.0975	1.00	1	09/11/2019 17:05	WG1343097
Benzo(b)fluoranthene	U		0.0896	1.00	1	09/11/2019 17:05	WG1343097
Benzo(k)fluoranthene	U		0.355	1.00	1	09/11/2019 17:05	WG1343097



Collected date/time: 09/05/19 09:40

L1136948

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(g,h,i)perylene	U		0.161	1.00	1	09/11/2019 17:05	WG1343097
Benzo(a)pyrene	U		0.340	1.00	1	09/11/2019 17:05	WG1343097
Biphenyl	U		0.325	10.0	1	09/11/2019 17:05	WG1343097
Bis(2-chlorethoxy)methane	U		0.329	10.0	1	09/11/2019 17:05	WG1343097
Bis(2-chloroethyl)ether	U		1.62	10.0	1	09/11/2019 17:05	WG1343097
Bis(2-chloroisopropyl)ether	U		0.445	10.0	1	09/11/2019 17:05	WG1343097
4-Bromophenyl-phenylether	U		0.335	10.0	1	09/11/2019 17:05	WG1343097
Caprolactam	U		2.59	10.0	1	09/11/2019 17:05	WG1343097
Carbazole	U		0.260	10.0	1	09/11/2019 17:05	WG1343097
4-Chloroaniline	U		0.382	10.0	1	09/11/2019 17:05	WG1343097
2-Chloronaphthalene	U		0.330	1.00	1	09/11/2019 17:05	WG1343097
4-Chlorophenyl-phenylether	U		0.303	10.0	1	09/11/2019 17:05	WG1343097
Chrysene	U		0.332	1.00	1	09/11/2019 17:05	WG1343097
Dibenz(a,h)anthracene	U		0.279	1.00	1	09/11/2019 17:05	WG1343097
Dibenzofuran	U		0.338	10.0	1	09/11/2019 17:05	WG1343097
3,3-Dichlorobenzidine	U		2.02	10.0	1	09/11/2019 17:05	WG1343097
2,4-Dinitrotoluene	U		1.65	10.0	1	09/11/2019 17:05	WG1343097
2,6-Dinitrotoluene	U		0.279	10.0	1	09/11/2019 17:05	WG1343097
Fluoranthene	U		0.310	1.00	1	09/11/2019 17:05	WG1343097
Fluorene	U		0.323	1.00	1	09/11/2019 17:05	WG1343097
Hexachlorobenzene	U		0.341	1.00	1	09/11/2019 17:05	WG1343097
Hexachloro-1,3-butadiene	U		0.329	10.0	1	09/11/2019 17:05	WG1343097
Hexachlorocyclopentadiene	U		2.33	10.0	1	09/11/2019 17:05	WG1343097
Hexachloroethane	U		0.365	10.0	1	09/11/2019 17:05	WG1343097
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	09/11/2019 17:05	WG1343097
Isophorone	U		0.272	10.0	1	09/11/2019 17:05	WG1343097
2-Methylnaphthalene	U		0.311	1.00	1	09/11/2019 17:05	WG1343097
Naphthalene	U		0.372	1.00	1	09/11/2019 17:05	WG1343097
2-Nitroaniline	U		1.90	10.0	1	09/11/2019 17:05	WG1343097
3-Nitroaniline	U		0.308	10.0	1	09/11/2019 17:05	WG1343097
4-Nitroaniline	U		0.349	10.0	1	09/11/2019 17:05	WG1343097
Nitrobenzene	U		0.367	10.0	1	09/11/2019 17:05	WG1343097
n-Nitrosodiphenylamine	U		1.19	10.0	1	09/11/2019 17:05	WG1343097
n-Nitrosodi-n-propylamine	U		0.403	10.0	1	09/11/2019 17:05	WG1343097
Phenanthrene	U		0.366	1.00	1	09/11/2019 17:05	WG1343097
Benzylbutyl phthalate	U		0.275	3.00	1	09/11/2019 17:05	WG1343097
Bis(2-ethylhexyl)phthalate	U		0.709	3.00	1	09/11/2019 17:05	WG1343097
Di-n-butyl phthalate	0.318	<u>J</u>	0.266	3.00	1	09/11/2019 17:05	WG1343097
Diethyl phthalate	U		0.282	3.00	1	09/11/2019 17:05	WG1343097
Dimethyl phthalate	U		0.283	3.00	1	09/11/2019 17:05	WG1343097
Di-n-octyl phthalate	U		0.278	3.00	1	09/11/2019 17:05	WG1343097
Pyrene	U		0.330	1.00	1	09/11/2019 17:05	WG1343097
1,2,4,5-Tetrachlorobenzene	U		2.41	10.0	1	09/11/2019 17:05	WG1343097
4-Chloro-3-methylphenol	U		0.263	10.0	1	09/11/2019 17:05	WG1343097
2-Chlorophenol	U		0.283	10.0	1	09/11/2019 17:05	WG1343097
2-Methylphenol	U		0.312	10.0	1	09/11/2019 17:05	WG1343097
3&4-Methyl Phenol	U		0.266	10.0	1	09/11/2019 17:05	WG1343097
2,4-Dichlorophenol	U		0.284	10.0	1	09/11/2019 17:05	WG1343097
2,4-Dimethylphenol	U		0.624	10.0	1	09/11/2019 17:05	WG1343097
4,6-Dinitro-2-methylphenol	U		2.62	10.0	1	09/11/2019 17:05	WG1343097
2,4-Dinitrophenol	U		3.25	10.0	1	09/11/2019 17:05	WG1343097
2-Nitrophenol	U		0.320	10.0	1	09/11/2019 17:05	WG1343097
4-Nitrophenol	U		2.01	10.0	1	09/11/2019 17:05	WG1343097
Pentachlorophenol	U		0.313	10.0	1	09/11/2019 17:05	WG1343097
Phenol	0.463	<u>B J</u>	0.334	10.0	1	09/11/2019 17:05	WG1343097
2,4,5-Trichlorophenol	U		0.236	10.0	1	09/11/2019 17:05	WG1343097

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
2,4,6-Trichlorophenol	U		0.297	10.0	1	09/11/2019 17:05	WG1343097
(S) 2-Fluorophenol	29.5			10.0-120		09/11/2019 17:05	WG1343097
(S) Phenol-d5	18.4			10.0-120		09/11/2019 17:05	WG1343097
(S) Nitrobenzene-d5	44.9			10.0-127		09/11/2019 17:05	WG1343097
(S) 2-Fluorobiphenyl	48.3			10.0-130		09/11/2019 17:05	WG1343097
(S) 2,4,6-Tribromophenol	50.0			10.0-155		09/11/2019 17:05	WG1343097
(S) p-Terphenyl-d14	64.9			10.0-128		09/11/2019 17:05	WG1343097

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Collected date/time: 09/05/19 11:22

L1136948

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury,Dissolved	U		0.0490	0.200	1	09/09/2019 18:24	WG1342092

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	132		5.15	100	1	09/13/2019 15:59	WG1342142
Antimony,Dissolved	1.02	J	0.754	2.00	1	09/13/2019 15:59	WG1342142
Arsenic,Dissolved	41.8		0.250	2.00	1	09/13/2019 15:59	WG1342142
Barium,Dissolved	126		0.360	5.00	1	09/13/2019 15:59	WG1342142
Beryllium,Dissolved	U		0.120	2.00	1	09/13/2019 15:59	WG1342142
Cadmium,Dissolved	U		0.160	1.00	1	09/13/2019 15:59	WG1342142
Calcium,Dissolved	201000		46.0	1000	1	09/13/2019 15:59	WG1342142
Chromium,Dissolved	6.50	B	0.540	2.00	1	09/13/2019 15:59	WG1342142
Copper,Dissolved	0.929	J	0.520	5.00	1	09/13/2019 15:59	WG1342142
Cobalt,Dissolved	2.54		0.260	2.00	1	09/13/2019 15:59	WG1342142
Iron,Dissolved	35600		15.0	100	1	09/13/2019 15:59	WG1342142
Lead,Dissolved	1.77	B J	0.240	2.00	1	09/13/2019 15:59	WG1342142
Magnesium,Dissolved	76100		100	1000	1	09/13/2019 15:59	WG1342142
Manganese,Dissolved	999		0.250	5.00	1	09/13/2019 15:59	WG1342142
Nickel,Dissolved	5.32		0.350	2.00	1	09/13/2019 15:59	WG1342142
Potassium,Dissolved	8420		37.0	1000	1	09/13/2019 15:59	WG1342142
Selenium,Dissolved	0.871	J	0.380	2.00	1	09/13/2019 15:59	WG1342142
Silver,Dissolved	U		0.310	2.00	1	09/13/2019 15:59	WG1342142
Sodium,Dissolved	28600		110	1000	1	09/13/2019 15:59	WG1342142
Thallium,Dissolved	U		0.190	2.00	1	09/13/2019 15:59	WG1342142
Vanadium,Dissolved	12.5		0.180	5.00	1	09/13/2019 15:59	WG1342142
Zinc,Dissolved	3.89	J	2.56	25.0	1	09/13/2019 15:59	WG1342142

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		10.0	50.0	1	09/14/2019 00:07	WG1345565
Benzene	U		0.331	1.00	1	09/14/2019 00:07	WG1345565
Bromochloromethane	U		0.520	1.00	1	09/14/2019 00:07	WG1345565
Bromodichloromethane	U		0.380	1.00	1	09/14/2019 00:07	WG1345565
Bromoform	U		0.469	1.00	1	09/14/2019 00:07	WG1345565
Bromomethane	U		0.866	5.00	1	09/14/2019 00:07	WG1345565
Carbon disulfide	U		0.275	1.00	1	09/14/2019 00:07	WG1345565
Carbon tetrachloride	U		0.379	1.00	1	09/14/2019 00:07	WG1345565
Chlorobenzene	U		0.348	1.00	1	09/14/2019 00:07	WG1345565
Chlorodibromomethane	U		0.327	1.00	1	09/14/2019 00:07	WG1345565
Chloroethane	U		0.453	5.00	1	09/14/2019 00:07	WG1345565
Chloroform	U		0.324	5.00	1	09/14/2019 00:07	WG1345565
Chloromethane	U		0.276	2.50	1	09/14/2019 00:07	WG1345565
Cyclohexane	U		0.390	1.00	1	09/14/2019 00:07	WG1345565
1,2-Dibromo-3-Chloropropane	U		1.33	5.00	1	09/14/2019 00:07	WG1345565
1,2-Dibromoethane	U		0.381	1.00	1	09/14/2019 00:07	WG1345565
1,2-Dichlorobenzene	U		0.349	1.00	1	09/14/2019 00:07	WG1345565
1,3-Dichlorobenzene	U		0.220	1.00	1	09/14/2019 00:07	WG1345565
1,4-Dichlorobenzene	U		0.274	1.00	1	09/14/2019 00:07	WG1345565
Dichlorodifluoromethane	U		0.551	5.00	1	09/14/2019 00:07	WG1345565
1,1-Dichloroethane	U		0.259	1.00	1	09/14/2019 00:07	WG1345565
1,2-Dichloroethane	U		0.361	1.00	1	09/14/2019 00:07	WG1345565
1,1-Dichloroethene	U		0.398	1.00	1	09/14/2019 00:07	WG1345565
cis-1,2-Dichloroethene	U		0.260	1.00	1	09/14/2019 00:07	WG1345565





Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
trans-1,2-Dichloroethene	U		0.396	1.00	1	09/14/2019 00:07	WG1345565
1,2-Dichloropropane	U		0.306	1.00	1	09/14/2019 00:07	WG1345565
cis-1,3-Dichloropropene	U		0.418	1.00	1	09/14/2019 00:07	WG1345565
trans-1,3-Dichloropropene	U		0.419	1.00	1	09/14/2019 00:07	WG1345565
Ethylbenzene	U		0.384	1.00	1	09/14/2019 00:07	WG1345565
2-Hexanone	U		3.82	10.0	1	09/14/2019 00:07	WG1345565
Isopropylbenzene	U		0.326	1.00	1	09/14/2019 00:07	WG1345565
2-Butanone (MEK)	U		3.93	10.0	1	09/14/2019 00:07	WG1345565
Methyl Acetate	U		4.30	20.0	1	09/14/2019 00:07	WG1345565
Methyl Cyclohexane	U		0.380	1.00	1	09/14/2019 00:07	WG1345565
Methylene Chloride	U		1.00	5.00	1	09/14/2019 00:07	WG1345565
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	09/14/2019 00:07	WG1345565
Methyl tert-butyl ether	U		0.367	1.00	1	09/14/2019 00:07	WG1345565
Styrene	U		0.307	1.00	1	09/14/2019 00:07	WG1345565
1,1,2,2-Tetrachloroethane	U		0.130	1.00	1	09/14/2019 00:07	WG1345565
Tetrachloroethene	U		0.372	1.00	1	09/14/2019 00:07	WG1345565
Toluene	U		0.412	1.00	1	09/14/2019 00:07	WG1345565
1,2,3-Trichlorobenzene	U		0.230	1.00	1	09/14/2019 00:07	WG1345565
1,2,4-Trichlorobenzene	U		0.355	1.00	1	09/14/2019 00:07	WG1345565
1,1,1-Trichloroethane	U		0.319	1.00	1	09/14/2019 00:07	WG1345565
1,1,2-Trichloroethane	U		0.383	1.00	1	09/14/2019 00:07	WG1345565
Trichloroethene	U		0.398	1.00	1	09/14/2019 00:07	WG1345565
Trichlorofluoromethane	U		1.20	5.00	1	09/14/2019 00:07	WG1345565
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00	1	09/14/2019 00:07	WG1345565
Vinyl chloride	U		0.259	1.00	1	09/14/2019 00:07	WG1345565
Xylenes, Total	U		1.06	3.00	1	09/14/2019 00:07	WG1345565
(S) Toluene-d8	108			80.0-120		09/14/2019 00:07	WG1345565
(S) 4-Bromofluorobenzene	93.6			77.0-126		09/14/2019 00:07	WG1345565
(S) 1,2-Dichloroethane-d4	93.2			70.0-130		09/14/2019 00:07	WG1345565

1	Cp
2	Tc
3	Ss
4	Cn
5	Sr
6	Qc
7	Gl
8	Al
9	Sc

Polychlorinated Biphenyls (GC) by Method 8082

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
PCB 1016	U		0.100	0.500	1	09/10/2019 14:57	WG1342044
PCB 1221	U		0.0730	0.500	1	09/10/2019 14:57	WG1342044
PCB 1232	U		0.0420	0.500	1	09/10/2019 14:57	WG1342044
PCB 1242	U		0.0470	0.500	1	09/10/2019 14:57	WG1342044
PCB 1248	U		0.0860	0.500	1	09/10/2019 14:57	WG1342044
PCB 1254	U		0.0470	0.500	1	09/10/2019 14:57	WG1342044
PCB 1260	U		0.120	0.500	1	09/10/2019 14:57	WG1342044
(S) Decachlorobiphenyl	51.2			10.0-128		09/10/2019 14:57	WG1342044
(S) Tetrachloro-m-xylene	38.8			10.0-127		09/10/2019 14:57	WG1342044

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acenaphthene	1.94	J	1.58	5.00	5	09/11/2019 22:59	WG1343097
Acenaphthylene	U		1.54	5.00	5	09/11/2019 22:59	WG1343097
Acetophenone	U		13.6	50.0	5	09/11/2019 22:59	WG1343097
Anthracene	U		1.46	5.00	5	09/11/2019 22:59	WG1343097
Atrazine	U		1.30	50.0	5	09/11/2019 22:59	WG1343097
Benzaldehyde	U		7.00	50.0	5	09/11/2019 22:59	WG1343097
Benzo(a)anthracene	U		0.488	5.00	5	09/11/2019 22:59	WG1343097
Benzo(b)fluoranthene	U		0.448	5.00	5	09/11/2019 22:59	WG1343097
Benzo(k)fluoranthene	U		1.78	5.00	5	09/11/2019 22:59	WG1343097



Collected date/time: 09/05/19 11:22

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Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(g,h,i)perylene	U		0.805	5.00	5	09/11/2019 22:59	WG1343097
Benzo(a)pyrene	U		1.70	5.00	5	09/11/2019 22:59	WG1343097
Biphenyl	U		1.63	50.0	5	09/11/2019 22:59	WG1343097
Bis(2-chlorethoxy)methane	U		1.64	50.0	5	09/11/2019 22:59	WG1343097
Bis(2-chloroethyl)ether	U		8.10	50.0	5	09/11/2019 22:59	WG1343097
Bis(2-chloroisopropyl)ether	U		2.22	50.0	5	09/11/2019 22:59	WG1343097
4-Bromophenyl-phenylether	U		1.68	50.0	5	09/11/2019 22:59	WG1343097
Caprolactam	U		13.0	50.0	5	09/11/2019 22:59	WG1343097
Carbazole	16.0	<u>I</u>	1.30	50.0	5	09/11/2019 22:59	WG1343097
4-Chloroaniline	U		1.91	50.0	5	09/11/2019 22:59	WG1343097
2-Chloronaphthalene	U		1.65	5.00	5	09/11/2019 22:59	WG1343097
4-Chlorophenyl-phenylether	U		1.52	50.0	5	09/11/2019 22:59	WG1343097
Chrysene	U		1.66	5.00	5	09/11/2019 22:59	WG1343097
Dibenz(a,h)anthracene	U		1.40	5.00	5	09/11/2019 22:59	WG1343097
Dibenzofuran	2.15	<u>I</u>	1.69	50.0	5	09/11/2019 22:59	WG1343097
3,3-Dichlorobenzidine	U		10.1	50.0	5	09/11/2019 22:59	WG1343097
2,4-Dinitrotoluene	U		8.25	50.0	5	09/11/2019 22:59	WG1343097
2,6-Dinitrotoluene	U		1.40	50.0	5	09/11/2019 22:59	WG1343097
Fluoranthene	U		1.55	5.00	5	09/11/2019 22:59	WG1343097
Fluorene	3.80	<u>I</u>	1.61	5.00	5	09/11/2019 22:59	WG1343097
Hexachlorobenzene	U		1.70	5.00	5	09/11/2019 22:59	WG1343097
Hexachloro-1,3-butadiene	U		1.64	50.0	5	09/11/2019 22:59	WG1343097
Hexachlorocyclopentadiene	U		11.7	50.0	5	09/11/2019 22:59	WG1343097
Hexachloroethane	U		1.83	50.0	5	09/11/2019 22:59	WG1343097
Indeno(1,2,3-cd)pyrene	U		1.40	5.00	5	09/11/2019 22:59	WG1343097
Isophorone	U		1.36	50.0	5	09/11/2019 22:59	WG1343097
2-Methylnaphthalene	54.5		1.56	5.00	5	09/11/2019 22:59	WG1343097
Naphthalene	U		1.86	5.00	5	09/11/2019 22:59	WG1343097
2-Nitroaniline	U		9.50	50.0	5	09/11/2019 22:59	WG1343097
3-Nitroaniline	U		1.54	50.0	5	09/11/2019 22:59	WG1343097
4-Nitroaniline	U		1.74	50.0	5	09/11/2019 22:59	WG1343097
Nitrobenzene	U		1.84	50.0	5	09/11/2019 22:59	WG1343097
n-Nitrosodiphenylamine	U		5.95	50.0	5	09/11/2019 22:59	WG1343097
n-Nitrosodi-n-propylamine	U		2.01	50.0	5	09/11/2019 22:59	WG1343097
Phenanthrene	12.8		1.83	5.00	5	09/11/2019 22:59	WG1343097
Benzylbutyl phthalate	U		1.38	15.0	5	09/11/2019 22:59	WG1343097
Bis(2-ethylhexyl)phthalate	U		3.55	15.0	5	09/11/2019 22:59	WG1343097
Di-n-butyl phthalate	U		1.33	15.0	5	09/11/2019 22:59	WG1343097
Diethyl phthalate	U		1.41	15.0	5	09/11/2019 22:59	WG1343097
Dimethyl phthalate	U		1.41	15.0	5	09/11/2019 22:59	WG1343097
Di-n-octyl phthalate	U		1.39	15.0	5	09/11/2019 22:59	WG1343097
Pyrene	U		1.65	5.00	5	09/11/2019 22:59	WG1343097
1,2,4,5-Tetrachlorobenzene	U		12.0	50.0	5	09/11/2019 22:59	WG1343097
4-Chloro-3-methylphenol	U		1.32	50.0	5	09/11/2019 22:59	WG1343097
2-Chlorophenol	U		1.41	50.0	5	09/11/2019 22:59	WG1343097
2-Methylphenol	U		1.56	50.0	5	09/11/2019 22:59	WG1343097
3&4-Methyl Phenol	U		1.33	50.0	5	09/11/2019 22:59	WG1343097
2,4-Dichlorophenol	U		1.42	50.0	5	09/11/2019 22:59	WG1343097
2,4-Dimethylphenol	9.28	<u>I</u>	3.12	50.0	5	09/11/2019 22:59	WG1343097
4,6-Dinitro-2-methylphenol	U		13.1	50.0	5	09/11/2019 22:59	WG1343097
2,4-Dinitrophenol	U		16.3	50.0	5	09/11/2019 22:59	WG1343097
2-Nitrophenol	U		1.60	50.0	5	09/11/2019 22:59	WG1343097
4-Nitrophenol	U		10.1	50.0	5	09/11/2019 22:59	WG1343097
Pentachlorophenol	U		1.57	50.0	5	09/11/2019 22:59	WG1343097
Phenol	2.08	<u>B</u> <u>J</u>	1.67	50.0	5	09/11/2019 22:59	WG1343097
2,4,5-Trichlorophenol	U		1.18	50.0	5	09/11/2019 22:59	WG1343097

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
2,4,6-Trichlorophenol	U		1.48	50.0	5	09/11/2019 22:59	WG1343097
(S) 2-Fluorophenol	28.4			10.0-120		09/11/2019 22:59	WG1343097
(S) Phenol-d5	18.5			10.0-120		09/11/2019 22:59	WG1343097
(S) Nitrobenzene-d5	34.5			10.0-127		09/11/2019 22:59	WG1343097
(S) 2-Fluorobiphenyl	37.8			10.0-130		09/11/2019 22:59	WG1343097
(S) 2,4,6-Tribromophenol	45.8			10.0-155		09/11/2019 22:59	WG1343097
(S) p-Terphenyl-d14	51.7			10.0-128		09/11/2019 22:59	WG1343097

Sample Narrative:

L1136948-02 WG1343097: Cannot run at lower dilution due to viscosity of extract

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury,Dissolved	U		0.0490	0.200	1	09/09/2019 18:26	WG1342092

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	232		5.15	100	1	09/13/2019 16:03	WG1342142
Antimony,Dissolved	U		0.754	2.00	1	09/13/2019 16:03	WG1342142
Arsenic,Dissolved	8.79		0.250	2.00	1	09/13/2019 16:03	WG1342142
Barium,Dissolved	76.9		0.360	5.00	1	09/13/2019 16:03	WG1342142
Beryllium,Dissolved	U		0.120	2.00	1	09/13/2019 16:03	WG1342142
Cadmium,Dissolved	U		0.160	1.00	1	09/13/2019 16:03	WG1342142
Calcium,Dissolved	140000		46.0	1000	1	09/13/2019 16:03	WG1342142
Chromium,Dissolved	2.12	B	0.540	2.00	1	09/13/2019 16:03	WG1342142
Copper,Dissolved	1.90	J	0.520	5.00	1	09/13/2019 16:03	WG1342142
Cobalt,Dissolved	2.05		0.260	2.00	1	09/13/2019 16:03	WG1342142
Iron,Dissolved	12200		15.0	100	1	09/13/2019 16:03	WG1342142
Lead,Dissolved	5.51		0.240	2.00	1	09/13/2019 16:03	WG1342142
Magnesium,Dissolved	25700		100	1000	1	09/13/2019 16:03	WG1342142
Manganese,Dissolved	1060		0.250	5.00	1	09/13/2019 16:03	WG1342142
Nickel,Dissolved	1.85	J	0.350	2.00	1	09/13/2019 16:03	WG1342142
Potassium,Dissolved	2040		37.0	1000	1	09/13/2019 16:03	WG1342142
Selenium,Dissolved	0.755	J	0.380	2.00	1	09/13/2019 16:03	WG1342142
Silver,Dissolved	U		0.310	2.00	1	09/13/2019 16:03	WG1342142
Sodium,Dissolved	4800		110	1000	1	09/13/2019 16:03	WG1342142
Thallium,Dissolved	U		0.190	2.00	1	09/13/2019 16:03	WG1342142
Vanadium,Dissolved	3.75	J	0.180	5.00	1	09/13/2019 16:03	WG1342142
Zinc,Dissolved	6.80	J	2.56	25.0	1	09/13/2019 16:03	WG1342142

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		10.0	50.0	1	09/14/2019 00:27	WG1345565
Benzene	93.3		1.66	5.00	5	09/16/2019 17:38	WG1346102
Bromochloromethane	U		0.520	1.00	1	09/14/2019 00:27	WG1345565
Bromodichloromethane	U		0.380	1.00	1	09/14/2019 00:27	WG1345565
Bromoform	U		0.469	1.00	1	09/14/2019 00:27	WG1345565
Bromomethane	U		0.866	5.00	1	09/14/2019 00:27	WG1345565
Carbon disulfide	0.417	J	0.275	1.00	1	09/14/2019 00:27	WG1345565
Carbon tetrachloride	U		0.379	1.00	1	09/14/2019 00:27	WG1345565
Chlorobenzene	U		0.348	1.00	1	09/14/2019 00:27	WG1345565
Chlorodibromomethane	U		0.327	1.00	1	09/14/2019 00:27	WG1345565
Chloroethane	U		0.453	5.00	1	09/14/2019 00:27	WG1345565
Chloroform	U		0.324	5.00	1	09/14/2019 00:27	WG1345565
Chloromethane	U		0.276	2.50	1	09/14/2019 00:27	WG1345565
Cyclohexane	40.0		0.390	1.00	1	09/14/2019 00:27	WG1345565
1,2-Dibromo-3-Chloropropane	U		1.33	5.00	1	09/14/2019 00:27	WG1345565
1,2-Dibromoethane	U		0.381	1.00	1	09/14/2019 00:27	WG1345565
1,2-Dichlorobenzene	U		0.349	1.00	1	09/14/2019 00:27	WG1345565
1,3-Dichlorobenzene	U		0.220	1.00	1	09/14/2019 00:27	WG1345565
1,4-Dichlorobenzene	U		0.274	1.00	1	09/14/2019 00:27	WG1345565
Dichlorodifluoromethane	U		0.551	5.00	1	09/14/2019 00:27	WG1345565
1,1-Dichloroethane	U		0.259	1.00	1	09/14/2019 00:27	WG1345565
1,2-Dichloroethane	U		0.361	1.00	1	09/14/2019 00:27	WG1345565
1,1-Dichloroethene	U		0.398	1.00	1	09/14/2019 00:27	WG1345565
cis-1,2-Dichloroethene	U		0.260	1.00	1	09/14/2019 00:27	WG1345565



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
trans-1,2-Dichloroethene	U		0.396	1.00	1	09/14/2019 00:27	WG1345565
1,2-Dichloropropane	U		0.306	1.00	1	09/14/2019 00:27	WG1345565
cis-1,3-Dichloropropene	U		0.418	1.00	1	09/14/2019 00:27	WG1345565
trans-1,3-Dichloropropene	U		0.419	1.00	1	09/14/2019 00:27	WG1345565
Ethylbenzene	7.04		1.92	5.00	5	09/16/2019 18:59	WG1346102
2-Hexanone	U		3.82	10.0	1	09/14/2019 00:27	WG1345565
Isopropylbenzene	6.53		0.326	1.00	1	09/14/2019 00:27	WG1345565
2-Butanone (MEK)	U		3.93	10.0	1	09/14/2019 00:27	WG1345565
Methyl Acetate	U		4.30	20.0	1	09/14/2019 00:27	WG1345565
Methyl Cyclohexane	34.1		0.380	1.00	1	09/14/2019 00:27	WG1345565
Methylene Chloride	U		1.00	5.00	1	09/14/2019 00:27	WG1345565
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	09/14/2019 00:27	WG1345565
Methyl tert-butyl ether	U		0.367	1.00	1	09/14/2019 00:27	WG1345565
Styrene	U		0.307	1.00	1	09/14/2019 00:27	WG1345565
1,1,2,2-Tetrachloroethane	U		0.130	1.00	1	09/14/2019 00:27	WG1345565
Tetrachloroethene	U		0.372	1.00	1	09/14/2019 00:27	WG1345565
Toluene	5.15		2.06	5.00	5	09/16/2019 18:59	WG1346102
1,2,3-Trichlorobenzene	U		0.230	1.00	1	09/14/2019 00:27	WG1345565
1,2,4-Trichlorobenzene	U		0.355	1.00	1	09/14/2019 00:27	WG1345565
1,1,1-Trichloroethane	U		0.319	1.00	1	09/14/2019 00:27	WG1345565
1,1,2-Trichloroethane	U		0.383	1.00	1	09/14/2019 00:27	WG1345565
Trichloroethene	U		0.398	1.00	1	09/14/2019 00:27	WG1345565
Trichlorofluoromethane	U		1.20	5.00	1	09/14/2019 00:27	WG1345565
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00	1	09/14/2019 00:27	WG1345565
Vinyl chloride	U		0.259	1.00	1	09/14/2019 00:27	WG1345565
Xylenes, Total	21.1		5.30	15.0	5	09/16/2019 18:59	WG1346102
(S) Toluene-d8	107			80.0-120		09/14/2019 00:27	WG1345565
(S) Toluene-d8	101			80.0-120		09/16/2019 17:38	WG1346102
(S) Toluene-d8	104			80.0-120		09/16/2019 18:59	WG1346102
(S) 4-Bromofluorobenzene	96.1			77.0-126		09/14/2019 00:27	WG1345565
(S) 4-Bromofluorobenzene	89.8			77.0-126		09/16/2019 17:38	WG1346102
(S) 4-Bromofluorobenzene	92.9			77.0-126		09/16/2019 18:59	WG1346102
(S) 1,2-Dichloroethane-d4	86.7			70.0-130		09/14/2019 00:27	WG1345565
(S) 1,2-Dichloroethane-d4	103			70.0-130		09/16/2019 18:59	WG1346102
(S) 1,2-Dichloroethane-d4	105			70.0-130		09/16/2019 17:38	WG1346102

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Polychlorinated Biphenyls (GC) by Method 8082

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
PCB 1016	U		0.100	0.500	1	09/10/2019 15:13	WG1342044
PCB 1221	U		0.0730	0.500	1	09/10/2019 15:13	WG1342044
PCB 1232	U		0.0420	0.500	1	09/10/2019 15:13	WG1342044
PCB 1242	U		0.0470	0.500	1	09/10/2019 15:13	WG1342044
PCB 1248	U		0.0860	0.500	1	09/10/2019 15:13	WG1342044
PCB 1254	U		0.0470	0.500	1	09/10/2019 15:13	WG1342044
PCB 1260	U		0.120	0.500	1	09/10/2019 15:13	WG1342044
(S) Decachlorobiphenyl	46.5			10.0-128		09/10/2019 15:13	WG1342044
(S) Tetrachloro-m-xylene	39.2			10.0-127		09/10/2019 15:13	WG1342044



Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		1.58	5.00	5	09/11/2019 23:21	WG1343097
Acenaphthylene	U		1.54	5.00	5	09/11/2019 23:21	WG1343097
Acetophenone	U		13.6	50.0	5	09/11/2019 23:21	WG1343097
Anthracene	U		1.46	5.00	5	09/11/2019 23:21	WG1343097
Atrazine	U		1.30	50.0	5	09/11/2019 23:21	WG1343097
Benzaldehyde	U		7.00	50.0	5	09/11/2019 23:21	WG1343097
Benzo(a)anthracene	U		0.488	5.00	5	09/11/2019 23:21	WG1343097
Benzo(b)fluoranthene	U		0.448	5.00	5	09/11/2019 23:21	WG1343097
Benzo(k)fluoranthene	U		1.78	5.00	5	09/11/2019 23:21	WG1343097
Benzo(g,h,i)perylene	U		0.805	5.00	5	09/11/2019 23:21	WG1343097
Benzo(a)pyrene	U		1.70	5.00	5	09/11/2019 23:21	WG1343097
Biphenyl	U		1.63	50.0	5	09/11/2019 23:21	WG1343097
Bis(2-chloroethoxy)methane	U		1.64	50.0	5	09/11/2019 23:21	WG1343097
Bis(2-chloroethyl)ether	U		8.10	50.0	5	09/11/2019 23:21	WG1343097
Bis(2-chloroisopropyl)ether	U		2.22	50.0	5	09/11/2019 23:21	WG1343097
4-Bromophenyl-phenylether	U		1.68	50.0	5	09/11/2019 23:21	WG1343097
Caprolactam	U		13.0	50.0	5	09/11/2019 23:21	WG1343097
Carbazole	U		1.30	50.0	5	09/11/2019 23:21	WG1343097
4-Chloroaniline	U		1.91	50.0	5	09/11/2019 23:21	WG1343097
2-Chloronaphthalene	U		1.65	5.00	5	09/11/2019 23:21	WG1343097
4-Chlorophenyl-phenylether	U		1.52	50.0	5	09/11/2019 23:21	WG1343097
Chrysene	U		1.66	5.00	5	09/11/2019 23:21	WG1343097
Dibenz(a,h)anthracene	U		1.40	5.00	5	09/11/2019 23:21	WG1343097
Dibenzofuran	U		1.69	50.0	5	09/11/2019 23:21	WG1343097
3,3-Dichlorobenzidine	U		10.1	50.0	5	09/11/2019 23:21	WG1343097
2,4-Dinitrotoluene	U		8.25	50.0	5	09/11/2019 23:21	WG1343097
2,6-Dinitrotoluene	U		1.40	50.0	5	09/11/2019 23:21	WG1343097
Fluoranthene	U		1.55	5.00	5	09/11/2019 23:21	WG1343097
Fluorene	U		1.61	5.00	5	09/11/2019 23:21	WG1343097
Hexachlorobenzene	U		1.70	5.00	5	09/11/2019 23:21	WG1343097
Hexachloro-1,3-butadiene	U		1.64	50.0	5	09/11/2019 23:21	WG1343097
Hexachlorocyclopentadiene	U		11.7	50.0	5	09/11/2019 23:21	WG1343097
Hexachloroethane	U		1.83	50.0	5	09/11/2019 23:21	WG1343097
Indeno(1,2,3-cd)pyrene	U		1.40	5.00	5	09/11/2019 23:21	WG1343097
Isophorone	U		1.36	50.0	5	09/11/2019 23:21	WG1343097
2-Methylnaphthalene	18.4		1.56	5.00	5	09/11/2019 23:21	WG1343097
Naphthalene	U		1.86	5.00	5	09/11/2019 23:21	WG1343097
2-Nitroaniline	U		9.50	50.0	5	09/11/2019 23:21	WG1343097
3-Nitroaniline	U		1.54	50.0	5	09/11/2019 23:21	WG1343097
4-Nitroaniline	U		1.74	50.0	5	09/11/2019 23:21	WG1343097
Nitrobenzene	U		1.84	50.0	5	09/11/2019 23:21	WG1343097
n-Nitrosodiphenylamine	U		5.95	50.0	5	09/11/2019 23:21	WG1343097
n-Nitrosodi-n-propylamine	U		2.01	50.0	5	09/11/2019 23:21	WG1343097
Phenanthrene	3.00	U	1.83	5.00	5	09/11/2019 23:21	WG1343097
Benzylbutyl phthalate	U		1.38	15.0	5	09/11/2019 23:21	WG1343097
Bis(2-ethylhexyl)phthalate	U		3.55	15.0	5	09/11/2019 23:21	WG1343097
Di-n-butyl phthalate	U		1.33	15.0	5	09/11/2019 23:21	WG1343097
Diethyl phthalate	U		1.41	15.0	5	09/11/2019 23:21	WG1343097
Dimethyl phthalate	U		1.41	15.0	5	09/11/2019 23:21	WG1343097
Di-n-octyl phthalate	U		1.39	15.0	5	09/11/2019 23:21	WG1343097
Pyrene	U		1.65	5.00	5	09/11/2019 23:21	WG1343097
1,2,4,5-Tetrachlorobenzene	U		12.0	50.0	5	09/11/2019 23:21	WG1343097
4-Chloro-3-methylphenol	U		1.32	50.0	5	09/11/2019 23:21	WG1343097
2-Chlorophenol	U		1.41	50.0	5	09/11/2019 23:21	WG1343097
2-Methylphenol	U		1.56	50.0	5	09/11/2019 23:21	WG1343097
3&4-Methyl Phenol	U		1.33	50.0	5	09/11/2019 23:21	WG1343097

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
2,4-Dichlorophenol	U		1.42	50.0	5	09/11/2019 23:21	WG1343097
2,4-Dimethylphenol	U		3.12	50.0	5	09/11/2019 23:21	WG1343097
4,6-Dinitro-2-methylphenol	U		13.1	50.0	5	09/11/2019 23:21	WG1343097
2,4-Dinitrophenol	U		16.3	50.0	5	09/11/2019 23:21	WG1343097
2-Nitrophenol	U		1.60	50.0	5	09/11/2019 23:21	WG1343097
4-Nitrophenol	U		10.1	50.0	5	09/11/2019 23:21	WG1343097
Pentachlorophenol	U		1.57	50.0	5	09/11/2019 23:21	WG1343097
Phenol	3.21	BJ	1.67	50.0	5	09/11/2019 23:21	WG1343097
2,4,5-Trichlorophenol	U		1.18	50.0	5	09/11/2019 23:21	WG1343097
2,4,6-Trichlorophenol	U		1.48	50.0	5	09/11/2019 23:21	WG1343097
(S) 2-Fluorophenol	30.7			10.0-120		09/11/2019 23:21	WG1343097
(S) Phenol-d5	21.0			10.0-120		09/11/2019 23:21	WG1343097
(S) Nitrobenzene-d5	45.9			10.0-127		09/11/2019 23:21	WG1343097
(S) 2-Fluorobiphenyl	47.3			10.0-130		09/11/2019 23:21	WG1343097
(S) 2,4,6-Tribromophenol	60.0			10.0-155		09/11/2019 23:21	WG1343097
(S) p-Terphenyl-d14	67.5			10.0-128		09/11/2019 23:21	WG1343097

Sample Narrative:

L1136948-03 WG1343097: Cannot run at lower dilution due to viscosity of extract

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury,Dissolved	U		0.0490	0.200	1	09/09/2019 18:28	WG1342092

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	207		5.15	100	1	09/13/2019 16:07	WG1342142
Antimony,Dissolved	2.55		0.754	2.00	1	09/13/2019 16:07	WG1342142
Arsenic,Dissolved	1.33	J	0.250	2.00	1	09/13/2019 16:07	WG1342142
Barium,Dissolved	48.2		0.360	5.00	1	09/13/2019 16:07	WG1342142
Beryllium,Dissolved	U		0.120	2.00	1	09/13/2019 16:07	WG1342142
Cadmium,Dissolved	U		0.160	1.00	1	09/13/2019 16:07	WG1342142
Calcium,Dissolved	75300		46.0	1000	1	09/13/2019 16:07	WG1342142
Chromium,Dissolved	1.18	B J	0.540	2.00	1	09/13/2019 16:07	WG1342142
Copper,Dissolved	3.83	J	0.520	5.00	1	09/13/2019 16:07	WG1342142
Cobalt,Dissolved	1.48	J	0.260	2.00	1	09/13/2019 16:07	WG1342142
Iron,Dissolved	1060		15.0	100	1	09/13/2019 16:07	WG1342142
Lead,Dissolved	2.41	B	0.240	2.00	1	09/13/2019 16:07	WG1342142
Magnesium,Dissolved	30500		100	1000	1	09/13/2019 16:07	WG1342142
Manganese,Dissolved	217		0.250	5.00	1	09/13/2019 16:07	WG1342142
Nickel,Dissolved	2.34		0.350	2.00	1	09/13/2019 16:07	WG1342142
Potassium,Dissolved	4960		37.0	1000	1	09/13/2019 16:07	WG1342142
Selenium,Dissolved	5.59		0.380	2.00	1	09/13/2019 16:07	WG1342142
Silver,Dissolved	U		0.310	2.00	1	09/13/2019 16:07	WG1342142
Sodium,Dissolved	12300		110	1000	1	09/13/2019 16:07	WG1342142
Thallium,Dissolved	U		0.190	2.00	1	09/13/2019 16:07	WG1342142
Vanadium,Dissolved	0.730	J	0.180	5.00	1	09/13/2019 16:07	WG1342142
Zinc,Dissolved	5.38	J	2.56	25.0	1	09/13/2019 16:07	WG1342142

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		10.0	50.0	1	09/14/2019 00:47	WG1345565
Benzene	110		0.331	1.00	1	09/14/2019 00:47	WG1345565
Bromochloromethane	U		0.520	1.00	1	09/14/2019 00:47	WG1345565
Bromodichloromethane	U		0.380	1.00	1	09/14/2019 00:47	WG1345565
Bromoform	U		0.469	1.00	1	09/14/2019 00:47	WG1345565
Bromomethane	U		0.866	5.00	1	09/14/2019 00:47	WG1345565
Carbon disulfide	U		0.275	1.00	1	09/14/2019 00:47	WG1345565
Carbon tetrachloride	U		0.379	1.00	1	09/14/2019 00:47	WG1345565
Chlorobenzene	U		0.348	1.00	1	09/14/2019 00:47	WG1345565
Chlorodibromomethane	U		0.327	1.00	1	09/14/2019 00:47	WG1345565
Chloroethane	U		0.453	5.00	1	09/14/2019 00:47	WG1345565
Chloroform	U		0.324	5.00	1	09/14/2019 00:47	WG1345565
Chloromethane	U		0.276	2.50	1	09/14/2019 00:47	WG1345565
Cyclohexane	33.5		0.390	1.00	1	09/14/2019 00:47	WG1345565
1,2-Dibromo-3-Chloropropane	U		1.33	5.00	1	09/14/2019 00:47	WG1345565
1,2-Dibromoethane	U		0.381	1.00	1	09/14/2019 00:47	WG1345565
1,2-Dichlorobenzene	U		0.349	1.00	1	09/14/2019 00:47	WG1345565
1,3-Dichlorobenzene	U		0.220	1.00	1	09/14/2019 00:47	WG1345565
1,4-Dichlorobenzene	U		0.274	1.00	1	09/14/2019 00:47	WG1345565
Dichlorodifluoromethane	U		0.551	5.00	1	09/14/2019 00:47	WG1345565
1,1-Dichloroethane	U		0.259	1.00	1	09/14/2019 00:47	WG1345565
1,2-Dichloroethane	U		0.361	1.00	1	09/14/2019 00:47	WG1345565
1,1-Dichloroethene	U		0.398	1.00	1	09/14/2019 00:47	WG1345565
cis-1,2-Dichloroethene	U		0.260	1.00	1	09/14/2019 00:47	WG1345565



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
trans-1,2-Dichloroethene	U		0.396	1.00	1	09/14/2019 00:47	WG1345565
1,2-Dichloropropane	U		0.306	1.00	1	09/14/2019 00:47	WG1345565
cis-1,3-Dichloropropene	U		0.418	1.00	1	09/14/2019 00:47	WG1345565
trans-1,3-Dichloropropene	U		0.419	1.00	1	09/14/2019 00:47	WG1345565
Ethylbenzene	7.04		0.384	1.00	1	09/14/2019 00:47	WG1345565
2-Hexanone	U		3.82	10.0	1	09/14/2019 00:47	WG1345565
Isopropylbenzene	2.79		0.326	1.00	1	09/14/2019 00:47	WG1345565
2-Butanone (MEK)	U		3.93	10.0	1	09/14/2019 00:47	WG1345565
Methyl Acetate	U		4.30	20.0	1	09/14/2019 00:47	WG1345565
Methyl Cyclohexane	23.7		0.380	1.00	1	09/14/2019 00:47	WG1345565
Methylene Chloride	U		1.00	5.00	1	09/14/2019 00:47	WG1345565
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	09/14/2019 00:47	WG1345565
Methyl tert-butyl ether	U		0.367	1.00	1	09/14/2019 00:47	WG1345565
Styrene	U		0.307	1.00	1	09/14/2019 00:47	WG1345565
1,1,2,2-Tetrachloroethane	U		0.130	1.00	1	09/14/2019 00:47	WG1345565
Tetrachloroethene	U		0.372	1.00	1	09/14/2019 00:47	WG1345565
Toluene	5.08		0.412	1.00	1	09/14/2019 00:47	WG1345565
1,2,3-Trichlorobenzene	U		0.230	1.00	1	09/14/2019 00:47	WG1345565
1,2,4-Trichlorobenzene	U		0.355	1.00	1	09/14/2019 00:47	WG1345565
1,1,1-Trichloroethane	U		0.319	1.00	1	09/14/2019 00:47	WG1345565
1,1,2-Trichloroethane	U		0.383	1.00	1	09/14/2019 00:47	WG1345565
Trichloroethene	U		0.398	1.00	1	09/14/2019 00:47	WG1345565
Trichlorofluoromethane	U		1.20	5.00	1	09/14/2019 00:47	WG1345565
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00	1	09/14/2019 00:47	WG1345565
Vinyl chloride	U		0.259	1.00	1	09/14/2019 00:47	WG1345565
Xylenes, Total	20.2		1.06	3.00	1	09/14/2019 00:47	WG1345565
(S) Toluene-d8	108			80.0-120		09/14/2019 00:47	WG1345565
(S) 4-Bromofluorobenzene	91.5			77.0-126		09/14/2019 00:47	WG1345565
(S) 1,2-Dichloroethane-d4	90.7			70.0-130		09/14/2019 00:47	WG1345565

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Polychlorinated Biphenyls (GC) by Method 8082

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
PCB 1016	U		0.100	0.500	1	09/10/2019 15:29	WG1342044
PCB 1221	U		0.0730	0.500	1	09/10/2019 15:29	WG1342044
PCB 1232	U		0.0420	0.500	1	09/10/2019 15:29	WG1342044
PCB 1242	U		0.0470	0.500	1	09/10/2019 15:29	WG1342044
PCB 1248	U		0.0860	0.500	1	09/10/2019 15:29	WG1342044
PCB 1254	U		0.0470	0.500	1	09/10/2019 15:29	WG1342044
PCB 1260	U		0.120	0.500	1	09/10/2019 15:29	WG1342044
(S) Decachlorobiphenyl	43.3			10.0-128		09/10/2019 15:29	WG1342044
(S) Tetrachloro-m-xylene	24.9			10.0-127		09/10/2019 15:29	WG1342044

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		1.58	5.00	5	09/11/2019 23:42	WG1343097
Acenaphthylene	U		1.54	5.00	5	09/11/2019 23:42	WG1343097
Acetophenone	U		13.6	50.0	5	09/11/2019 23:42	WG1343097
Anthracene	U		1.46	5.00	5	09/11/2019 23:42	WG1343097
Atrazine	U		1.30	50.0	5	09/11/2019 23:42	WG1343097
Benzaldehyde	U		7.00	50.0	5	09/11/2019 23:42	WG1343097
Benzo(a)anthracene	U		0.488	5.00	5	09/11/2019 23:42	WG1343097
Benzo(b)fluoranthene	U		0.448	5.00	5	09/11/2019 23:42	WG1343097
Benzo(k)fluoranthene	U		1.78	5.00	5	09/11/2019 23:42	WG1343097



Collected date/time: 09/05/19 13:55

L1136948

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(g,h,i)perylene	U		0.805	5.00	5	09/11/2019 23:42	WG1343097
Benzo(a)pyrene	U		1.70	5.00	5	09/11/2019 23:42	WG1343097
Biphenyl	U		1.63	50.0	5	09/11/2019 23:42	WG1343097
Bis(2-chlorethoxy)methane	U		1.64	50.0	5	09/11/2019 23:42	WG1343097
Bis(2-chloroethyl)ether	U		8.10	50.0	5	09/11/2019 23:42	WG1343097
Bis(2-chloroisopropyl)ether	U		2.22	50.0	5	09/11/2019 23:42	WG1343097
4-Bromophenyl-phenylether	U		1.68	50.0	5	09/11/2019 23:42	WG1343097
Caprolactam	U		13.0	50.0	5	09/11/2019 23:42	WG1343097
Carbazole	U		1.30	50.0	5	09/11/2019 23:42	WG1343097
4-Chloroaniline	U		1.91	50.0	5	09/11/2019 23:42	WG1343097
2-Chloronaphthalene	U		1.65	5.00	5	09/11/2019 23:42	WG1343097
4-Chlorophenyl-phenylether	U		1.52	50.0	5	09/11/2019 23:42	WG1343097
Chrysene	U		1.66	5.00	5	09/11/2019 23:42	WG1343097
Dibenz(a,h)anthracene	U		1.40	5.00	5	09/11/2019 23:42	WG1343097
Dibenzofuran	U		1.69	50.0	5	09/11/2019 23:42	WG1343097
3,3-Dichlorobenzidine	U		10.1	50.0	5	09/11/2019 23:42	WG1343097
2,4-Dinitrotoluene	U		8.25	50.0	5	09/11/2019 23:42	WG1343097
2,6-Dinitrotoluene	U		1.40	50.0	5	09/11/2019 23:42	WG1343097
Fluoranthene	U		1.55	5.00	5	09/11/2019 23:42	WG1343097
Fluorene	U		1.61	5.00	5	09/11/2019 23:42	WG1343097
Hexachlorobenzene	U		1.70	5.00	5	09/11/2019 23:42	WG1343097
Hexachloro-1,3-butadiene	U		1.64	50.0	5	09/11/2019 23:42	WG1343097
Hexachlorocyclopentadiene	U		11.7	50.0	5	09/11/2019 23:42	WG1343097
Hexachloroethane	U		1.83	50.0	5	09/11/2019 23:42	WG1343097
Indeno(1,2,3-cd)pyrene	U		1.40	5.00	5	09/11/2019 23:42	WG1343097
Isophorone	U		1.36	50.0	5	09/11/2019 23:42	WG1343097
2-Methylnaphthalene	17.4		1.56	5.00	5	09/11/2019 23:42	WG1343097
Naphthalene	U		1.86	5.00	5	09/11/2019 23:42	WG1343097
2-Nitroaniline	U		9.50	50.0	5	09/11/2019 23:42	WG1343097
3-Nitroaniline	U		1.54	50.0	5	09/11/2019 23:42	WG1343097
4-Nitroaniline	U		1.74	50.0	5	09/11/2019 23:42	WG1343097
Nitrobenzene	U		1.84	50.0	5	09/11/2019 23:42	WG1343097
n-Nitrosodiphenylamine	U		5.95	50.0	5	09/11/2019 23:42	WG1343097
n-Nitrosodi-n-propylamine	U		2.01	50.0	5	09/11/2019 23:42	WG1343097
Phenanthrene	2.27	L	1.83	5.00	5	09/11/2019 23:42	WG1343097
Benzylbutyl phthalate	U		1.38	15.0	5	09/11/2019 23:42	WG1343097
Bis(2-ethylhexyl)phthalate	U		3.55	15.0	5	09/11/2019 23:42	WG1343097
Di-n-butyl phthalate	U		1.33	15.0	5	09/11/2019 23:42	WG1343097
Diethyl phthalate	U		1.41	15.0	5	09/11/2019 23:42	WG1343097
Dimethyl phthalate	U		1.41	15.0	5	09/11/2019 23:42	WG1343097
Di-n-octyl phthalate	U		1.39	15.0	5	09/11/2019 23:42	WG1343097
Pyrene	U		1.65	5.00	5	09/11/2019 23:42	WG1343097
1,2,4,5-Tetrachlorobenzene	U		12.0	50.0	5	09/11/2019 23:42	WG1343097
4-Chloro-3-methylphenol	U		1.32	50.0	5	09/11/2019 23:42	WG1343097
2-Chlorophenol	U		1.41	50.0	5	09/11/2019 23:42	WG1343097
2-Methylphenol	U		1.56	50.0	5	09/11/2019 23:42	WG1343097
3&4-Methyl Phenol	U		1.33	50.0	5	09/11/2019 23:42	WG1343097
2,4-Dichlorophenol	U		1.42	50.0	5	09/11/2019 23:42	WG1343097
2,4-Dimethylphenol	U		3.12	50.0	5	09/11/2019 23:42	WG1343097
4,6-Dinitro-2-methylphenol	U		13.1	50.0	5	09/11/2019 23:42	WG1343097
2,4-Dinitrophenol	U		16.3	50.0	5	09/11/2019 23:42	WG1343097
2-Nitrophenol	U		1.60	50.0	5	09/11/2019 23:42	WG1343097
4-Nitrophenol	U		10.1	50.0	5	09/11/2019 23:42	WG1343097
Pentachlorophenol	U		1.57	50.0	5	09/11/2019 23:42	WG1343097
Phenol	3.06	B J	1.67	50.0	5	09/11/2019 23:42	WG1343097
2,4,5-Trichlorophenol	U		1.18	50.0	5	09/11/2019 23:42	WG1343097

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
2,4,6-Trichlorophenol	U		1.48	50.0	5	09/11/2019 23:42	WG1343097
(S) 2-Fluorophenol	38.0			10.0-120		09/11/2019 23:42	WG1343097
(S) Phenol-d5	24.5			10.0-120		09/11/2019 23:42	WG1343097
(S) Nitrobenzene-d5	52.7			10.0-127		09/11/2019 23:42	WG1343097
(S) 2-Fluorobiphenyl	49.5			10.0-130		09/11/2019 23:42	WG1343097
(S) 2,4,6-Tribromophenol	57.5			10.0-155		09/11/2019 23:42	WG1343097
(S) p-Terphenyl-d14	62.6			10.0-128		09/11/2019 23:42	WG1343097

Sample Narrative:

L1136948-04 WG1343097: Cannot run at lower dilution due to viscosity of extract

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury,Dissolved	U		0.0490	0.200	1	09/09/2019 18:31	WG1342092

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	162		5.15	100	1	09/13/2019 16:10	WG1342142
Antimony,Dissolved	U		0.754	2.00	1	09/13/2019 16:10	WG1342142
Arsenic,Dissolved	8.53		0.250	2.00	1	09/13/2019 16:10	WG1342142
Barium,Dissolved	76.5		0.360	5.00	1	09/13/2019 16:10	WG1342142
Beryllium,Dissolved	U		0.120	2.00	1	09/13/2019 16:10	WG1342142
Cadmium,Dissolved	U		0.160	1.00	1	09/13/2019 16:10	WG1342142
Calcium,Dissolved	142000		46.0	1000	1	09/13/2019 16:10	WG1342142
Chromium,Dissolved	1.79	B J	0.540	2.00	1	09/13/2019 16:10	WG1342142
Copper,Dissolved	4.14	J	0.520	5.00	1	09/13/2019 16:10	WG1342142
Cobalt,Dissolved	1.69	J	0.260	2.00	1	09/13/2019 16:10	WG1342142
Iron,Dissolved	11500		15.0	100	1	09/13/2019 16:10	WG1342142
Lead,Dissolved	4.60		0.240	2.00	1	09/13/2019 16:10	WG1342142
Magnesium,Dissolved	25500		100	1000	1	09/13/2019 16:10	WG1342142
Manganese,Dissolved	1010		0.250	5.00	1	09/13/2019 16:10	WG1342142
Nickel,Dissolved	1.73	J	0.350	2.00	1	09/13/2019 16:10	WG1342142
Potassium,Dissolved	2140		37.0	1000	1	09/13/2019 16:10	WG1342142
Selenium,Dissolved	0.787	J	0.380	2.00	1	09/13/2019 16:10	WG1342142
Silver,Dissolved	U		0.310	2.00	1	09/13/2019 16:10	WG1342142
Sodium,Dissolved	5090		110	1000	1	09/13/2019 16:10	WG1342142
Thallium,Dissolved	U		0.190	2.00	1	09/13/2019 16:10	WG1342142
Vanadium,Dissolved	3.25	J	0.180	5.00	1	09/13/2019 16:10	WG1342142
Zinc,Dissolved	4.82	J	2.56	25.0	1	09/13/2019 16:10	WG1342142

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		10.0	50.0	1	09/14/2019 01:08	WG1345565
Benzene	97.3		0.331	1.00	1	09/14/2019 01:08	WG1345565
Bromochloromethane	U		0.520	1.00	1	09/14/2019 01:08	WG1345565
Bromodichloromethane	U		0.380	1.00	1	09/14/2019 01:08	WG1345565
Bromoform	U		0.469	1.00	1	09/14/2019 01:08	WG1345565
Bromomethane	U		0.866	5.00	1	09/14/2019 01:08	WG1345565
Carbon disulfide	U		0.275	1.00	1	09/14/2019 01:08	WG1345565
Carbon tetrachloride	U		0.379	1.00	1	09/14/2019 01:08	WG1345565
Chlorobenzene	U		0.348	1.00	1	09/14/2019 01:08	WG1345565
Chlorodibromomethane	U		0.327	1.00	1	09/14/2019 01:08	WG1345565
Chloroethane	U		0.453	5.00	1	09/14/2019 01:08	WG1345565
Chloroform	U		0.324	5.00	1	09/14/2019 01:08	WG1345565
Chloromethane	U		0.276	2.50	1	09/14/2019 01:08	WG1345565
Cyclohexane	28.1		0.390	1.00	1	09/14/2019 01:08	WG1345565
1,2-Dibromo-3-Chloropropane	U		1.33	5.00	1	09/14/2019 01:08	WG1345565
1,2-Dibromoethane	U		0.381	1.00	1	09/14/2019 01:08	WG1345565
1,2-Dichlorobenzene	U		0.349	1.00	1	09/14/2019 01:08	WG1345565
1,3-Dichlorobenzene	U		0.220	1.00	1	09/14/2019 01:08	WG1345565
1,4-Dichlorobenzene	U		0.274	1.00	1	09/14/2019 01:08	WG1345565
Dichlorodifluoromethane	U		0.551	5.00	1	09/14/2019 01:08	WG1345565
1,1-Dichloroethane	U		0.259	1.00	1	09/14/2019 01:08	WG1345565
1,2-Dichloroethane	U		0.361	1.00	1	09/14/2019 01:08	WG1345565
1,1-Dichloroethene	U		0.398	1.00	1	09/14/2019 01:08	WG1345565
cis-1,2-Dichloroethene	U		0.260	1.00	1	09/14/2019 01:08	WG1345565



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
trans-1,2-Dichloroethene	U		0.396	1.00	1	09/14/2019 01:08	WG1345565
1,2-Dichloropropane	U		0.306	1.00	1	09/14/2019 01:08	WG1345565
cis-1,3-Dichloropropene	U		0.418	1.00	1	09/14/2019 01:08	WG1345565
trans-1,3-Dichloropropene	U		0.419	1.00	1	09/14/2019 01:08	WG1345565
Ethylbenzene	5.93		0.384	1.00	1	09/14/2019 01:08	WG1345565
2-Hexanone	U		3.82	10.0	1	09/14/2019 01:08	WG1345565
Isopropylbenzene	2.26		0.326	1.00	1	09/14/2019 01:08	WG1345565
2-Butanone (MEK)	U		3.93	10.0	1	09/14/2019 01:08	WG1345565
Methyl Acetate	U		4.30	20.0	1	09/14/2019 01:08	WG1345565
Methyl Cyclohexane	19.6		0.380	1.00	1	09/14/2019 01:08	WG1345565
Methylene Chloride	U		1.00	5.00	1	09/14/2019 01:08	WG1345565
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	09/14/2019 01:08	WG1345565
Methyl tert-butyl ether	U		0.367	1.00	1	09/14/2019 01:08	WG1345565
Styrene	U		0.307	1.00	1	09/14/2019 01:08	WG1345565
1,1,2,2-Tetrachloroethane	U		0.130	1.00	1	09/14/2019 01:08	WG1345565
Tetrachloroethene	U		0.372	1.00	1	09/14/2019 01:08	WG1345565
Toluene	4.35		0.412	1.00	1	09/14/2019 01:08	WG1345565
1,2,3-Trichlorobenzene	U		0.230	1.00	1	09/14/2019 01:08	WG1345565
1,2,4-Trichlorobenzene	U		0.355	1.00	1	09/14/2019 01:08	WG1345565
1,1,1-Trichloroethane	U		0.319	1.00	1	09/14/2019 01:08	WG1345565
1,1,2-Trichloroethane	U		0.383	1.00	1	09/14/2019 01:08	WG1345565
Trichloroethene	U		0.398	1.00	1	09/14/2019 01:08	WG1345565
Trichlorofluoromethane	U		1.20	5.00	1	09/14/2019 01:08	WG1345565
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00	1	09/14/2019 01:08	WG1345565
Vinyl chloride	U		0.259	1.00	1	09/14/2019 01:08	WG1345565
Xylenes, Total	17.5		1.06	3.00	1	09/14/2019 01:08	WG1345565
(S) Toluene-d8	108			80.0-120		09/14/2019 01:08	WG1345565
(S) 4-Bromofluorobenzene	94.7			77.0-126		09/14/2019 01:08	WG1345565
(S) 1,2-Dichloroethane-d4	90.4			70.0-130		09/14/2019 01:08	WG1345565

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Polychlorinated Biphenyls (GC) by Method 8082

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
PCB 1016	U		0.100	0.500	1	09/10/2019 15:45	WG1342044
PCB 1221	U		0.0730	0.500	1	09/10/2019 15:45	WG1342044
PCB 1232	U		0.0420	0.500	1	09/10/2019 15:45	WG1342044
PCB 1242	U		0.0470	0.500	1	09/10/2019 15:45	WG1342044
PCB 1248	U		0.0860	0.500	1	09/10/2019 15:45	WG1342044
PCB 1254	U		0.0470	0.500	1	09/10/2019 15:45	WG1342044
PCB 1260	U		0.120	0.500	1	09/10/2019 15:45	WG1342044
(S) Decachlorobiphenyl	45.3			10.0-128		09/10/2019 15:45	WG1342044
(S) Tetrachloro-m-xylene	22.0			10.0-127		09/10/2019 15:45	WG1342044

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.329	1.04	1.04	09/11/2019 17:27	WG1343097
Acenaphthylene	U		0.321	1.04	1.04	09/11/2019 17:27	WG1343097
Acetophenone	U		2.82	10.4	1.04	09/11/2019 17:27	WG1343097
Anthracene	U		0.303	1.04	1.04	09/11/2019 17:27	WG1343097
Atrazine	U		0.270	10.4	1.04	09/11/2019 17:27	WG1343097
Benzaldehyde	U		1.46	10.4	1.04	09/11/2019 17:27	WG1343097
Benzo(a)anthracene	U		0.101	1.04	1.04	09/11/2019 17:27	WG1343097
Benzo(b)fluoranthene	U		0.0932	1.04	1.04	09/11/2019 17:27	WG1343097
Benzo(k)fluoranthene	U		0.369	1.04	1.04	09/11/2019 17:27	WG1343097



Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(g,h,i)perylene	U		0.167	1.04	1.04	09/11/2019 17:27	WG1343097
Benzo(a)pyrene	U		0.354	1.04	1.04	09/11/2019 17:27	WG1343097
Biphenyl	U		0.338	10.4	1.04	09/11/2019 17:27	WG1343097
Bis(2-chlorethoxy)methane	U		0.342	10.4	1.04	09/11/2019 17:27	WG1343097
Bis(2-chloroethyl)ether	U		1.68	10.4	1.04	09/11/2019 17:27	WG1343097
Bis(2-chloroisopropyl)ether	U		0.463	10.4	1.04	09/11/2019 17:27	WG1343097
4-Bromophenyl-phenylether	U		0.348	10.4	1.04	09/11/2019 17:27	WG1343097
Caprolactam	U		2.69	10.4	1.04	09/11/2019 17:27	WG1343097
Carbazole	U		0.270	10.4	1.04	09/11/2019 17:27	WG1343097
4-Chloroaniline	U		0.397	10.4	1.04	09/11/2019 17:27	WG1343097
2-Chloronaphthalene	U		0.343	1.04	1.04	09/11/2019 17:27	WG1343097
4-Chlorophenyl-phenylether	U		0.315	10.4	1.04	09/11/2019 17:27	WG1343097
Chrysene	U		0.345	1.04	1.04	09/11/2019 17:27	WG1343097
Dibenz(a,h)anthracene	U		0.290	1.04	1.04	09/11/2019 17:27	WG1343097
Dibenzofuran	U		0.352	10.4	1.04	09/11/2019 17:27	WG1343097
3,3-Dichlorobenzidine	U		2.10	10.4	1.04	09/11/2019 17:27	WG1343097
2,4-Dinitrotoluene	U		1.72	10.4	1.04	09/11/2019 17:27	WG1343097
2,6-Dinitrotoluene	U		0.290	10.4	1.04	09/11/2019 17:27	WG1343097
Fluoranthene	U		0.322	1.04	1.04	09/11/2019 17:27	WG1343097
Fluorene	U		0.336	1.04	1.04	09/11/2019 17:27	WG1343097
Hexachlorobenzene	U		0.355	1.04	1.04	09/11/2019 17:27	WG1343097
Hexachloro-1,3-butadiene	U		0.342	10.4	1.04	09/11/2019 17:27	WG1343097
Hexachlorocyclopentadiene	U		2.42	10.4	1.04	09/11/2019 17:27	WG1343097
Hexachloroethane	U		0.380	10.4	1.04	09/11/2019 17:27	WG1343097
Indeno(1,2,3-cd)pyrene	U		0.290	1.04	1.04	09/11/2019 17:27	WG1343097
Isophorone	U		0.283	10.4	1.04	09/11/2019 17:27	WG1343097
2-Methylnaphthalene	U		0.323	1.04	1.04	09/11/2019 17:27	WG1343097
Naphthalene	U		0.387	1.04	1.04	09/11/2019 17:27	WG1343097
2-Nitroaniline	U		1.98	10.4	1.04	09/11/2019 17:27	WG1343097
3-Nitroaniline	U		0.320	10.4	1.04	09/11/2019 17:27	WG1343097
4-Nitroaniline	U		0.363	10.4	1.04	09/11/2019 17:27	WG1343097
Nitrobenzene	U		0.382	10.4	1.04	09/11/2019 17:27	WG1343097
n-Nitrosodiphenylamine	U		1.24	10.4	1.04	09/11/2019 17:27	WG1343097
n-Nitrosodi-n-propylamine	U		0.419	10.4	1.04	09/11/2019 17:27	WG1343097
Phenanthrene	U		0.381	1.04	1.04	09/11/2019 17:27	WG1343097
Benzylbutyl phthalate	U		0.286	3.12	1.04	09/11/2019 17:27	WG1343097
Bis(2-ethylhexyl)phthalate	U		0.737	3.12	1.04	09/11/2019 17:27	WG1343097
Di-n-butyl phthalate	U		0.277	3.12	1.04	09/11/2019 17:27	WG1343097
Diethyl phthalate	U		0.293	3.12	1.04	09/11/2019 17:27	WG1343097
Dimethyl phthalate	U		0.294	3.12	1.04	09/11/2019 17:27	WG1343097
Di-n-octyl phthalate	U		0.289	3.12	1.04	09/11/2019 17:27	WG1343097
Pyrene	U		0.343	1.04	1.04	09/11/2019 17:27	WG1343097
1,2,4,5-Tetrachlorobenzene	U		2.51	10.4	1.04	09/11/2019 17:27	WG1343097
4-Chloro-3-methylphenol	U		0.274	10.4	1.04	09/11/2019 17:27	WG1343097
2-Chlorophenol	U		0.294	10.4	1.04	09/11/2019 17:27	WG1343097
2-Methylphenol	U		0.324	10.4	1.04	09/11/2019 17:27	WG1343097
3&4-Methyl Phenol	U		0.277	10.4	1.04	09/11/2019 17:27	WG1343097
2,4-Dichlorophenol	U		0.295	10.4	1.04	09/11/2019 17:27	WG1343097
2,4-Dimethylphenol	U		0.649	10.4	1.04	09/11/2019 17:27	WG1343097
4,6-Dinitro-2-methylphenol	U		2.72	10.4	1.04	09/11/2019 17:27	WG1343097
2,4-Dinitrophenol	U		3.38	10.4	1.04	09/11/2019 17:27	WG1343097
2-Nitrophenol	U		0.333	10.4	1.04	09/11/2019 17:27	WG1343097
4-Nitrophenol	U		2.09	10.4	1.04	09/11/2019 17:27	WG1343097
Pentachlorophenol	U		0.326	10.4	1.04	09/11/2019 17:27	WG1343097
Phenol	0.803	B J	0.347	10.4	1.04	09/11/2019 17:27	WG1343097
2,4,5-Trichlorophenol	U		0.245	10.4	1.04	09/11/2019 17:27	WG1343097

¹ Cp
² Tc
³ Ss
⁴ Cn
⁵ Sr
⁶ Qc
⁷ Gl
⁸ Al
⁹ Sc



Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
2,4,6-Trichlorophenol	U		0.309	10.4	1.04	09/11/2019 17:27	WG1343097
(S) 2-Fluorophenol	41.9			10.0-120		09/11/2019 17:27	WG1343097
(S) Phenol-d5	25.3			10.0-120		09/11/2019 17:27	WG1343097
(S) Nitrobenzene-d5	58.6			10.0-127		09/11/2019 17:27	WG1343097
(S) 2-Fluorobiphenyl	58.2			10.0-130		09/11/2019 17:27	WG1343097
(S) 2,4,6-Tribromophenol	57.2			10.0-155		09/11/2019 17:27	WG1343097
(S) p-Terphenyl-d14	67.2			10.0-128		09/11/2019 17:27	WG1343097

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury,Dissolved	U		0.0490	0.200	1	09/09/2019 18:33	WG1342092

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	224		5.15	100	1	09/13/2019 16:14	WG1342142
Antimony,Dissolved	U		0.754	2.00	1	09/13/2019 16:14	WG1342142
Arsenic,Dissolved	10.7		0.250	2.00	1	09/13/2019 16:14	WG1342142
Barium,Dissolved	131		0.360	5.00	1	09/13/2019 16:14	WG1342142
Beryllium,Dissolved	U		0.120	2.00	1	09/13/2019 16:14	WG1342142
Cadmium,Dissolved	U		0.160	1.00	1	09/13/2019 16:14	WG1342142
Calcium,Dissolved	217000		46.0	1000	1	09/13/2019 16:14	WG1342142
Chromium,Dissolved	3.61	B	0.540	2.00	1	09/13/2019 16:14	WG1342142
Copper,Dissolved	1.17	J	0.520	5.00	1	09/13/2019 16:14	WG1342142
Cobalt,Dissolved	2.12		0.260	2.00	1	09/13/2019 16:14	WG1342142
Iron,Dissolved	10300		15.0	100	1	09/13/2019 16:14	WG1342142
Lead,Dissolved	19.3		0.240	2.00	1	09/13/2019 16:14	WG1342142
Magnesium,Dissolved	42000		100	1000	1	09/13/2019 16:14	WG1342142
Manganese,Dissolved	1270		0.250	5.00	1	09/13/2019 16:14	WG1342142
Nickel,Dissolved	3.43		0.350	2.00	1	09/13/2019 16:14	WG1342142
Potassium,Dissolved	3790		37.0	1000	1	09/13/2019 16:14	WG1342142
Selenium,Dissolved	0.578	J	0.380	2.00	1	09/13/2019 16:14	WG1342142
Silver,Dissolved	U		0.310	2.00	1	09/13/2019 16:14	WG1342142
Sodium,Dissolved	7790		110	1000	1	09/13/2019 16:14	WG1342142
Thallium,Dissolved	U		0.190	2.00	1	09/13/2019 16:14	WG1342142
Vanadium,Dissolved	5.15		0.180	5.00	1	09/13/2019 16:14	WG1342142
Zinc,Dissolved	6.75	J	2.56	25.0	1	09/13/2019 16:14	WG1342142

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		50.0	250	5	09/14/2019 01:28	WG1345565
Benzene	U		1.66	5.00	5	09/14/2019 01:28	WG1345565
Bromochloromethane	U		2.60	5.00	5	09/14/2019 01:28	WG1345565
Bromodichloromethane	U		1.90	5.00	5	09/14/2019 01:28	WG1345565
Bromoform	U		2.34	5.00	5	09/14/2019 01:28	WG1345565
Bromomethane	U		4.33	25.0	5	09/14/2019 01:28	WG1345565
Carbon disulfide	U		1.38	5.00	5	09/14/2019 01:28	WG1345565
Carbon tetrachloride	U		1.90	5.00	5	09/14/2019 01:28	WG1345565
Chlorobenzene	U		1.74	5.00	5	09/14/2019 01:28	WG1345565
Chlorodibromomethane	U		1.64	5.00	5	09/14/2019 01:28	WG1345565
Chloroethane	U		2.26	25.0	5	09/14/2019 01:28	WG1345565
Chloroform	U		1.62	25.0	5	09/14/2019 01:28	WG1345565
Chloromethane	U		1.38	12.5	5	09/14/2019 01:28	WG1345565
Cyclohexane	U		1.95	5.00	5	09/14/2019 01:28	WG1345565
1,2-Dibromo-3-Chloropropane	U		6.65	25.0	5	09/14/2019 01:28	WG1345565
1,2-Dibromoethane	U		1.90	5.00	5	09/14/2019 01:28	WG1345565
1,2-Dichlorobenzene	U		1.74	5.00	5	09/14/2019 01:28	WG1345565
1,3-Dichlorobenzene	U		1.10	5.00	5	09/14/2019 01:28	WG1345565
1,4-Dichlorobenzene	U		1.37	5.00	5	09/14/2019 01:28	WG1345565
Dichlorodifluoromethane	U		2.76	25.0	5	09/14/2019 01:28	WG1345565
1,1-Dichloroethane	U		1.30	5.00	5	09/14/2019 01:28	WG1345565
1,2-Dichloroethane	U		1.80	5.00	5	09/14/2019 01:28	WG1345565
1,1-Dichloroethene	U		1.99	5.00	5	09/14/2019 01:28	WG1345565
cis-1,2-Dichloroethene	U		1.30	5.00	5	09/14/2019 01:28	WG1345565

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
trans-1,2-Dichloroethene	U		1.98	5.00	5	09/14/2019 01:28	WG1345565
1,2-Dichloropropane	U		1.53	5.00	5	09/14/2019 01:28	WG1345565
cis-1,3-Dichloropropene	U		2.09	5.00	5	09/14/2019 01:28	WG1345565
trans-1,3-Dichloropropene	U		2.10	5.00	5	09/14/2019 01:28	WG1345565
Ethylbenzene	U		1.92	5.00	5	09/14/2019 01:28	WG1345565
2-Hexanone	U		19.1	50.0	5	09/14/2019 01:28	WG1345565
Isopropylbenzene	U		1.63	5.00	5	09/14/2019 01:28	WG1345565
2-Butanone (MEK)	U		19.6	50.0	5	09/14/2019 01:28	WG1345565
Methyl Acetate	U		21.5	100	5	09/14/2019 01:28	WG1345565
Methyl Cyclohexane	U		1.90	5.00	5	09/14/2019 01:28	WG1345565
Methylene Chloride	U		5.00	25.0	5	09/14/2019 01:28	WG1345565
4-Methyl-2-pentanone (MIBK)	U		10.7	50.0	5	09/14/2019 01:28	WG1345565
Methyl tert-butyl ether	U		1.84	5.00	5	09/14/2019 01:28	WG1345565
Styrene	U		1.54	5.00	5	09/14/2019 01:28	WG1345565
1,1,2,2-Tetrachloroethane	U		0.650	5.00	5	09/14/2019 01:28	WG1345565
Tetrachloroethene	U		1.86	5.00	5	09/14/2019 01:28	WG1345565
Toluene	U		2.06	5.00	5	09/14/2019 01:28	WG1345565
1,2,3-Trichlorobenzene	U		1.15	5.00	5	09/14/2019 01:28	WG1345565
1,2,4-Trichlorobenzene	U		1.78	5.00	5	09/14/2019 01:28	WG1345565
1,1,1-Trichloroethane	U		1.60	5.00	5	09/14/2019 01:28	WG1345565
1,1,2-Trichloroethane	U		1.92	5.00	5	09/14/2019 01:28	WG1345565
Trichloroethene	U		1.99	5.00	5	09/14/2019 01:28	WG1345565
Trichlorofluoromethane	U		6.00	25.0	5	09/14/2019 01:28	WG1345565
1,1,2-Trichlorotrifluoroethane	U		1.52	5.00	5	09/14/2019 01:28	WG1345565
Vinyl chloride	U		1.30	5.00	5	09/14/2019 01:28	WG1345565
Xylenes, Total	U		5.30	15.0	5	09/14/2019 01:28	WG1345565
(S) Toluene-d8	107			80.0-120		09/14/2019 01:28	WG1345565
(S) 4-Bromofluorobenzene	93.5			77.0-126		09/14/2019 01:28	WG1345565
(S) 1,2-Dichloroethane-d4	93.5			70.0-130		09/14/2019 01:28	WG1345565

Sample Narrative:

L1136948-06 WG1345565: Dilution due to matrix impact on instrumentation at lower dilution

Polychlorinated Biphenyls (GC) by Method 8082

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
PCB 1016	U		0.100	0.500	1	09/10/2019 16:17	WG1342044
PCB 1221	U		0.0730	0.500	1	09/10/2019 16:17	WG1342044
PCB 1232	U		0.0420	0.500	1	09/10/2019 16:17	WG1342044
PCB 1242	U		0.0470	0.500	1	09/10/2019 16:17	WG1342044
PCB 1248	U		0.0860	0.500	1	09/10/2019 16:17	WG1342044
PCB 1254	U		0.0470	0.500	1	09/10/2019 16:17	WG1342044
PCB 1260	U		0.120	0.500	1	09/10/2019 16:17	WG1342044
(S) Decachlorobiphenyl	61.7			10.0-128		09/10/2019 16:17	WG1342044
(S) Tetrachloro-m-xylene	44.0			10.0-127		09/10/2019 16:17	WG1342044

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acenaphthene	2.22	J	1.63	5.15	5.15	09/12/2019 00:03	WG1343097
Acenaphthylene	U		1.59	5.15	5.15	09/12/2019 00:03	WG1343097
Acetophenone	U		14.0	51.5	5.15	09/12/2019 00:03	WG1343097
Anthracene	U		1.50	5.15	5.15	09/12/2019 00:03	WG1343097
Atrazine	U		1.34	51.5	5.15	09/12/2019 00:03	WG1343097
Benzaldehyde	U		7.21	51.5	5.15	09/12/2019 00:03	WG1343097

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 09/05/19 16:18

L1136948

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(a)anthracene	1.14	U	0.502	5.15	5.15	09/12/2019 00:03	WG1343097
Benzo(b)fluoranthene	U		0.461	5.15	5.15	09/12/2019 00:03	WG1343097
Benzo(k)fluoranthene	U		1.83	5.15	5.15	09/12/2019 00:03	WG1343097
Benzo(g,h,i)perylene	U		0.829	5.15	5.15	09/12/2019 00:03	WG1343097
Benzo(a)pyrene	U		1.75	5.15	5.15	09/12/2019 00:03	WG1343097
Biphenyl	U		1.67	51.5	5.15	09/12/2019 00:03	WG1343097
Bis(2-chlorethoxy)methane	U		1.69	51.5	5.15	09/12/2019 00:03	WG1343097
Bis(2-chloroethyl)ether	U		8.34	51.5	5.15	09/12/2019 00:03	WG1343097
Bis(2-chloroisopropyl)ether	U		2.29	51.5	5.15	09/12/2019 00:03	WG1343097
4-Bromophenyl-phenylether	U		1.73	51.5	5.15	09/12/2019 00:03	WG1343097
Caprolactam	U		13.3	51.5	5.15	09/12/2019 00:03	WG1343097
Carbazole	31.4	U	1.34	51.5	5.15	09/12/2019 00:03	WG1343097
4-Chloroaniline	U		1.97	51.5	5.15	09/12/2019 00:03	WG1343097
2-Chloronaphthalene	U		1.70	51.5	5.15	09/12/2019 00:03	WG1343097
4-Chlorophenyl-phenylether	U		1.56	51.5	5.15	09/12/2019 00:03	WG1343097
Chrysene	U		1.71	51.5	5.15	09/12/2019 00:03	WG1343097
Dibenz(a,h)anthracene	U		1.44	51.5	5.15	09/12/2019 00:03	WG1343097
Dibenzofuran	2.05	U	1.74	51.5	5.15	09/12/2019 00:03	WG1343097
3,3-Dichlorobenzidine	U		10.4	51.5	5.15	09/12/2019 00:03	WG1343097
2,4-Dinitrotoluene	U		8.50	51.5	5.15	09/12/2019 00:03	WG1343097
2,6-Dinitrotoluene	U		1.44	51.5	5.15	09/12/2019 00:03	WG1343097
Fluoranthene	U		1.60	51.5	5.15	09/12/2019 00:03	WG1343097
Fluorene	5.69		1.66	51.5	5.15	09/12/2019 00:03	WG1343097
Hexachlorobenzene	U		1.76	51.5	5.15	09/12/2019 00:03	WG1343097
Hexachloro-1,3-butadiene	U		1.69	51.5	5.15	09/12/2019 00:03	WG1343097
Hexachlorocyclopentadiene	U		12.0	51.5	5.15	09/12/2019 00:03	WG1343097
Hexachloroethane	U		1.88	51.5	5.15	09/12/2019 00:03	WG1343097
Indeno(1,2,3-cd)pyrene	U		1.44	51.5	5.15	09/12/2019 00:03	WG1343097
Isophorone	U		1.40	51.5	5.15	09/12/2019 00:03	WG1343097
2-Methylnaphthalene	41.8		1.60	51.5	5.15	09/12/2019 00:03	WG1343097
Naphthalene	U		1.92	51.5	5.15	09/12/2019 00:03	WG1343097
2-Nitroaniline	U		9.79	51.5	5.15	09/12/2019 00:03	WG1343097
3-Nitroaniline	U		1.59	51.5	5.15	09/12/2019 00:03	WG1343097
4-Nitroaniline	U		1.80	51.5	5.15	09/12/2019 00:03	WG1343097
Nitrobenzene	U		1.89	51.5	5.15	09/12/2019 00:03	WG1343097
n-Nitrosodiphenylamine	U		6.13	51.5	5.15	09/12/2019 00:03	WG1343097
n-Nitrosodi-n-propylamine	U		2.08	51.5	5.15	09/12/2019 00:03	WG1343097
Phenanthrene	24.2		1.88	51.5	5.15	09/12/2019 00:03	WG1343097
Benzylbutyl phthalate	U		1.42	15.5	5.15	09/12/2019 00:03	WG1343097
Bis(2-ethylhexyl)phthalate	U		3.65	15.5	5.15	09/12/2019 00:03	WG1343097
Di-n-butyl phthalate	U		1.37	15.5	5.15	09/12/2019 00:03	WG1343097
Diethyl phthalate	U		1.45	15.5	5.15	09/12/2019 00:03	WG1343097
Dimethyl phthalate	U		1.46	15.5	5.15	09/12/2019 00:03	WG1343097
Di-n-octyl phthalate	U		1.43	15.5	5.15	09/12/2019 00:03	WG1343097
Pyrene	2.34	U	1.70	51.5	5.15	09/12/2019 00:03	WG1343097
1,2,4,5-Tetrachlorobenzene	U		12.4	51.5	5.15	09/12/2019 00:03	WG1343097
4-Chloro-3-methylphenol	U		1.35	51.5	5.15	09/12/2019 00:03	WG1343097
2-Chlorophenol	U		1.46	51.5	5.15	09/12/2019 00:03	WG1343097
2-Methylphenol	U		1.61	51.5	5.15	09/12/2019 00:03	WG1343097
3&4-Methyl Phenol	U		1.37	51.5	5.15	09/12/2019 00:03	WG1343097
2,4-Dichlorophenol	U		1.46	51.5	5.15	09/12/2019 00:03	WG1343097
2,4-Dimethylphenol	U		3.21	51.5	5.15	09/12/2019 00:03	WG1343097
4,6-Dinitro-2-methylphenol	U		13.5	51.5	5.15	09/12/2019 00:03	WG1343097
2,4-Dinitrophenol	U		16.7	51.5	5.15	09/12/2019 00:03	WG1343097
2-Nitrophenol	U		1.65	51.5	5.15	09/12/2019 00:03	WG1343097
4-Nitrophenol	U		10.4	51.5	5.15	09/12/2019 00:03	WG1343097

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Pentachlorophenol	U		1.61	51.5	5.15	09/12/2019 00:03	WG1343097
Phenol	2.95	<u>BJ</u>	1.72	51.5	5.15	09/12/2019 00:03	WG1343097
2,4,5-Trichlorophenol	U		1.22	51.5	5.15	09/12/2019 00:03	WG1343097
2,4,6-Trichlorophenol	U		1.53	51.5	5.15	09/12/2019 00:03	WG1343097
(S) 2-Fluorophenol	33.0			10.0-120		09/12/2019 00:03	WG1343097
(S) Phenol-d5	21.6			10.0-120		09/12/2019 00:03	WG1343097
(S) Nitrobenzene-d5	51.8			10.0-127		09/12/2019 00:03	WG1343097
(S) 2-Fluorobiphenyl	45.8			10.0-130		09/12/2019 00:03	WG1343097
(S) 2,4,6-Tribromophenol	56.8			10.0-155		09/12/2019 00:03	WG1343097
(S) p-Terphenyl-d14	61.1			10.0-128		09/12/2019 00:03	WG1343097

Sample Narrative:

L1136948-06 WG1343097: Cannot run at lower dilution due to viscosity of extract

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury,Dissolved	U		0.0490	0.200	1	09/09/2019 18:39	WG1342092

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	230		5.15	100	1	09/13/2019 16:18	WG1342142
Antimony,Dissolved	1.04	J	0.754	2.00	1	09/13/2019 16:18	WG1342142
Arsenic,Dissolved	4.48		0.250	2.00	1	09/13/2019 16:18	WG1342142
Barium,Dissolved	165		0.360	5.00	1	09/13/2019 16:18	WG1342142
Beryllium,Dissolved	U		0.120	2.00	1	09/13/2019 16:18	WG1342142
Cadmium,Dissolved	U		0.160	1.00	1	09/13/2019 16:18	WG1342142
Calcium,Dissolved	179000		46.0	1000	1	09/13/2019 16:18	WG1342142
Chromium,Dissolved	1.88	B J	0.540	2.00	1	09/13/2019 16:18	WG1342142
Copper,Dissolved	2.94	J	0.520	5.00	1	09/13/2019 16:18	WG1342142
Cobalt,Dissolved	6.51		0.260	2.00	1	09/13/2019 16:18	WG1342142
Iron,Dissolved	3070		15.0	100	1	09/13/2019 16:18	WG1342142
Lead,Dissolved	3.22	B	0.240	2.00	1	09/13/2019 16:18	WG1342142
Magnesium,Dissolved	133000		100	1000	1	09/13/2019 16:18	WG1342142
Manganese,Dissolved	1150		0.250	5.00	1	09/13/2019 16:18	WG1342142
Nickel,Dissolved	11.2		0.350	2.00	1	09/13/2019 16:18	WG1342142
Potassium,Dissolved	7090		37.0	1000	1	09/13/2019 16:18	WG1342142
Selenium,Dissolved	0.495	J	0.380	2.00	1	09/13/2019 16:18	WG1342142
Silver,Dissolved	U		0.310	2.00	1	09/13/2019 16:18	WG1342142
Sodium,Dissolved	20300		110	1000	1	09/13/2019 16:18	WG1342142
Thallium,Dissolved	U		0.190	2.00	1	09/13/2019 16:18	WG1342142
Vanadium,Dissolved	2.61	J	0.180	5.00	1	09/13/2019 16:18	WG1342142
Zinc,Dissolved	9.29	J	2.56	25.0	1	09/13/2019 16:18	WG1342142

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		50.0	250	5	09/14/2019 01:49	WG1345565
Benzene	156		1.66	5.00	5	09/14/2019 01:49	WG1345565
Bromochloromethane	U		2.60	5.00	5	09/14/2019 01:49	WG1345565
Bromodichloromethane	U		1.90	5.00	5	09/14/2019 01:49	WG1345565
Bromoform	U		2.34	5.00	5	09/14/2019 01:49	WG1345565
Bromomethane	U		4.33	25.0	5	09/14/2019 01:49	WG1345565
Carbon disulfide	U		1.38	5.00	5	09/14/2019 01:49	WG1345565
Carbon tetrachloride	U		1.90	5.00	5	09/14/2019 01:49	WG1345565
Chlorobenzene	U		1.74	5.00	5	09/14/2019 01:49	WG1345565
Chlorodibromomethane	U		1.64	5.00	5	09/14/2019 01:49	WG1345565
Chloroethane	U		2.26	25.0	5	09/14/2019 01:49	WG1345565
Chloroform	U		1.62	25.0	5	09/14/2019 01:49	WG1345565
Chloromethane	U		1.38	12.5	5	09/14/2019 01:49	WG1345565
Cyclohexane	52.8		1.95	5.00	5	09/14/2019 01:49	WG1345565
1,2-Dibromo-3-Chloropropane	U		6.65	25.0	5	09/14/2019 01:49	WG1345565
1,2-Dibromoethane	U		1.90	5.00	5	09/14/2019 01:49	WG1345565
1,2-Dichlorobenzene	U		1.74	5.00	5	09/14/2019 01:49	WG1345565
1,3-Dichlorobenzene	U		1.10	5.00	5	09/14/2019 01:49	WG1345565
1,4-Dichlorobenzene	U		1.37	5.00	5	09/14/2019 01:49	WG1345565
Dichlorodifluoromethane	U		2.76	25.0	5	09/14/2019 01:49	WG1345565
1,1-Dichloroethane	U		1.30	5.00	5	09/14/2019 01:49	WG1345565
1,2-Dichloroethane	U		1.80	5.00	5	09/14/2019 01:49	WG1345565
1,1-Dichloroethene	U		1.99	5.00	5	09/14/2019 01:49	WG1345565
cis-1,2-Dichloroethene	U		1.30	5.00	5	09/14/2019 01:49	WG1345565

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
trans-1,2-Dichloroethene	U		1.98	5.00	5	09/14/2019 01:49	WG1345565
1,2-Dichloropropane	U		1.53	5.00	5	09/14/2019 01:49	WG1345565
cis-1,3-Dichloropropene	U		2.09	5.00	5	09/14/2019 01:49	WG1345565
trans-1,3-Dichloropropene	U		2.10	5.00	5	09/14/2019 01:49	WG1345565
Ethylbenzene	49.2		1.92	5.00	5	09/14/2019 01:49	WG1345565
2-Hexanone	U		19.1	50.0	5	09/14/2019 01:49	WG1345565
Isopropylbenzene	7.98		1.63	5.00	5	09/14/2019 01:49	WG1345565
2-Butanone (MEK)	U		19.6	50.0	5	09/14/2019 01:49	WG1345565
Methyl Acetate	U		21.5	100	5	09/14/2019 01:49	WG1345565
Methyl Cyclohexane	43.8		1.90	5.00	5	09/14/2019 01:49	WG1345565
Methylene Chloride	U		5.00	25.0	5	09/14/2019 01:49	WG1345565
4-Methyl-2-pentanone (MIBK)	U		10.7	50.0	5	09/14/2019 01:49	WG1345565
Methyl tert-butyl ether	U		1.84	5.00	5	09/14/2019 01:49	WG1345565
Styrene	U		1.54	5.00	5	09/14/2019 01:49	WG1345565
1,1,2,2-Tetrachloroethane	U		0.650	5.00	5	09/14/2019 01:49	WG1345565
Tetrachloroethene	U		1.86	5.00	5	09/14/2019 01:49	WG1345565
Toluene	12.4		2.06	5.00	5	09/14/2019 01:49	WG1345565
1,2,3-Trichlorobenzene	U		1.15	5.00	5	09/14/2019 01:49	WG1345565
1,2,4-Trichlorobenzene	U		1.78	5.00	5	09/14/2019 01:49	WG1345565
1,1,1-Trichloroethane	U		1.60	5.00	5	09/14/2019 01:49	WG1345565
1,1,2-Trichloroethane	U		1.92	5.00	5	09/14/2019 01:49	WG1345565
Trichloroethene	U		1.99	5.00	5	09/14/2019 01:49	WG1345565
Trichlorofluoromethane	U		6.00	25.0	5	09/14/2019 01:49	WG1345565
1,1,2-Trichlorotrifluoroethane	U		1.52	5.00	5	09/14/2019 01:49	WG1345565
Vinyl chloride	U		1.30	5.00	5	09/14/2019 01:49	WG1345565
Xylenes, Total	76.0		5.30	15.0	5	09/14/2019 01:49	WG1345565
(S) Toluene-d8	109			80.0-120		09/14/2019 01:49	WG1345565
(S) 4-Bromofluorobenzene	93.0			77.0-126		09/14/2019 01:49	WG1345565
(S) 1,2-Dichloroethane-d4	90.6			70.0-130		09/14/2019 01:49	WG1345565

Sample Narrative:

L1136948-07 WG1345565: Dilution due to matrix impact on instrumentation at lower dilution

Polychlorinated Biphenyls (GC) by Method 8082

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
PCB 1016	U		0.100	0.500	1	09/10/2019 16:49	WG1342044
PCB 1221	U		0.0730	0.500	1	09/10/2019 16:49	WG1342044
PCB 1232	U		0.0420	0.500	1	09/10/2019 16:49	WG1342044
PCB 1242	U		0.0470	0.500	1	09/10/2019 16:49	WG1342044
PCB 1248	U		0.0860	0.500	1	09/10/2019 16:49	WG1342044
PCB 1254	U		0.0470	0.500	1	09/10/2019 16:49	WG1342044
PCB 1260	U		0.120	0.500	1	09/10/2019 16:49	WG1342044
(S) Decachlorobiphenyl	51.9			10.0-128		09/10/2019 16:49	WG1342044
(S) Tetrachloro-m-xylene	26.5			10.0-127		09/10/2019 16:49	WG1342044

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.316	1.00	1	09/11/2019 22:16	WG1343097
Acenaphthylene	U		0.309	1.00	1	09/11/2019 22:16	WG1343097
Acetophenone	U		2.71	10.0	1	09/11/2019 22:16	WG1343097
Anthracene	U		0.291	1.00	1	09/11/2019 22:16	WG1343097
Atrazine	U		0.260	10.0	1	09/11/2019 22:16	WG1343097
Benzaldehyde	U		1.40	10.0	1	09/11/2019 22:16	WG1343097

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(a)anthracene	U		0.0975	1.00	1	09/11/2019 22:16	WG1343097
Benzo(b)fluoranthene	U		0.0896	1.00	1	09/11/2019 22:16	WG1343097
Benzo(k)fluoranthene	U		0.355	1.00	1	09/11/2019 22:16	WG1343097
Benzo(g,h,i)perylene	U		0.161	1.00	1	09/11/2019 22:16	WG1343097
Benzo(a)pyrene	U		0.340	1.00	1	09/11/2019 22:16	WG1343097
Biphenyl	U		0.325	10.0	1	09/11/2019 22:16	WG1343097
Bis(2-chlorethoxy)methane	U		0.329	10.0	1	09/11/2019 22:16	WG1343097
Bis(2-chloroethyl)ether	U		1.62	10.0	1	09/11/2019 22:16	WG1343097
Bis(2-chloroisopropyl)ether	U		0.445	10.0	1	09/11/2019 22:16	WG1343097
4-Bromophenyl-phenylether	U		0.335	10.0	1	09/11/2019 22:16	WG1343097
Caprolactam	U		2.59	10.0	1	09/11/2019 22:16	WG1343097
Carbazole	U		0.260	10.0	1	09/11/2019 22:16	WG1343097
4-Chloroaniline	U		0.382	10.0	1	09/11/2019 22:16	WG1343097
2-Chloronaphthalene	U		0.330	1.00	1	09/11/2019 22:16	WG1343097
4-Chlorophenyl-phenylether	U		0.303	10.0	1	09/11/2019 22:16	WG1343097
Chrysene	U		0.332	1.00	1	09/11/2019 22:16	WG1343097
Dibenz(a,h)anthracene	U		0.279	1.00	1	09/11/2019 22:16	WG1343097
Dibenzofuran	U		0.338	10.0	1	09/11/2019 22:16	WG1343097
3,3-Dichlorobenzidine	U		2.02	10.0	1	09/11/2019 22:16	WG1343097
2,4-Dinitrotoluene	U		1.65	10.0	1	09/11/2019 22:16	WG1343097
2,6-Dinitrotoluene	U		0.279	10.0	1	09/11/2019 22:16	WG1343097
Fluoranthene	U		0.310	1.00	1	09/11/2019 22:16	WG1343097
Fluorene	U		0.323	1.00	1	09/11/2019 22:16	WG1343097
Hexachlorobenzene	U		0.341	1.00	1	09/11/2019 22:16	WG1343097
Hexachloro-1,3-butadiene	U		0.329	10.0	1	09/11/2019 22:16	WG1343097
Hexachlorocyclopentadiene	U		2.33	10.0	1	09/11/2019 22:16	WG1343097
Hexachloroethane	U		0.365	10.0	1	09/11/2019 22:16	WG1343097
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	09/11/2019 22:16	WG1343097
Isophorone	U		0.272	10.0	1	09/11/2019 22:16	WG1343097
2-Methylnaphthalene	U		0.311	1.00	1	09/11/2019 22:16	WG1343097
Naphthalene	U		0.372	1.00	1	09/11/2019 22:16	WG1343097
2-Nitroaniline	U		1.90	10.0	1	09/11/2019 22:16	WG1343097
3-Nitroaniline	U		0.308	10.0	1	09/11/2019 22:16	WG1343097
4-Nitroaniline	U		0.349	10.0	1	09/11/2019 22:16	WG1343097
Nitrobenzene	U		0.367	10.0	1	09/11/2019 22:16	WG1343097
n-Nitrosodiphenylamine	U		1.19	10.0	1	09/11/2019 22:16	WG1343097
n-Nitrosodi-n-propylamine	U		0.403	10.0	1	09/11/2019 22:16	WG1343097
Phenanthrene	U		0.366	1.00	1	09/11/2019 22:16	WG1343097
Benzylbutyl phthalate	U		0.275	3.00	1	09/11/2019 22:16	WG1343097
Bis(2-ethylhexyl)phthalate	U		0.709	3.00	1	09/11/2019 22:16	WG1343097
Di-n-butyl phthalate	0.604	U	0.266	3.00	1	09/11/2019 22:16	WG1343097
Diethyl phthalate	U		0.282	3.00	1	09/11/2019 22:16	WG1343097
Dimethyl phthalate	U		0.283	3.00	1	09/11/2019 22:16	WG1343097
Di-n-octyl phthalate	U		0.278	3.00	1	09/11/2019 22:16	WG1343097
Pyrene	U		0.330	1.00	1	09/11/2019 22:16	WG1343097
1,2,4,5-Tetrachlorobenzene	U		2.41	10.0	1	09/11/2019 22:16	WG1343097
4-Chloro-3-methylphenol	U		0.263	10.0	1	09/11/2019 22:16	WG1343097
2-Chlorophenol	U		0.283	10.0	1	09/11/2019 22:16	WG1343097
2-Methylphenol	U		0.312	10.0	1	09/11/2019 22:16	WG1343097
3&4-Methyl Phenol	U		0.266	10.0	1	09/11/2019 22:16	WG1343097
2,4-Dichlorophenol	U		0.284	10.0	1	09/11/2019 22:16	WG1343097
2,4-Dimethylphenol	U		0.624	10.0	1	09/11/2019 22:16	WG1343097
4,6-Dinitro-2-methylphenol	U		2.62	10.0	1	09/11/2019 22:16	WG1343097
2,4-Dinitrophenol	U		3.25	10.0	1	09/11/2019 22:16	WG1343097
2-Nitrophenol	U		0.320	10.0	1	09/11/2019 22:16	WG1343097
4-Nitrophenol	U		2.01	10.0	1	09/11/2019 22:16	WG1343097

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc



Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Pentachlorophenol	U		0.313	10.0	1	09/11/2019 22:16	WG1343097
Phenol	5.40	J	0.334	10.0	1	09/11/2019 22:16	WG1343097
2,4,5-Trichlorophenol	U		0.236	10.0	1	09/11/2019 22:16	WG1343097
2,4,6-Trichlorophenol	U		0.297	10.0	1	09/11/2019 22:16	WG1343097
(S) 2-Fluorophenol	36.1			10.0-120		09/11/2019 22:16	WG1343097
(S) Phenol-d5	24.7			10.0-120		09/11/2019 22:16	WG1343097
(S) Nitrobenzene-d5	55.1			10.0-127		09/11/2019 22:16	WG1343097
(S) 2-Fluorobiphenyl	55.8			10.0-130		09/11/2019 22:16	WG1343097
(S) 2,4,6-Tribromophenol	63.0			10.0-155		09/11/2019 22:16	WG1343097
(S) p-Terphenyl-d14	69.1			10.0-128		09/11/2019 22:16	WG1343097

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 09/05/19 08:00

L1136948

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		10.0	50.0	1	09/13/2019 21:46	WG1345565
Benzene	U		0.331	1.00	1	09/13/2019 21:46	WG1345565
Bromochloromethane	U		0.520	1.00	1	09/13/2019 21:46	WG1345565
Bromodichloromethane	U		0.380	1.00	1	09/13/2019 21:46	WG1345565
Bromoform	U		0.469	1.00	1	09/13/2019 21:46	WG1345565
Bromomethane	U		0.866	5.00	1	09/13/2019 21:46	WG1345565
Carbon disulfide	U		0.275	1.00	1	09/13/2019 21:46	WG1345565
Carbon tetrachloride	U		0.379	1.00	1	09/13/2019 21:46	WG1345565
Chlorobenzene	U		0.348	1.00	1	09/13/2019 21:46	WG1345565
Chlorodibromomethane	U		0.327	1.00	1	09/13/2019 21:46	WG1345565
Chloroethane	U		0.453	5.00	1	09/13/2019 21:46	WG1345565
Chloroform	U		0.324	5.00	1	09/13/2019 21:46	WG1345565
Chloromethane	U		0.276	2.50	1	09/13/2019 21:46	WG1345565
Cyclohexane	U		0.390	1.00	1	09/13/2019 21:46	WG1345565
1,2-Dibromo-3-Chloropropane	U		1.33	5.00	1	09/13/2019 21:46	WG1345565
1,2-Dibromoethane	U		0.381	1.00	1	09/13/2019 21:46	WG1345565
1,2-Dichlorobenzene	U		0.349	1.00	1	09/13/2019 21:46	WG1345565
1,3-Dichlorobenzene	U		0.220	1.00	1	09/13/2019 21:46	WG1345565
1,4-Dichlorobenzene	U		0.274	1.00	1	09/13/2019 21:46	WG1345565
Dichlorodifluoromethane	U		0.551	5.00	1	09/13/2019 21:46	WG1345565
1,1-Dichloroethane	U		0.259	1.00	1	09/13/2019 21:46	WG1345565
1,2-Dichloroethane	U		0.361	1.00	1	09/13/2019 21:46	WG1345565
1,1-Dichloroethene	U		0.398	1.00	1	09/13/2019 21:46	WG1345565
cis-1,2-Dichloroethene	U		0.260	1.00	1	09/13/2019 21:46	WG1345565
trans-1,2-Dichloroethene	U		0.396	1.00	1	09/13/2019 21:46	WG1345565
1,2-Dichloropropane	U		0.306	1.00	1	09/13/2019 21:46	WG1345565
cis-1,3-Dichloropropene	U		0.418	1.00	1	09/13/2019 21:46	WG1345565
trans-1,3-Dichloropropene	U		0.419	1.00	1	09/13/2019 21:46	WG1345565
Ethylbenzene	U		0.384	1.00	1	09/13/2019 21:46	WG1345565
2-Hexanone	U		3.82	10.0	1	09/13/2019 21:46	WG1345565
Isopropylbenzene	U		0.326	1.00	1	09/13/2019 21:46	WG1345565
2-Butanone (MEK)	U		3.93	10.0	1	09/13/2019 21:46	WG1345565
Methyl Acetate	U		4.30	20.0	1	09/13/2019 21:46	WG1345565
Methyl Cyclohexane	U		0.380	1.00	1	09/13/2019 21:46	WG1345565
Methylene Chloride	U		1.00	5.00	1	09/13/2019 21:46	WG1345565
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	09/13/2019 21:46	WG1345565
Methyl tert-butyl ether	U		0.367	1.00	1	09/13/2019 21:46	WG1345565
Styrene	U		0.307	1.00	1	09/13/2019 21:46	WG1345565
1,1,2,2-Tetrachloroethane	U		0.130	1.00	1	09/13/2019 21:46	WG1345565
Tetrachloroethene	U		0.372	1.00	1	09/13/2019 21:46	WG1345565
Toluene	U		0.412	1.00	1	09/13/2019 21:46	WG1345565
1,2,3-Trichlorobenzene	U		0.230	1.00	1	09/13/2019 21:46	WG1345565
1,2,4-Trichlorobenzene	U		0.355	1.00	1	09/13/2019 21:46	WG1345565
1,1,1-Trichloroethane	U		0.319	1.00	1	09/13/2019 21:46	WG1345565
1,1,2-Trichloroethane	U		0.383	1.00	1	09/13/2019 21:46	WG1345565
Trichloroethene	U		0.398	1.00	1	09/13/2019 21:46	WG1345565
Trichlorofluoromethane	U		1.20	5.00	1	09/13/2019 21:46	WG1345565
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00	1	09/13/2019 21:46	WG1345565
Vinyl chloride	U		0.259	1.00	1	09/13/2019 21:46	WG1345565
Xylenes, Total	U		1.06	3.00	1	09/13/2019 21:46	WG1345565
(S) Toluene-d8	106			80.0-120		09/13/2019 21:46	WG1345565
(S) 4-Bromofluorobenzene	92.4			77.0-126		09/13/2019 21:46	WG1345565
(S) 1,2-Dichloroethane-d4	94.0			70.0-130		09/13/2019 21:46	WG1345565

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury,Dissolved	U		0.0490	0.200	1	09/10/2019 18:19	WG1342094

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	826		5.15	100	1	09/13/2019 16:21	WG1342142
Antimony,Dissolved	U		0.754	2.00	1	09/13/2019 16:21	WG1342142
Arsenic,Dissolved	3.70		0.250	2.00	1	09/13/2019 16:21	WG1342142
Barium,Dissolved	152		0.360	5.00	1	09/13/2019 16:21	WG1342142
Beryllium,Dissolved	U		0.120	2.00	1	09/13/2019 16:21	WG1342142
Cadmium,Dissolved	U		0.160	1.00	1	09/13/2019 16:21	WG1342142
Calcium,Dissolved	171000		46.0	1000	1	09/13/2019 16:21	WG1342142
Chromium,Dissolved	3.23	B	0.540	2.00	1	09/13/2019 16:21	WG1342142
Copper,Dissolved	8.53		0.520	5.00	1	09/13/2019 16:21	WG1342142
Cobalt,Dissolved	5.23		0.260	2.00	1	09/13/2019 16:21	WG1342142
Iron,Dissolved	5200		15.0	100	1	09/13/2019 16:21	WG1342142
Lead,Dissolved	7.74		0.240	2.00	1	09/13/2019 16:21	WG1342142
Magnesium,Dissolved	59700		100	1000	1	09/13/2019 16:21	WG1342142
Manganese,Dissolved	968		0.250	5.00	1	09/13/2019 16:21	WG1342142
Nickel,Dissolved	8.49		0.350	2.00	1	09/13/2019 16:21	WG1342142
Potassium,Dissolved	11400		37.0	1000	1	09/13/2019 16:21	WG1342142
Selenium,Dissolved	0.574	J	0.380	2.00	1	09/13/2019 16:21	WG1342142
Silver,Dissolved	U		0.310	2.00	1	09/13/2019 16:21	WG1342142
Sodium,Dissolved	8910		110	1000	1	09/13/2019 16:21	WG1342142
Thallium,Dissolved	U		0.190	2.00	1	09/13/2019 16:21	WG1342142
Vanadium,Dissolved	4.54	J	0.180	5.00	1	09/13/2019 16:21	WG1342142
Zinc,Dissolved	17.9	J	2.56	25.0	1	09/13/2019 16:21	WG1342142

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		10.0	50.0	1	09/14/2019 02:10	WG1345565
Benzene	U		0.331	1.00	1	09/14/2019 02:10	WG1345565
Bromochloromethane	U		0.520	1.00	1	09/14/2019 02:10	WG1345565
Bromodichloromethane	U		0.380	1.00	1	09/14/2019 02:10	WG1345565
Bromoform	U		0.469	1.00	1	09/14/2019 02:10	WG1345565
Bromomethane	U		0.866	5.00	1	09/14/2019 02:10	WG1345565
Carbon disulfide	U		0.275	1.00	1	09/14/2019 02:10	WG1345565
Carbon tetrachloride	U		0.379	1.00	1	09/14/2019 02:10	WG1345565
Chlorobenzene	U		0.348	1.00	1	09/14/2019 02:10	WG1345565
Chlorodibromomethane	U		0.327	1.00	1	09/14/2019 02:10	WG1345565
Chloroethane	U		0.453	5.00	1	09/14/2019 02:10	WG1345565
Chloroform	U		0.324	5.00	1	09/14/2019 02:10	WG1345565
Chloromethane	U		0.276	2.50	1	09/14/2019 02:10	WG1345565
Cyclohexane	U		0.390	1.00	1	09/14/2019 02:10	WG1345565
1,2-Dibromo-3-Chloropropane	U		1.33	5.00	1	09/14/2019 02:10	WG1345565
1,2-Dibromoethane	U		0.381	1.00	1	09/14/2019 02:10	WG1345565
1,2-Dichlorobenzene	U		0.349	1.00	1	09/14/2019 02:10	WG1345565
1,3-Dichlorobenzene	U		0.220	1.00	1	09/14/2019 02:10	WG1345565
1,4-Dichlorobenzene	U		0.274	1.00	1	09/14/2019 02:10	WG1345565
Dichlorodifluoromethane	U		0.551	5.00	1	09/14/2019 02:10	WG1345565
1,1-Dichloroethane	U		0.259	1.00	1	09/14/2019 02:10	WG1345565
1,2-Dichloroethane	U		0.361	1.00	1	09/14/2019 02:10	WG1345565
1,1-Dichloroethene	U		0.398	1.00	1	09/14/2019 02:10	WG1345565
cis-1,2-Dichloroethene	U		0.260	1.00	1	09/14/2019 02:10	WG1345565



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
trans-1,2-Dichloroethene	U		0.396	1.00	1	09/14/2019 02:10	WG1345565
1,2-Dichloropropane	U		0.306	1.00	1	09/14/2019 02:10	WG1345565
cis-1,3-Dichloropropene	U		0.418	1.00	1	09/14/2019 02:10	WG1345565
trans-1,3-Dichloropropene	U		0.419	1.00	1	09/14/2019 02:10	WG1345565
Ethylbenzene	U		0.384	1.00	1	09/14/2019 02:10	WG1345565
2-Hexanone	U		3.82	10.0	1	09/14/2019 02:10	WG1345565
Isopropylbenzene	U		0.326	1.00	1	09/14/2019 02:10	WG1345565
2-Butanone (MEK)	U		3.93	10.0	1	09/14/2019 02:10	WG1345565
Methyl Acetate	U		4.30	20.0	1	09/14/2019 02:10	WG1345565
Methyl Cyclohexane	U		0.380	1.00	1	09/14/2019 02:10	WG1345565
Methylene Chloride	U		1.00	5.00	1	09/14/2019 02:10	WG1345565
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	09/14/2019 02:10	WG1345565
Methyl tert-butyl ether	U		0.367	1.00	1	09/14/2019 02:10	WG1345565
Styrene	U		0.307	1.00	1	09/14/2019 02:10	WG1345565
1,1,2,2-Tetrachloroethane	U		0.130	1.00	1	09/14/2019 02:10	WG1345565
Tetrachloroethene	U		0.372	1.00	1	09/14/2019 02:10	WG1345565
Toluene	U		0.412	1.00	1	09/14/2019 02:10	WG1345565
1,2,3-Trichlorobenzene	U		0.230	1.00	1	09/14/2019 02:10	WG1345565
1,2,4-Trichlorobenzene	U		0.355	1.00	1	09/14/2019 02:10	WG1345565
1,1,1-Trichloroethane	U		0.319	1.00	1	09/14/2019 02:10	WG1345565
1,1,2-Trichloroethane	U		0.383	1.00	1	09/14/2019 02:10	WG1345565
Trichloroethene	U		0.398	1.00	1	09/14/2019 02:10	WG1345565
Trichlorofluoromethane	U		1.20	5.00	1	09/14/2019 02:10	WG1345565
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00	1	09/14/2019 02:10	WG1345565
Vinyl chloride	U		0.259	1.00	1	09/14/2019 02:10	WG1345565
Xylenes, Total	U		1.06	3.00	1	09/14/2019 02:10	WG1345565
(S) Toluene-d8	110			80.0-120		09/14/2019 02:10	WG1345565
(S) 4-Bromofluorobenzene	96.0			77.0-126		09/14/2019 02:10	WG1345565
(S) 1,2-Dichloroethane-d4	92.4			70.0-130		09/14/2019 02:10	WG1345565

1	Cp
2	Tc
3	Ss
4	Cn
5	Sr
6	Qc
7	Gl
8	Al
9	Sc

Polychlorinated Biphenyls (GC) by Method 8082

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
PCB 1016	U		0.100	0.500	1	09/10/2019 17:05	WG1342044
PCB 1221	U		0.0730	0.500	1	09/10/2019 17:05	WG1342044
PCB 1232	U		0.0420	0.500	1	09/10/2019 17:05	WG1342044
PCB 1242	U		0.0470	0.500	1	09/10/2019 17:05	WG1342044
PCB 1248	U		0.0860	0.500	1	09/10/2019 17:05	WG1342044
PCB 1254	U		0.0470	0.500	1	09/10/2019 17:05	WG1342044
PCB 1260	U		0.120	0.500	1	09/10/2019 17:05	WG1342044
(S) Decachlorobiphenyl	61.7			10.0-128		09/10/2019 17:05	WG1342044
(S) Tetrachloro-m-xylene	49.2			10.0-127		09/10/2019 17:05	WG1342044

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acenaphthene	3.48	U	1.58	5.00	5	09/11/2019 22:38	WG1343097
Acenaphthylene	U		1.54	5.00	5	09/11/2019 22:38	WG1343097
Acetophenone	U		13.6	50.0	5	09/11/2019 22:38	WG1343097
Anthracene	U		1.46	5.00	5	09/11/2019 22:38	WG1343097
Atrazine	U		1.30	50.0	5	09/11/2019 22:38	WG1343097
Benzaldehyde	U		7.00	50.0	5	09/11/2019 22:38	WG1343097
Benzo(a)anthracene	1.64	U	0.488	5.00	5	09/11/2019 22:38	WG1343097
Benzo(b)fluoranthene	0.873	U	0.448	5.00	5	09/11/2019 22:38	WG1343097
Benzo(k)fluoranthene	U		1.78	5.00	5	09/11/2019 22:38	WG1343097



Collected date/time: 09/05/19 18:45

L1136948

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(g,h,i)perylene	U		0.805	5.00	5	09/11/2019 22:38	WG1343097
Benzo(a)pyrene	U		1.70	5.00	5	09/11/2019 22:38	WG1343097
Biphenyl	U		1.63	50.0	5	09/11/2019 22:38	WG1343097
Bis(2-chlorethoxy)methane	U		1.64	50.0	5	09/11/2019 22:38	WG1343097
Bis(2-chloroethyl)ether	U		8.10	50.0	5	09/11/2019 22:38	WG1343097
Bis(2-chloroisopropyl)ether	U		2.22	50.0	5	09/11/2019 22:38	WG1343097
4-Bromophenyl-phenylether	U		1.68	50.0	5	09/11/2019 22:38	WG1343097
Caprolactam	U		13.0	50.0	5	09/11/2019 22:38	WG1343097
Carbazole	U		1.30	50.0	5	09/11/2019 22:38	WG1343097
4-Chloroaniline	U		1.91	50.0	5	09/11/2019 22:38	WG1343097
2-Chloronaphthalene	U		1.65	5.00	5	09/11/2019 22:38	WG1343097
4-Chlorophenyl-phenylether	U		1.52	50.0	5	09/11/2019 22:38	WG1343097
Chrysene	2.42	L	1.66	5.00	5	09/11/2019 22:38	WG1343097
Dibenz(a,h)anthracene	U		1.40	5.00	5	09/11/2019 22:38	WG1343097
Dibenzofuran	U		1.69	50.0	5	09/11/2019 22:38	WG1343097
3,3-Dichlorobenzidine	U		10.1	50.0	5	09/11/2019 22:38	WG1343097
2,4-Dinitrotoluene	U		8.25	50.0	5	09/11/2019 22:38	WG1343097
2,6-Dinitrotoluene	U		1.40	50.0	5	09/11/2019 22:38	WG1343097
Fluoranthene	U		1.55	5.00	5	09/11/2019 22:38	WG1343097
Fluorene	4.25	L	1.61	5.00	5	09/11/2019 22:38	WG1343097
Hexachlorobenzene	U		1.70	5.00	5	09/11/2019 22:38	WG1343097
Hexachloro-1,3-butadiene	U		1.64	50.0	5	09/11/2019 22:38	WG1343097
Hexachlorocyclopentadiene	U		11.7	50.0	5	09/11/2019 22:38	WG1343097
Hexachloroethane	U		1.83	50.0	5	09/11/2019 22:38	WG1343097
Indeno(1,2,3-cd)pyrene	U		1.40	5.00	5	09/11/2019 22:38	WG1343097
Isophorone	U		1.36	50.0	5	09/11/2019 22:38	WG1343097
2-Methylnaphthalene	13.4		1.56	5.00	5	09/11/2019 22:38	WG1343097
Naphthalene	U		1.86	5.00	5	09/11/2019 22:38	WG1343097
2-Nitroaniline	U		9.50	50.0	5	09/11/2019 22:38	WG1343097
3-Nitroaniline	U		1.54	50.0	5	09/11/2019 22:38	WG1343097
4-Nitroaniline	U		1.74	50.0	5	09/11/2019 22:38	WG1343097
Nitrobenzene	U		1.84	50.0	5	09/11/2019 22:38	WG1343097
n-Nitrosodiphenylamine	U		5.95	50.0	5	09/11/2019 22:38	WG1343097
n-Nitrosodi-n-propylamine	U		2.01	50.0	5	09/11/2019 22:38	WG1343097
Phenanthrene	6.88		1.83	5.00	5	09/11/2019 22:38	WG1343097
Benzylbutyl phthalate	U		1.38	15.0	5	09/11/2019 22:38	WG1343097
Bis(2-ethylhexyl)phthalate	U		3.55	15.0	5	09/11/2019 22:38	WG1343097
Di-n-butyl phthalate	U		1.33	15.0	5	09/11/2019 22:38	WG1343097
Diethyl phthalate	U		1.41	15.0	5	09/11/2019 22:38	WG1343097
Dimethyl phthalate	U		1.41	15.0	5	09/11/2019 22:38	WG1343097
Di-n-octyl phthalate	U		1.39	15.0	5	09/11/2019 22:38	WG1343097
Pyrene	3.24	L	1.65	5.00	5	09/11/2019 22:38	WG1343097
1,2,4,5-Tetrachlorobenzene	U		12.0	50.0	5	09/11/2019 22:38	WG1343097
4-Chloro-3-methylphenol	U		1.32	50.0	5	09/11/2019 22:38	WG1343097
2-Chlorophenol	U		1.41	50.0	5	09/11/2019 22:38	WG1343097
2-Methylphenol	U		1.56	50.0	5	09/11/2019 22:38	WG1343097
3&4-Methyl Phenol	U		1.33	50.0	5	09/11/2019 22:38	WG1343097
2,4-Dichlorophenol	U		1.42	50.0	5	09/11/2019 22:38	WG1343097
2,4-Dimethylphenol	U		3.12	50.0	5	09/11/2019 22:38	WG1343097
4,6-Dinitro-2-methylphenol	U		13.1	50.0	5	09/11/2019 22:38	WG1343097
2,4-Dinitrophenol	U		16.3	50.0	5	09/11/2019 22:38	WG1343097
2-Nitrophenol	U		1.60	50.0	5	09/11/2019 22:38	WG1343097
4-Nitrophenol	U		10.1	50.0	5	09/11/2019 22:38	WG1343097
Pentachlorophenol	U		1.57	50.0	5	09/11/2019 22:38	WG1343097
Phenol	U		1.67	50.0	5	09/11/2019 22:38	WG1343097
2,4,5-Trichlorophenol	U		1.18	50.0	5	09/11/2019 22:38	WG1343097

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
2,4,6-Trichlorophenol	U		1.48	50.0	5	09/11/2019 22:38	WG1343097
(S) 2-Fluorophenol	30.5			10.0-120		09/11/2019 22:38	WG1343097
(S) Phenol-d5	19.7			10.0-120		09/11/2019 22:38	WG1343097
(S) Nitrobenzene-d5	46.5			10.0-127		09/11/2019 22:38	WG1343097
(S) 2-Fluorobiphenyl	49.1			10.0-130		09/11/2019 22:38	WG1343097
(S) 2,4,6-Tribromophenol	62.0			10.0-155		09/11/2019 22:38	WG1343097
(S) p-Terphenyl-d14	65.4			10.0-128		09/11/2019 22:38	WG1343097

Sample Narrative:

L1136948-09 WG1343097: Cannot run at lower dilution due to viscosity of extract

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury,Dissolved	U		0.0490	0.200	1	09/10/2019 18:21	WG1342094

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	189		5.15	100	1	09/13/2019 16:25	WG1342142
Antimony,Dissolved	0.985	J	0.754	2.00	1	09/13/2019 16:25	WG1342142
Arsenic,Dissolved	3.07		0.250	2.00	1	09/13/2019 16:25	WG1342142
Barium,Dissolved	44.1		0.360	5.00	1	09/13/2019 16:25	WG1342142
Beryllium,Dissolved	U		0.120	2.00	1	09/13/2019 16:25	WG1342142
Cadmium,Dissolved	U		0.160	1.00	1	09/13/2019 16:25	WG1342142
Calcium,Dissolved	115000		46.0	1000	1	09/13/2019 16:25	WG1342142
Chromium,Dissolved	1.30	B J	0.540	2.00	1	09/13/2019 16:25	WG1342142
Copper,Dissolved	2.67	J	0.520	5.00	1	09/13/2019 16:25	WG1342142
Cobalt,Dissolved	1.59	J	0.260	2.00	1	09/13/2019 16:25	WG1342142
Iron,Dissolved	5280		15.0	100	1	09/13/2019 16:25	WG1342142
Lead,Dissolved	2.81	B	0.240	2.00	1	09/13/2019 16:25	WG1342142
Magnesium,Dissolved	29100		100	1000	1	09/13/2019 16:25	WG1342142
Manganese,Dissolved	543		0.250	5.00	1	09/13/2019 16:25	WG1342142
Nickel,Dissolved	2.67		0.350	2.00	1	09/13/2019 16:25	WG1342142
Potassium,Dissolved	3880		37.0	1000	1	09/13/2019 16:25	WG1342142
Selenium,Dissolved	0.742	J	0.380	2.00	1	09/13/2019 16:25	WG1342142
Silver,Dissolved	U		0.310	2.00	1	09/13/2019 16:25	WG1342142
Sodium,Dissolved	63300		110	1000	1	09/13/2019 16:25	WG1342142
Thallium,Dissolved	U		0.190	2.00	1	09/13/2019 16:25	WG1342142
Vanadium,Dissolved	1.94	J	0.180	5.00	1	09/13/2019 16:25	WG1342142
Zinc,Dissolved	6.23	J	2.56	25.0	1	09/13/2019 16:25	WG1342142

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		10.0	50.0	1	09/14/2019 02:30	WG1345565
Benzene	U		0.331	1.00	1	09/14/2019 02:30	WG1345565
Bromochloromethane	U		0.520	1.00	1	09/14/2019 02:30	WG1345565
Bromodichloromethane	U		0.380	1.00	1	09/14/2019 02:30	WG1345565
Bromoform	U		0.469	1.00	1	09/14/2019 02:30	WG1345565
Bromomethane	U		0.866	5.00	1	09/14/2019 02:30	WG1345565
Carbon disulfide	U		0.275	1.00	1	09/14/2019 02:30	WG1345565
Carbon tetrachloride	U		0.379	1.00	1	09/14/2019 02:30	WG1345565
Chlorobenzene	U		0.348	1.00	1	09/14/2019 02:30	WG1345565
Chlorodibromomethane	U		0.327	1.00	1	09/14/2019 02:30	WG1345565
Chloroethane	U		0.453	5.00	1	09/14/2019 02:30	WG1345565
Chloroform	U		0.324	5.00	1	09/14/2019 02:30	WG1345565
Chloromethane	U		0.276	2.50	1	09/14/2019 02:30	WG1345565
Cyclohexane	0.755	J	0.390	1.00	1	09/14/2019 02:30	WG1345565
1,2-Dibromo-3-Chloropropane	U		1.33	5.00	1	09/14/2019 02:30	WG1345565
1,2-Dibromoethane	U		0.381	1.00	1	09/14/2019 02:30	WG1345565
1,2-Dichlorobenzene	U		0.349	1.00	1	09/14/2019 02:30	WG1345565
1,3-Dichlorobenzene	U		0.220	1.00	1	09/14/2019 02:30	WG1345565
1,4-Dichlorobenzene	U		0.274	1.00	1	09/14/2019 02:30	WG1345565
Dichlorodifluoromethane	U		0.551	5.00	1	09/14/2019 02:30	WG1345565
1,1-Dichloroethane	U		0.259	1.00	1	09/14/2019 02:30	WG1345565
1,2-Dichloroethane	U		0.361	1.00	1	09/14/2019 02:30	WG1345565
1,1-Dichloroethene	U		0.398	1.00	1	09/14/2019 02:30	WG1345565
cis-1,2-Dichloroethene	U		0.260	1.00	1	09/14/2019 02:30	WG1345565



Collected date/time: 09/06/19 09:38

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Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
trans-1,2-Dichloroethene	U		0.396	1.00	1	09/14/2019 02:30	WG1345565
1,2-Dichloropropane	U		0.306	1.00	1	09/14/2019 02:30	WG1345565
cis-1,3-Dichloropropene	U		0.418	1.00	1	09/14/2019 02:30	WG1345565
trans-1,3-Dichloropropene	U		0.419	1.00	1	09/14/2019 02:30	WG1345565
Ethylbenzene	U		0.384	1.00	1	09/14/2019 02:30	WG1345565
2-Hexanone	U		3.82	10.0	1	09/14/2019 02:30	WG1345565
Isopropylbenzene	0.346	J	0.326	1.00	1	09/14/2019 02:30	WG1345565
2-Butanone (MEK)	U		3.93	10.0	1	09/14/2019 02:30	WG1345565
Methyl Acetate	U		4.30	20.0	1	09/14/2019 02:30	WG1345565
Methyl Cyclohexane	U		0.380	1.00	1	09/14/2019 02:30	WG1345565
Methylene Chloride	U		1.00	5.00	1	09/14/2019 02:30	WG1345565
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	09/14/2019 02:30	WG1345565
Methyl tert-butyl ether	U		0.367	1.00	1	09/14/2019 02:30	WG1345565
Styrene	U		0.307	1.00	1	09/14/2019 02:30	WG1345565
1,1,2,2-Tetrachloroethane	U		0.130	1.00	1	09/14/2019 02:30	WG1345565
Tetrachloroethene	U		0.372	1.00	1	09/14/2019 02:30	WG1345565
Toluene	0.461	J	0.412	1.00	1	09/14/2019 02:30	WG1345565
1,2,3-Trichlorobenzene	U		0.230	1.00	1	09/14/2019 02:30	WG1345565
1,2,4-Trichlorobenzene	U		0.355	1.00	1	09/14/2019 02:30	WG1345565
1,1,1-Trichloroethane	U		0.319	1.00	1	09/14/2019 02:30	WG1345565
1,1,2-Trichloroethane	U		0.383	1.00	1	09/14/2019 02:30	WG1345565
Trichloroethene	U		0.398	1.00	1	09/14/2019 02:30	WG1345565
Trichlorofluoromethane	U		1.20	5.00	1	09/14/2019 02:30	WG1345565
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00	1	09/14/2019 02:30	WG1345565
Vinyl chloride	U		0.259	1.00	1	09/14/2019 02:30	WG1345565
Xylenes, Total	5.76		1.06	3.00	1	09/14/2019 02:30	WG1345565
(S) Toluene-d8	107			80.0-120		09/14/2019 02:30	WG1345565
(S) 4-Bromofluorobenzene	97.1			77.0-126		09/14/2019 02:30	WG1345565
(S) 1,2-Dichloroethane-d4	92.8			70.0-130		09/14/2019 02:30	WG1345565

1	Cp
2	Tc
3	Ss
4	Cn
5	Sr
6	Qc
7	Gl
8	Al
9	Sc

Polychlorinated Biphenyls (GC) by Method 8082

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
PCB 1016	U		0.100	0.500	1	09/10/2019 17:21	WG1342044
PCB 1221	U		0.0730	0.500	1	09/10/2019 17:21	WG1342044
PCB 1232	U		0.0420	0.500	1	09/10/2019 17:21	WG1342044
PCB 1242	U		0.0470	0.500	1	09/10/2019 17:21	WG1342044
PCB 1248	U		0.0860	0.500	1	09/10/2019 17:21	WG1342044
PCB 1254	U		0.0470	0.500	1	09/10/2019 17:21	WG1342044
PCB 1260	U		0.120	0.500	1	09/10/2019 17:21	WG1342044
(S) Decachlorobiphenyl	47.2			10.0-128		09/10/2019 17:21	WG1342044
(S) Tetrachloro-m-xylene	35.0			10.0-127		09/10/2019 17:21	WG1342044

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.316	1.00	1	09/11/2019 21:32	WG1343097
Acenaphthylene	U		0.309	1.00	1	09/11/2019 21:32	WG1343097
Acetophenone	U		2.71	10.0	1	09/11/2019 21:32	WG1343097
Anthracene	U		0.291	1.00	1	09/11/2019 21:32	WG1343097
Atrazine	U		0.260	10.0	1	09/11/2019 21:32	WG1343097
Benzaldehyde	U		1.40	10.0	1	09/11/2019 21:32	WG1343097
Benzo(a)anthracene	U		0.0975	1.00	1	09/11/2019 21:32	WG1343097
Benzo(b)fluoranthene	U		0.0896	1.00	1	09/11/2019 21:32	WG1343097
Benzo(k)fluoranthene	U		0.355	1.00	1	09/11/2019 21:32	WG1343097



Collected date/time: 09/06/19 09:38

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Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(g,h,i)perylene	U		0.161	1.00	1	09/11/2019 21:32	WG1343097
Benzo(a)pyrene	U		0.340	1.00	1	09/11/2019 21:32	WG1343097
Biphenyl	U		0.325	10.0	1	09/11/2019 21:32	WG1343097
Bis(2-chlorethoxy)methane	U		0.329	10.0	1	09/11/2019 21:32	WG1343097
Bis(2-chloroethyl)ether	U		1.62	10.0	1	09/11/2019 21:32	WG1343097
Bis(2-chloroisopropyl)ether	U		0.445	10.0	1	09/11/2019 21:32	WG1343097
4-Bromophenyl-phenylether	U		0.335	10.0	1	09/11/2019 21:32	WG1343097
Caprolactam	U		2.59	10.0	1	09/11/2019 21:32	WG1343097
Carbazole	U		0.260	10.0	1	09/11/2019 21:32	WG1343097
4-Chloroaniline	U		0.382	10.0	1	09/11/2019 21:32	WG1343097
2-Chloronaphthalene	U		0.330	1.00	1	09/11/2019 21:32	WG1343097
4-Chlorophenyl-phenylether	U		0.303	10.0	1	09/11/2019 21:32	WG1343097
Chrysene	U		0.332	1.00	1	09/11/2019 21:32	WG1343097
Dibenz(a,h)anthracene	U		0.279	1.00	1	09/11/2019 21:32	WG1343097
Dibenzofuran	U		0.338	10.0	1	09/11/2019 21:32	WG1343097
3,3-Dichlorobenzidine	U		2.02	10.0	1	09/11/2019 21:32	WG1343097
2,4-Dinitrotoluene	U		1.65	10.0	1	09/11/2019 21:32	WG1343097
2,6-Dinitrotoluene	U		0.279	10.0	1	09/11/2019 21:32	WG1343097
Fluoranthene	U		0.310	1.00	1	09/11/2019 21:32	WG1343097
Fluorene	U		0.323	1.00	1	09/11/2019 21:32	WG1343097
Hexachlorobenzene	U		0.341	1.00	1	09/11/2019 21:32	WG1343097
Hexachloro-1,3-butadiene	U		0.329	10.0	1	09/11/2019 21:32	WG1343097
Hexachlorocyclopentadiene	U		2.33	10.0	1	09/11/2019 21:32	WG1343097
Hexachloroethane	U		0.365	10.0	1	09/11/2019 21:32	WG1343097
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	09/11/2019 21:32	WG1343097
Isophorone	U		0.272	10.0	1	09/11/2019 21:32	WG1343097
2-Methylnaphthalene	U		0.311	1.00	1	09/11/2019 21:32	WG1343097
Naphthalene	U		0.372	1.00	1	09/11/2019 21:32	WG1343097
2-Nitroaniline	U		1.90	10.0	1	09/11/2019 21:32	WG1343097
3-Nitroaniline	U		0.308	10.0	1	09/11/2019 21:32	WG1343097
4-Nitroaniline	U		0.349	10.0	1	09/11/2019 21:32	WG1343097
Nitrobenzene	U		0.367	10.0	1	09/11/2019 21:32	WG1343097
n-Nitrosodiphenylamine	U		1.19	10.0	1	09/11/2019 21:32	WG1343097
n-Nitrosodi-n-propylamine	U		0.403	10.0	1	09/11/2019 21:32	WG1343097
Phenanthrene	U		0.366	1.00	1	09/11/2019 21:32	WG1343097
Benzylbutyl phthalate	U		0.275	3.00	1	09/11/2019 21:32	WG1343097
Bis(2-ethylhexyl)phthalate	U		0.709	3.00	1	09/11/2019 21:32	WG1343097
Di-n-butyl phthalate	U		0.266	3.00	1	09/11/2019 21:32	WG1343097
Diethyl phthalate	U		0.282	3.00	1	09/11/2019 21:32	WG1343097
Dimethyl phthalate	U		0.283	3.00	1	09/11/2019 21:32	WG1343097
Di-n-octyl phthalate	U		0.278	3.00	1	09/11/2019 21:32	WG1343097
Pyrene	U		0.330	1.00	1	09/11/2019 21:32	WG1343097
1,2,4,5-Tetrachlorobenzene	U		2.41	10.0	1	09/11/2019 21:32	WG1343097
4-Chloro-3-methylphenol	U		0.263	10.0	1	09/11/2019 21:32	WG1343097
2-Chlorophenol	U		0.283	10.0	1	09/11/2019 21:32	WG1343097
2-Methylphenol	U		0.312	10.0	1	09/11/2019 21:32	WG1343097
3&4-Methyl Phenol	U		0.266	10.0	1	09/11/2019 21:32	WG1343097
2,4-Dichlorophenol	U		0.284	10.0	1	09/11/2019 21:32	WG1343097
2,4-Dimethylphenol	U		0.624	10.0	1	09/11/2019 21:32	WG1343097
4,6-Dinitro-2-methylphenol	U		2.62	10.0	1	09/11/2019 21:32	WG1343097
2,4-Dinitrophenol	U		3.25	10.0	1	09/11/2019 21:32	WG1343097
2-Nitrophenol	U		0.320	10.0	1	09/11/2019 21:32	WG1343097
4-Nitrophenol	U		2.01	10.0	1	09/11/2019 21:32	WG1343097
Pentachlorophenol	U		0.313	10.0	1	09/11/2019 21:32	WG1343097
Phenol	0.642	B J	0.334	10.0	1	09/11/2019 21:32	WG1343097
2,4,5-Trichlorophenol	U		0.236	10.0	1	09/11/2019 21:32	WG1343097

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
2,4,6-Trichlorophenol	U		0.297	10.0	1	09/11/2019 21:32	WG1343097
(S) 2-Fluorophenol	26.3			10.0-120		09/11/2019 21:32	WG1343097
(S) Phenol-d5	16.6			10.0-120		09/11/2019 21:32	WG1343097
(S) Nitrobenzene-d5	41.4			10.0-127		09/11/2019 21:32	WG1343097
(S) 2-Fluorobiphenyl	42.1			10.0-130		09/11/2019 21:32	WG1343097
(S) 2,4,6-Tribromophenol	52.5			10.0-155		09/11/2019 21:32	WG1343097
(S) p-Terphenyl-d14	58.7			10.0-128		09/11/2019 21:32	WG1343097

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury,Dissolved	U		0.0490	0.200	1	09/10/2019 18:23	WG1342094

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	373		5.15	100	1	09/13/2019 16:29	WG1342142
Antimony,Dissolved	U		0.754	2.00	1	09/13/2019 16:29	WG1342142
Arsenic,Dissolved	3.98		0.250	2.00	1	09/13/2019 16:29	WG1342142
Barium,Dissolved	50.4		0.360	5.00	1	09/13/2019 16:29	WG1342142
Beryllium,Dissolved	U		0.120	2.00	1	09/13/2019 16:29	WG1342142
Cadmium,Dissolved	U		0.160	1.00	1	09/13/2019 16:29	WG1342142
Calcium,Dissolved	118000		46.0	1000	1	09/13/2019 16:29	WG1342142
Chromium,Dissolved	1.68	B J	0.540	2.00	1	09/13/2019 16:29	WG1342142
Copper,Dissolved	1.89	J	0.520	5.00	1	09/13/2019 16:29	WG1342142
Cobalt,Dissolved	2.12		0.260	2.00	1	09/13/2019 16:29	WG1342142
Iron,Dissolved	5750		15.0	100	1	09/13/2019 16:29	WG1342142
Lead,Dissolved	3.85	B	0.240	2.00	1	09/13/2019 16:29	WG1342142
Magnesium,Dissolved	29300		100	1000	1	09/13/2019 16:29	WG1342142
Manganese,Dissolved	372		0.250	5.00	1	09/13/2019 16:29	WG1342142
Nickel,Dissolved	3.13		0.350	2.00	1	09/13/2019 16:29	WG1342142
Potassium,Dissolved	4110		37.0	1000	1	09/13/2019 16:29	WG1342142
Selenium,Dissolved	0.591	J	0.380	2.00	1	09/13/2019 16:29	WG1342142
Silver,Dissolved	U		0.310	2.00	1	09/13/2019 16:29	WG1342142
Sodium,Dissolved	449000		110	1000	1	09/13/2019 16:29	WG1342142
Thallium,Dissolved	U		0.190	2.00	1	09/13/2019 16:29	WG1342142
Vanadium,Dissolved	1.94	J	0.180	5.00	1	09/13/2019 16:29	WG1342142
Zinc,Dissolved	8.87	J	2.56	25.0	1	09/13/2019 16:29	WG1342142

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		10.0	50.0	1	09/14/2019 02:51	WG1345565
Benzene	U		0.331	1.00	1	09/14/2019 02:51	WG1345565
Bromochloromethane	U		0.520	1.00	1	09/14/2019 02:51	WG1345565
Bromodichloromethane	U		0.380	1.00	1	09/14/2019 02:51	WG1345565
Bromoform	U		0.469	1.00	1	09/14/2019 02:51	WG1345565
Bromomethane	U		0.866	5.00	1	09/14/2019 02:51	WG1345565
Carbon disulfide	U		0.275	1.00	1	09/14/2019 02:51	WG1345565
Carbon tetrachloride	U		0.379	1.00	1	09/14/2019 02:51	WG1345565
Chlorobenzene	U		0.348	1.00	1	09/14/2019 02:51	WG1345565
Chlorodibromomethane	U		0.327	1.00	1	09/14/2019 02:51	WG1345565
Chloroethane	U		0.453	5.00	1	09/14/2019 02:51	WG1345565
Chloroform	U		0.324	5.00	1	09/14/2019 02:51	WG1345565
Chloromethane	U		0.276	2.50	1	09/14/2019 02:51	WG1345565
Cyclohexane	U		0.390	1.00	1	09/14/2019 02:51	WG1345565
1,2-Dibromo-3-Chloropropane	U		1.33	5.00	1	09/14/2019 02:51	WG1345565
1,2-Dibromoethane	U		0.381	1.00	1	09/14/2019 02:51	WG1345565
1,2-Dichlorobenzene	U		0.349	1.00	1	09/14/2019 02:51	WG1345565
1,3-Dichlorobenzene	U		0.220	1.00	1	09/14/2019 02:51	WG1345565
1,4-Dichlorobenzene	U		0.274	1.00	1	09/14/2019 02:51	WG1345565
Dichlorodifluoromethane	U		0.551	5.00	1	09/14/2019 02:51	WG1345565
1,1-Dichloroethane	U		0.259	1.00	1	09/14/2019 02:51	WG1345565
1,2-Dichloroethane	U		0.361	1.00	1	09/14/2019 02:51	WG1345565
1,1-Dichloroethene	U		0.398	1.00	1	09/14/2019 02:51	WG1345565
cis-1,2-Dichloroethene	U		0.260	1.00	1	09/14/2019 02:51	WG1345565



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
trans-1,2-Dichloroethene	U		0.396	1.00	1	09/14/2019 02:51	WG1345565
1,2-Dichloropropane	U		0.306	1.00	1	09/14/2019 02:51	WG1345565
cis-1,3-Dichloropropene	U		0.418	1.00	1	09/14/2019 02:51	WG1345565
trans-1,3-Dichloropropene	U		0.419	1.00	1	09/14/2019 02:51	WG1345565
Ethylbenzene	U		0.384	1.00	1	09/14/2019 02:51	WG1345565
2-Hexanone	U		3.82	10.0	1	09/14/2019 02:51	WG1345565
Isopropylbenzene	U		0.326	1.00	1	09/14/2019 02:51	WG1345565
2-Butanone (MEK)	U		3.93	10.0	1	09/14/2019 02:51	WG1345565
Methyl Acetate	U		4.30	20.0	1	09/14/2019 02:51	WG1345565
Methyl Cyclohexane	U		0.380	1.00	1	09/14/2019 02:51	WG1345565
Methylene Chloride	U		1.00	5.00	1	09/14/2019 02:51	WG1345565
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	09/14/2019 02:51	WG1345565
Methyl tert-butyl ether	U		0.367	1.00	1	09/14/2019 02:51	WG1345565
Styrene	U		0.307	1.00	1	09/14/2019 02:51	WG1345565
1,1,2,2-Tetrachloroethane	U		0.130	1.00	1	09/14/2019 02:51	WG1345565
Tetrachloroethene	U		0.372	1.00	1	09/14/2019 02:51	WG1345565
Toluene	U		0.412	1.00	1	09/14/2019 02:51	WG1345565
1,2,3-Trichlorobenzene	U		0.230	1.00	1	09/14/2019 02:51	WG1345565
1,2,4-Trichlorobenzene	U		0.355	1.00	1	09/14/2019 02:51	WG1345565
1,1,1-Trichloroethane	U		0.319	1.00	1	09/14/2019 02:51	WG1345565
1,1,2-Trichloroethane	U		0.383	1.00	1	09/14/2019 02:51	WG1345565
Trichloroethene	U		0.398	1.00	1	09/14/2019 02:51	WG1345565
Trichlorofluoromethane	U		1.20	5.00	1	09/14/2019 02:51	WG1345565
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00	1	09/14/2019 02:51	WG1345565
Vinyl chloride	U		0.259	1.00	1	09/14/2019 02:51	WG1345565
Xylenes, Total	U		1.06	3.00	1	09/14/2019 02:51	WG1345565
(S) Toluene-d8	110			80.0-120		09/14/2019 02:51	WG1345565
(S) 4-Bromofluorobenzene	96.7			77.0-126		09/14/2019 02:51	WG1345565
(S) 1,2-Dichloroethane-d4	92.8			70.0-130		09/14/2019 02:51	WG1345565

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Polychlorinated Biphenyls (GC) by Method 8082

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
PCB 1016	U		0.100	0.500	1	09/10/2019 17:36	WG1342044
PCB 1221	U		0.0730	0.500	1	09/10/2019 17:36	WG1342044
PCB 1232	U		0.0420	0.500	1	09/10/2019 17:36	WG1342044
PCB 1242	U		0.0470	0.500	1	09/10/2019 17:36	WG1342044
PCB 1248	U		0.0860	0.500	1	09/10/2019 17:36	WG1342044
PCB 1254	U		0.0470	0.500	1	09/10/2019 17:36	WG1342044
PCB 1260	U		0.120	0.500	1	09/10/2019 17:36	WG1342044
(S) Decachlorobiphenyl	54.6			10.0-128		09/10/2019 17:36	WG1342044
(S) Tetrachloro-m-xylene	45.9			10.0-127		09/10/2019 17:36	WG1342044

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acenaphthene	0.915	U	0.316	1.00	1	09/11/2019 21:54	WG1343097
Acenaphthylene	U		0.309	1.00	1	09/11/2019 21:54	WG1343097
Acetophenone	U		2.71	10.0	1	09/11/2019 21:54	WG1343097
Anthracene	0.354	U	0.291	1.00	1	09/11/2019 21:54	WG1343097
Atrazine	U		0.260	10.0	1	09/11/2019 21:54	WG1343097
Benzaldehyde	U		1.40	10.0	1	09/11/2019 21:54	WG1343097
Benzo(a)anthracene	0.292	U	0.0975	1.00	1	09/11/2019 21:54	WG1343097
Benzo(b)fluoranthene	U		0.0896	1.00	1	09/11/2019 21:54	WG1343097
Benzo(k)fluoranthene	U		0.355	1.00	1	09/11/2019 21:54	WG1343097



Collected date/time: 09/06/19 10:50

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Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(g,h,i)perylene	U		0.161	1.00	1	09/11/2019 21:54	WG1343097
Benzo(a)pyrene	U		0.340	1.00	1	09/11/2019 21:54	WG1343097
Biphenyl	U		0.325	10.0	1	09/11/2019 21:54	WG1343097
Bis(2-chlorethoxy)methane	U		0.329	10.0	1	09/11/2019 21:54	WG1343097
Bis(2-chloroethyl)ether	U		1.62	10.0	1	09/11/2019 21:54	WG1343097
Bis(2-chloroisopropyl)ether	U		0.445	10.0	1	09/11/2019 21:54	WG1343097
4-Bromophenyl-phenylether	U		0.335	10.0	1	09/11/2019 21:54	WG1343097
Caprolactam	U		2.59	10.0	1	09/11/2019 21:54	WG1343097
Carbazole	U		0.260	10.0	1	09/11/2019 21:54	WG1343097
4-Chloroaniline	U		0.382	10.0	1	09/11/2019 21:54	WG1343097
2-Chloronaphthalene	U		0.330	1.00	1	09/11/2019 21:54	WG1343097
4-Chlorophenyl-phenylether	U		0.303	10.0	1	09/11/2019 21:54	WG1343097
Chrysene	U		0.332	1.00	1	09/11/2019 21:54	WG1343097
Dibenz(a,h)anthracene	U		0.279	1.00	1	09/11/2019 21:54	WG1343097
Dibenzofuran	0.459	IJ	0.338	10.0	1	09/11/2019 21:54	WG1343097
3,3-Dichlorobenzidine	U		2.02	10.0	1	09/11/2019 21:54	WG1343097
2,4-Dinitrotoluene	U		1.65	10.0	1	09/11/2019 21:54	WG1343097
2,6-Dinitrotoluene	U		0.279	10.0	1	09/11/2019 21:54	WG1343097
Fluoranthene	U		0.310	1.00	1	09/11/2019 21:54	WG1343097
Fluorene	1.09		0.323	1.00	1	09/11/2019 21:54	WG1343097
Hexachlorobenzene	U		0.341	1.00	1	09/11/2019 21:54	WG1343097
Hexachloro-1,3-butadiene	U		0.329	10.0	1	09/11/2019 21:54	WG1343097
Hexachlorocyclopentadiene	U		2.33	10.0	1	09/11/2019 21:54	WG1343097
Hexachloroethane	U		0.365	10.0	1	09/11/2019 21:54	WG1343097
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	09/11/2019 21:54	WG1343097
Isophorone	U		0.272	10.0	1	09/11/2019 21:54	WG1343097
2-Methylnaphthalene	0.535	IJ	0.311	1.00	1	09/11/2019 21:54	WG1343097
Naphthalene	U		0.372	1.00	1	09/11/2019 21:54	WG1343097
2-Nitroaniline	U		1.90	10.0	1	09/11/2019 21:54	WG1343097
3-Nitroaniline	U		0.308	10.0	1	09/11/2019 21:54	WG1343097
4-Nitroaniline	U		0.349	10.0	1	09/11/2019 21:54	WG1343097
Nitrobenzene	U		0.367	10.0	1	09/11/2019 21:54	WG1343097
n-Nitrosodiphenylamine	U		1.19	10.0	1	09/11/2019 21:54	WG1343097
n-Nitrosodi-n-propylamine	U		0.403	10.0	1	09/11/2019 21:54	WG1343097
Phenanthrene	1.81		0.366	1.00	1	09/11/2019 21:54	WG1343097
Benzylbutyl phthalate	U		0.275	3.00	1	09/11/2019 21:54	WG1343097
Bis(2-ethylhexyl)phthalate	U		0.709	3.00	1	09/11/2019 21:54	WG1343097
Di-n-butyl phthalate	0.272	IJ	0.266	3.00	1	09/11/2019 21:54	WG1343097
Diethyl phthalate	U		0.282	3.00	1	09/11/2019 21:54	WG1343097
Dimethyl phthalate	U		0.283	3.00	1	09/11/2019 21:54	WG1343097
Di-n-octyl phthalate	U		0.278	3.00	1	09/11/2019 21:54	WG1343097
Pyrene	0.463	IJ	0.330	1.00	1	09/11/2019 21:54	WG1343097
1,2,4,5-Tetrachlorobenzene	U		2.41	10.0	1	09/11/2019 21:54	WG1343097
4-Chloro-3-methylphenol	U		0.263	10.0	1	09/11/2019 21:54	WG1343097
2-Chlorophenol	U		0.283	10.0	1	09/11/2019 21:54	WG1343097
2-Methylphenol	U		0.312	10.0	1	09/11/2019 21:54	WG1343097
3&4-Methyl Phenol	U		0.266	10.0	1	09/11/2019 21:54	WG1343097
2,4-Dichlorophenol	U		0.284	10.0	1	09/11/2019 21:54	WG1343097
2,4-Dimethylphenol	U		0.624	10.0	1	09/11/2019 21:54	WG1343097
4,6-Dinitro-2-methylphenol	U		2.62	10.0	1	09/11/2019 21:54	WG1343097
2,4-Dinitrophenol	U		3.25	10.0	1	09/11/2019 21:54	WG1343097
2-Nitrophenol	U		0.320	10.0	1	09/11/2019 21:54	WG1343097
4-Nitrophenol	U		2.01	10.0	1	09/11/2019 21:54	WG1343097
Pentachlorophenol	U		0.313	10.0	1	09/11/2019 21:54	WG1343097
Phenol	1.46	BJ	0.334	10.0	1	09/11/2019 21:54	WG1343097
2,4,5-Trichlorophenol	U		0.236	10.0	1	09/11/2019 21:54	WG1343097

1 Cp**2** Tc**3** Ss**4** Cn**5** Sr**6** Qc**7** Gl**8** Al**9** Sc



Collected date/time: 09/06/19 10:50

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Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
2,4,6-Trichlorophenol	U		0.297	10.0	1	09/11/2019 21:54	WG1343097
(S) 2-Fluorophenol	33.2			10.0-120		09/11/2019 21:54	WG1343097
(S) Phenol-d5	21.8			10.0-120		09/11/2019 21:54	WG1343097
(S) Nitrobenzene-d5	46.1			10.0-127		09/11/2019 21:54	WG1343097
(S) 2-Fluorobiphenyl	48.4			10.0-130		09/11/2019 21:54	WG1343097
(S) 2,4,6-Tribromophenol	63.5			10.0-155		09/11/2019 21:54	WG1343097
(S) p-Terphenyl-d14	69.8			10.0-128		09/11/2019 21:54	WG1343097

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury,Dissolved	U		0.0490	0.200	1	09/10/2019 18:25	WG1342094

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	239		5.15	100	1	09/13/2019 16:40	WG1342142
Antimony,Dissolved	U		0.754	2.00	1	09/13/2019 16:40	WG1342142
Arsenic,Dissolved	2.24		0.250	2.00	1	09/13/2019 16:40	WG1342142
Barium,Dissolved	36.2		0.360	5.00	1	09/13/2019 16:40	WG1342142
Beryllium,Dissolved	U		0.120	2.00	1	09/13/2019 16:40	WG1342142
Cadmium,Dissolved	U		0.160	1.00	1	09/13/2019 16:40	WG1342142
Calcium,Dissolved	104000		46.0	1000	1	09/13/2019 16:40	WG1342142
Chromium,Dissolved	1.33	B J	0.540	2.00	1	09/13/2019 16:40	WG1342142
Copper,Dissolved	1.73	J	0.520	5.00	1	09/13/2019 16:40	WG1342142
Cobalt,Dissolved	1.85	J	0.260	2.00	1	09/13/2019 16:40	WG1342142
Iron,Dissolved	2100		15.0	100	1	09/13/2019 16:40	WG1342142
Lead,Dissolved	2.89	B	0.240	2.00	1	09/13/2019 16:40	WG1342142
Magnesium,Dissolved	23100		100	1000	1	09/13/2019 16:40	WG1342142
Manganese,Dissolved	376		0.250	5.00	1	09/13/2019 16:40	WG1342142
Nickel,Dissolved	2.15		0.350	2.00	1	09/13/2019 16:40	WG1342142
Potassium,Dissolved	4630		37.0	1000	1	09/13/2019 16:40	WG1342142
Selenium,Dissolved	0.801	J	0.380	2.00	1	09/13/2019 16:40	WG1342142
Silver,Dissolved	U		0.310	2.00	1	09/13/2019 16:40	WG1342142
Sodium,Dissolved	286000		110	1000	1	09/13/2019 16:40	WG1342142
Thallium,Dissolved	U		0.190	2.00	1	09/13/2019 16:40	WG1342142
Vanadium,Dissolved	1.29	J	0.180	5.00	1	09/13/2019 16:40	WG1342142
Zinc,Dissolved	5.93	J	2.56	25.0	1	09/13/2019 16:40	WG1342142

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		10.0	50.0	1	09/14/2019 01:06	WG1345579
Benzene	U		0.331	1.00	1	09/14/2019 01:06	WG1345579
Bromochloromethane	U		0.520	1.00	1	09/14/2019 01:06	WG1345579
Bromodichloromethane	U		0.380	1.00	1	09/14/2019 01:06	WG1345579
Bromoform	U		0.469	1.00	1	09/14/2019 01:06	WG1345579
Bromomethane	U		0.866	5.00	1	09/14/2019 01:06	WG1345579
Carbon disulfide	U		0.275	1.00	1	09/14/2019 01:06	WG1345579
Carbon tetrachloride	U		0.379	1.00	1	09/14/2019 01:06	WG1345579
Chlorobenzene	U		0.348	1.00	1	09/14/2019 01:06	WG1345579
Chlorodibromomethane	U		0.327	1.00	1	09/14/2019 01:06	WG1345579
Chloroethane	U		0.453	5.00	1	09/14/2019 01:06	WG1345579
Chloroform	U		0.324	5.00	1	09/14/2019 01:06	WG1345579
Chloromethane	U		0.276	2.50	1	09/14/2019 01:06	WG1345579
Cyclohexane	U		0.390	1.00	1	09/14/2019 01:06	WG1345579
1,2-Dibromo-3-Chloropropane	U		1.33	5.00	1	09/14/2019 01:06	WG1345579
1,2-Dibromoethane	U		0.381	1.00	1	09/14/2019 01:06	WG1345579
1,2-Dichlorobenzene	U		0.349	1.00	1	09/14/2019 01:06	WG1345579
1,3-Dichlorobenzene	U		0.220	1.00	1	09/14/2019 01:06	WG1345579
1,4-Dichlorobenzene	U		0.274	1.00	1	09/14/2019 01:06	WG1345579
Dichlorodifluoromethane	U		0.551	5.00	1	09/14/2019 01:06	WG1345579
1,1-Dichloroethane	U		0.259	1.00	1	09/14/2019 01:06	WG1345579
1,2-Dichloroethane	U		0.361	1.00	1	09/14/2019 01:06	WG1345579
1,1-Dichloroethene	U		0.398	1.00	1	09/14/2019 01:06	WG1345579
cis-1,2-Dichloroethene	U		0.260	1.00	1	09/14/2019 01:06	WG1345579



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
trans-1,2-Dichloroethene	U		0.396	1.00	1	09/14/2019 01:06	WG1345579
1,2-Dichloropropane	U		0.306	1.00	1	09/14/2019 01:06	WG1345579
cis-1,3-Dichloropropene	U		0.418	1.00	1	09/14/2019 01:06	WG1345579
trans-1,3-Dichloropropene	U		0.419	1.00	1	09/14/2019 01:06	WG1345579
Ethylbenzene	U		0.384	1.00	1	09/14/2019 01:06	WG1345579
2-Hexanone	U		3.82	10.0	1	09/14/2019 01:06	WG1345579
Isopropylbenzene	U		0.326	1.00	1	09/14/2019 01:06	WG1345579
2-Butanone (MEK)	U		3.93	10.0	1	09/14/2019 01:06	WG1345579
Methyl Acetate	U		4.30	20.0	1	09/14/2019 01:06	WG1345579
Methyl Cyclohexane	U		0.380	1.00	1	09/14/2019 01:06	WG1345579
Methylene Chloride	U		1.00	5.00	1	09/14/2019 01:06	WG1345579
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	09/14/2019 01:06	WG1345579
Methyl tert-butyl ether	U		0.367	1.00	1	09/14/2019 01:06	WG1345579
Styrene	U		0.307	1.00	1	09/14/2019 01:06	WG1345579
1,1,2,2-Tetrachloroethane	U		0.130	1.00	1	09/14/2019 01:06	WG1345579
Tetrachloroethene	U		0.372	1.00	1	09/14/2019 01:06	WG1345579
Toluene	U		0.412	1.00	1	09/14/2019 01:06	WG1345579
1,2,3-Trichlorobenzene	U		0.230	1.00	1	09/14/2019 01:06	WG1345579
1,2,4-Trichlorobenzene	U		0.355	1.00	1	09/14/2019 01:06	WG1345579
1,1,1-Trichloroethane	U		0.319	1.00	1	09/14/2019 01:06	WG1345579
1,1,2-Trichloroethane	U		0.383	1.00	1	09/14/2019 01:06	WG1345579
Trichloroethene	U		0.398	1.00	1	09/14/2019 01:06	WG1345579
Trichlorofluoromethane	U		1.20	5.00	1	09/14/2019 01:06	WG1345579
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00	1	09/14/2019 01:06	WG1345579
Vinyl chloride	U		0.259	1.00	1	09/14/2019 01:06	WG1345579
Xylenes, Total	U		1.06	3.00	1	09/14/2019 01:06	WG1345579
(S) Toluene-d8	101			80.0-120		09/14/2019 01:06	WG1345579
(S) 4-Bromofluorobenzene	98.2			77.0-126		09/14/2019 01:06	WG1345579
(S) 1,2-Dichloroethane-d4	98.4			70.0-130		09/14/2019 01:06	WG1345579

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Polychlorinated Biphenyls (GC) by Method 8082

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
PCB 1016	U		0.100	0.500	1	09/10/2019 17:52	WG1342044
PCB 1221	U		0.0730	0.500	1	09/10/2019 17:52	WG1342044
PCB 1232	U		0.0420	0.500	1	09/10/2019 17:52	WG1342044
PCB 1242	U		0.0470	0.500	1	09/10/2019 17:52	WG1342044
PCB 1248	U		0.0860	0.500	1	09/10/2019 17:52	WG1342044
PCB 1254	U		0.0470	0.500	1	09/10/2019 17:52	WG1342044
PCB 1260	U		0.120	0.500	1	09/10/2019 17:52	WG1342044
(S) Decachlorobiphenyl	56.3			10.0-128		09/10/2019 17:52	WG1342044
(S) Tetrachloro-m-xylene	32.0			10.0-127		09/10/2019 17:52	WG1342044

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.319	1.01	1.01	09/11/2019 17:49	WG1343097
Acenaphthylene	U		0.312	1.01	1.01	09/11/2019 17:49	WG1343097
Acetophenone	U		2.74	10.1	1.01	09/11/2019 17:49	WG1343097
Anthracene	U		0.294	1.01	1.01	09/11/2019 17:49	WG1343097
Atrazine	U		0.263	10.1	1.01	09/11/2019 17:49	WG1343097
Benzaldehyde	U		1.41	10.1	1.01	09/11/2019 17:49	WG1343097
Benzo(a)anthracene	U		0.0985	1.01	1.01	09/11/2019 17:49	WG1343097
Benzo(b)fluoranthene	U		0.0905	1.01	1.01	09/11/2019 17:49	WG1343097
Benzo(k)fluoranthene	U		0.359	1.01	1.01	09/11/2019 17:49	WG1343097



Collected date/time: 09/06/19 11:55

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Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(g,h,i)perylene	U		0.163	1.01	1.01	09/11/2019 17:49	WG1343097
Benzo(a)pyrene	U		0.343	1.01	1.01	09/11/2019 17:49	WG1343097
Biphenyl	U		0.328	10.1	1.01	09/11/2019 17:49	WG1343097
Bis(2-chlorethoxy)methane	U		0.332	10.1	1.01	09/11/2019 17:49	WG1343097
Bis(2-chloroethyl)ether	U		1.64	10.1	1.01	09/11/2019 17:49	WG1343097
Bis(2-chloroisopropyl)ether	U		0.449	10.1	1.01	09/11/2019 17:49	WG1343097
4-Bromophenyl-phenylether	U		0.338	10.1	1.01	09/11/2019 17:49	WG1343097
Caprolactam	U		2.62	10.1	1.01	09/11/2019 17:49	WG1343097
Carbazole	U		0.263	10.1	1.01	09/11/2019 17:49	WG1343097
4-Chloroaniline	U		0.386	10.1	1.01	09/11/2019 17:49	WG1343097
2-Chloronaphthalene	U		0.333	1.01	1.01	09/11/2019 17:49	WG1343097
4-Chlorophenyl-phenylether	U		0.306	10.1	1.01	09/11/2019 17:49	WG1343097
Chrysene	U		0.335	1.01	1.01	09/11/2019 17:49	WG1343097
Dibenz(a,h)anthracene	U		0.282	1.01	1.01	09/11/2019 17:49	WG1343097
Dibenzofuran	U		0.341	10.1	1.01	09/11/2019 17:49	WG1343097
3,3-Dichlorobenzidine	U		2.04	10.1	1.01	09/11/2019 17:49	WG1343097
2,4-Dinitrotoluene	U		1.67	10.1	1.01	09/11/2019 17:49	WG1343097
2,6-Dinitrotoluene	U		0.282	10.1	1.01	09/11/2019 17:49	WG1343097
Fluoranthene	U		0.313	1.01	1.01	09/11/2019 17:49	WG1343097
Fluorene	U		0.326	1.01	1.01	09/11/2019 17:49	WG1343097
Hexachlorobenzene	U		0.344	1.01	1.01	09/11/2019 17:49	WG1343097
Hexachloro-1,3-butadiene	U		0.332	10.1	1.01	09/11/2019 17:49	WG1343097
Hexachlorocyclopentadiene	U		2.35	10.1	1.01	09/11/2019 17:49	WG1343097
Hexachloroethane	U		0.369	10.1	1.01	09/11/2019 17:49	WG1343097
Indeno(1,2,3-cd)pyrene	U		0.282	1.01	1.01	09/11/2019 17:49	WG1343097
Isophorone	U		0.275	10.1	1.01	09/11/2019 17:49	WG1343097
2-Methylnaphthalene	U		0.314	1.01	1.01	09/11/2019 17:49	WG1343097
Naphthalene	U		0.376	1.01	1.01	09/11/2019 17:49	WG1343097
2-Nitroaniline	U		1.92	10.1	1.01	09/11/2019 17:49	WG1343097
3-Nitroaniline	U		0.311	10.1	1.01	09/11/2019 17:49	WG1343097
4-Nitroaniline	U		0.352	10.1	1.01	09/11/2019 17:49	WG1343097
Nitrobenzene	U		0.371	10.1	1.01	09/11/2019 17:49	WG1343097
n-Nitrosodiphenylamine	U		1.20	10.1	1.01	09/11/2019 17:49	WG1343097
n-Nitrosodi-n-propylamine	U		0.407	10.1	1.01	09/11/2019 17:49	WG1343097
Phenanthrene	U		0.370	1.01	1.01	09/11/2019 17:49	WG1343097
Benzylbutyl phthalate	U		0.278	3.03	1.01	09/11/2019 17:49	WG1343097
Bis(2-ethylhexyl)phthalate	U		0.716	3.03	1.01	09/11/2019 17:49	WG1343097
Di-n-butyl phthalate	0.334	<u>J</u>	0.269	3.03	1.01	09/11/2019 17:49	WG1343097
Diethyl phthalate	U		0.285	3.03	1.01	09/11/2019 17:49	WG1343097
Dimethyl phthalate	U		0.286	3.03	1.01	09/11/2019 17:49	WG1343097
Di-n-octyl phthalate	U		0.281	3.03	1.01	09/11/2019 17:49	WG1343097
Pyrene	U		0.333	1.01	1.01	09/11/2019 17:49	WG1343097
1,2,4,5-Tetrachlorobenzene	U		2.43	10.1	1.01	09/11/2019 17:49	WG1343097
4-Chloro-3-methylphenol	U		0.266	10.1	1.01	09/11/2019 17:49	WG1343097
2-Chlorophenol	U		0.286	10.1	1.01	09/11/2019 17:49	WG1343097
2-Methylphenol	U		0.315	10.1	1.01	09/11/2019 17:49	WG1343097
3&4-Methyl Phenol	U		0.269	10.1	1.01	09/11/2019 17:49	WG1343097
2,4-Dichlorophenol	U		0.287	10.1	1.01	09/11/2019 17:49	WG1343097
2,4-Dimethylphenol	U		0.630	10.1	1.01	09/11/2019 17:49	WG1343097
4,6-Dinitro-2-methylphenol	U		2.65	10.1	1.01	09/11/2019 17:49	WG1343097
2,4-Dinitrophenol	U		3.28	10.1	1.01	09/11/2019 17:49	WG1343097
2-Nitrophenol	U		0.323	10.1	1.01	09/11/2019 17:49	WG1343097
4-Nitrophenol	U		2.03	10.1	1.01	09/11/2019 17:49	WG1343097
Pentachlorophenol	U		0.316	10.1	1.01	09/11/2019 17:49	WG1343097
Phenol	1.08	<u>B J</u>	0.337	10.1	1.01	09/11/2019 17:49	WG1343097
2,4,5-Trichlorophenol	U		0.238	10.1	1.01	09/11/2019 17:49	WG1343097

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 09/06/19 11:55

L1136948

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
2,4,6-Trichlorophenol	U		0.300	10.1	1.01	09/11/2019 17:49	WG1343097
(S) 2-Fluorophenol	31.3			10.0-120		09/11/2019 17:49	WG1343097
(S) Phenol-d5	20.0			10.0-120		09/11/2019 17:49	WG1343097
(S) Nitrobenzene-d5	38.6			10.0-127		09/11/2019 17:49	WG1343097
(S) 2-Fluorobiphenyl	41.2			10.0-130		09/11/2019 17:49	WG1343097
(S) 2,4,6-Tribromophenol	48.5			10.0-155		09/11/2019 17:49	WG1343097
(S) p-Terphenyl-d14	59.7			10.0-128		09/11/2019 17:49	WG1343097

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury,Dissolved	U		0.0490	0.200	1	09/10/2019 17:57	WG1342094

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	216		5.15	100	1	09/12/2019 18:29	WG1342142
Antimony,Dissolved	U		0.754	2.00	1	09/12/2019 18:29	WG1342142
Arsenic,Dissolved	2.76		0.250	2.00	1	09/12/2019 18:29	WG1342142
Barium,Dissolved	121		0.360	5.00	1	09/12/2019 18:29	WG1342142
Beryllium,Dissolved	U		0.120	2.00	1	09/12/2019 18:29	WG1342142
Cadmium,Dissolved	U		0.160	1.00	1	09/12/2019 18:29	WG1342142
Calcium,Dissolved	101000	V	46.0	1000	1	09/12/2019 18:29	WG1342142
Chromium,Dissolved	1.49	B J	0.540	2.00	1	09/12/2019 18:29	WG1342142
Copper,Dissolved	7.32		0.520	5.00	1	09/12/2019 18:29	WG1342142
Cobalt,Dissolved	1.46	J	0.260	2.00	1	09/12/2019 18:29	WG1342142
Iron,Dissolved	1490		15.0	100	1	09/12/2019 18:29	WG1342142
Lead,Dissolved	6.73		0.240	2.00	1	09/12/2019 18:29	WG1342142
Magnesium,Dissolved	22200		100	1000	1	09/12/2019 18:29	WG1342142
Manganese,Dissolved	271		0.250	5.00	1	09/12/2019 18:29	WG1342142
Nickel,Dissolved	3.16		0.350	2.00	1	09/12/2019 18:29	WG1342142
Potassium,Dissolved	4730		37.0	1000	1	09/12/2019 18:29	WG1342142
Selenium,Dissolved	0.472	J	0.380	2.00	1	09/12/2019 18:29	WG1342142
Silver,Dissolved	U		0.310	2.00	1	09/12/2019 18:29	WG1342142
Sodium,Dissolved	486000	V	110	1000	1	09/12/2019 18:29	WG1342142
Thallium,Dissolved	U		0.190	2.00	1	09/12/2019 18:29	WG1342142
Vanadium,Dissolved	1.58	J	0.180	5.00	1	09/12/2019 18:29	WG1342142
Zinc,Dissolved	5.05	J	2.56	25.0	1	09/12/2019 18:29	WG1342142

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		10.0	50.0	1	09/14/2019 01:26	WG1345579
Benzene	U		0.331	1.00	1	09/14/2019 01:26	WG1345579
Bromochloromethane	U		0.520	1.00	1	09/14/2019 01:26	WG1345579
Bromodichloromethane	U		0.380	1.00	1	09/14/2019 01:26	WG1345579
Bromoform	U		0.469	1.00	1	09/14/2019 01:26	WG1345579
Bromomethane	U		0.866	5.00	1	09/14/2019 01:26	WG1345579
Carbon disulfide	U		0.275	1.00	1	09/14/2019 01:26	WG1345579
Carbon tetrachloride	U		0.379	1.00	1	09/14/2019 01:26	WG1345579
Chlorobenzene	U		0.348	1.00	1	09/14/2019 01:26	WG1345579
Chlorodibromomethane	U		0.327	1.00	1	09/14/2019 01:26	WG1345579
Chloroethane	U		0.453	5.00	1	09/14/2019 01:26	WG1345579
Chloroform	U		0.324	5.00	1	09/14/2019 01:26	WG1345579
Chloromethane	U		0.276	2.50	1	09/14/2019 01:26	WG1345579
Cyclohexane	1.93		0.390	1.00	1	09/14/2019 01:26	WG1345579
1,2-Dibromo-3-Chloropropane	U		1.33	5.00	1	09/14/2019 01:26	WG1345579
1,2-Dibromoethane	U		0.381	1.00	1	09/14/2019 01:26	WG1345579
1,2-Dichlorobenzene	U		0.349	1.00	1	09/14/2019 01:26	WG1345579
1,3-Dichlorobenzene	U		0.220	1.00	1	09/14/2019 01:26	WG1345579
1,4-Dichlorobenzene	U		0.274	1.00	1	09/14/2019 01:26	WG1345579
Dichlorodifluoromethane	U		0.551	5.00	1	09/14/2019 01:26	WG1345579
1,1-Dichloroethane	U		0.259	1.00	1	09/14/2019 01:26	WG1345579
1,2-Dichloroethane	U		0.361	1.00	1	09/14/2019 01:26	WG1345579
1,1-Dichloroethene	U		0.398	1.00	1	09/14/2019 01:26	WG1345579
cis-1,2-Dichloroethene	U		0.260	1.00	1	09/14/2019 01:26	WG1345579





Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
trans-1,2-Dichloroethene	U		0.396	1.00	1	09/14/2019 01:26	WG1345579
1,2-Dichloropropane	U		0.306	1.00	1	09/14/2019 01:26	WG1345579
cis-1,3-Dichloropropene	U		0.418	1.00	1	09/14/2019 01:26	WG1345579
trans-1,3-Dichloropropene	U		0.419	1.00	1	09/14/2019 01:26	WG1345579
Ethylbenzene	U		0.384	1.00	1	09/14/2019 01:26	WG1345579
2-Hexanone	U		3.82	10.0	1	09/14/2019 01:26	WG1345579
Isopropylbenzene	1.19		0.326	1.00	1	09/14/2019 01:26	WG1345579
2-Butanone (MEK)	U		3.93	10.0	1	09/14/2019 01:26	WG1345579
Methyl Acetate	U	J3	4.30	20.0	1	09/14/2019 01:26	WG1345579
Methyl Cyclohexane	U		0.380	1.00	1	09/14/2019 01:26	WG1345579
Methylene Chloride	U		1.00	5.00	1	09/14/2019 01:26	WG1345579
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	09/14/2019 01:26	WG1345579
Methyl tert-butyl ether	U		0.367	1.00	1	09/14/2019 01:26	WG1345579
Styrene	U		0.307	1.00	1	09/14/2019 01:26	WG1345579
1,1,2,2-Tetrachloroethane	U		0.130	1.00	1	09/14/2019 01:26	WG1345579
Tetrachloroethene	U		0.372	1.00	1	09/14/2019 01:26	WG1345579
Toluene	U		0.412	1.00	1	09/14/2019 01:26	WG1345579
1,2,3-Trichlorobenzene	U		0.230	1.00	1	09/14/2019 01:26	WG1345579
1,2,4-Trichlorobenzene	U		0.355	1.00	1	09/14/2019 01:26	WG1345579
1,1,1-Trichloroethane	U		0.319	1.00	1	09/14/2019 01:26	WG1345579
1,1,2-Trichloroethane	U		0.383	1.00	1	09/14/2019 01:26	WG1345579
Trichloroethene	U		0.398	1.00	1	09/14/2019 01:26	WG1345579
Trichlorofluoromethane	U		1.20	5.00	1	09/14/2019 01:26	WG1345579
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00	1	09/14/2019 01:26	WG1345579
Vinyl chloride	U		0.259	1.00	1	09/14/2019 01:26	WG1345579
Xylenes, Total	U		1.06	3.00	1	09/14/2019 01:26	WG1345579
(S) Toluene-d8	94.1			80.0-120		09/14/2019 01:26	WG1345579
(S) 4-Bromofluorobenzene	97.8			77.0-126		09/14/2019 01:26	WG1345579
(S) 1,2-Dichloroethane-d4	95.2			70.0-130		09/14/2019 01:26	WG1345579

1	Cp
2	Tc
3	Ss
4	Cn
5	Sr
6	Qc
7	Gl
8	Al
9	Sc

Polychlorinated Biphenyls (GC) by Method 8082

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
PCB 1016	U		0.100	0.500	1	09/10/2019 18:08	WG1342044
PCB 1221	U		0.0730	0.500	1	09/10/2019 18:08	WG1342044
PCB 1232	U		0.0420	0.500	1	09/10/2019 18:08	WG1342044
PCB 1242	U		0.0470	0.500	1	09/10/2019 18:08	WG1342044
PCB 1248	U		0.0860	0.500	1	09/10/2019 18:08	WG1342044
PCB 1254	U		0.0470	0.500	1	09/10/2019 18:08	WG1342044
PCB 1260	U		0.120	0.500	1	09/10/2019 18:08	WG1342044
(S) Decachlorobiphenyl	64.5			10.0-128		09/10/2019 18:08	WG1342044
(S) Tetrachloro-m-xylene	28.9			10.0-127		09/10/2019 18:08	WG1342044

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.348	1.10	1.1	09/11/2019 19:19	WG1343097
Acenaphthylene	U		0.340	1.10	1.1	09/11/2019 19:19	WG1343097
Acetophenone	U		2.98	11.0	1.1	09/11/2019 19:19	WG1343097
Anthracene	U		0.320	1.10	1.1	09/11/2019 19:19	WG1343097
Atrazine	U		0.286	11.0	1.1	09/11/2019 19:19	WG1343097
Benzaldehyde	U		1.54	11.0	1.1	09/11/2019 19:19	WG1343097
Benzo(a)anthracene	U		0.107	1.10	1.1	09/11/2019 19:19	WG1343097
Benzo(b)fluoranthene	U		0.0986	1.10	1.1	09/11/2019 19:19	WG1343097
Benzo(k)fluoranthene	U		0.391	1.10	1.1	09/11/2019 19:19	WG1343097



Collected date/time: 09/06/19 13:53

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Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(g,h,i)perylene	U		0.177	1.10	1.1	09/11/2019 19:19	WG1343097
Benzo(a)pyrene	U		0.374	1.10	1.1	09/11/2019 19:19	WG1343097
Biphenyl	U		0.358	11.0	1.1	09/11/2019 19:19	WG1343097
Bis(2-chlorethoxy)methane	U		0.362	11.0	1.1	09/11/2019 19:19	WG1343097
Bis(2-chloroethyl)ether	U		1.78	11.0	1.1	09/11/2019 19:19	WG1343097
Bis(2-chloroisopropyl)ether	U		0.490	11.0	1.1	09/11/2019 19:19	WG1343097
4-Bromophenyl-phenylether	U		0.369	11.0	1.1	09/11/2019 19:19	WG1343097
Caprolactam	U		2.85	11.0	1.1	09/11/2019 19:19	WG1343097
Carbazole	U		0.286	11.0	1.1	09/11/2019 19:19	WG1343097
4-Chloroaniline	U		0.420	11.0	1.1	09/11/2019 19:19	WG1343097
2-Chloronaphthalene	U		0.363	1.10	1.1	09/11/2019 19:19	WG1343097
4-Chlorophenyl-phenylether	U		0.333	11.0	1.1	09/11/2019 19:19	WG1343097
Chrysene	U		0.365	1.10	1.1	09/11/2019 19:19	WG1343097
Dibenz(a,h)anthracene	U		0.307	1.10	1.1	09/11/2019 19:19	WG1343097
Dibenzofuran	U		0.372	11.0	1.1	09/11/2019 19:19	WG1343097
3,3-Dichlorobenzidine	U		2.22	11.0	1.1	09/11/2019 19:19	WG1343097
2,4-Dinitrotoluene	U		1.82	11.0	1.1	09/11/2019 19:19	WG1343097
2,6-Dinitrotoluene	U		0.307	11.0	1.1	09/11/2019 19:19	WG1343097
Fluoranthene	U		0.341	1.10	1.1	09/11/2019 19:19	WG1343097
Fluorene	U		0.355	1.10	1.1	09/11/2019 19:19	WG1343097
Hexachlorobenzene	U		0.375	1.10	1.1	09/11/2019 19:19	WG1343097
Hexachloro-1,3-butadiene	U		0.362	11.0	1.1	09/11/2019 19:19	WG1343097
Hexachlorocyclopentadiene	U		2.56	11.0	1.1	09/11/2019 19:19	WG1343097
Hexachloroethane	U		0.402	11.0	1.1	09/11/2019 19:19	WG1343097
Indeno(1,2,3-cd)pyrene	U		0.307	1.10	1.1	09/11/2019 19:19	WG1343097
Isophorone	U		0.299	11.0	1.1	09/11/2019 19:19	WG1343097
2-Methylnaphthalene	U		0.342	1.10	1.1	09/11/2019 19:19	WG1343097
Naphthalene	U		0.409	1.10	1.1	09/11/2019 19:19	WG1343097
2-Nitroaniline	U		2.09	11.0	1.1	09/11/2019 19:19	WG1343097
3-Nitroaniline	U		0.339	11.0	1.1	09/11/2019 19:19	WG1343097
4-Nitroaniline	U		0.384	11.0	1.1	09/11/2019 19:19	WG1343097
Nitrobenzene	U		0.404	11.0	1.1	09/11/2019 19:19	WG1343097
n-Nitrosodiphenylamine	U		1.31	11.0	1.1	09/11/2019 19:19	WG1343097
n-Nitrosodi-n-propylamine	U		0.443	11.0	1.1	09/11/2019 19:19	WG1343097
Phenanthrene	U		0.403	1.10	1.1	09/11/2019 19:19	WG1343097
Benzylbutyl phthalate	U		0.303	3.30	1.1	09/11/2019 19:19	WG1343097
Bis(2-ethylhexyl)phthalate	U		0.780	3.30	1.1	09/11/2019 19:19	WG1343097
Di-n-butyl phthalate	0.302	<u>J</u>	0.293	3.30	1.1	09/11/2019 19:19	WG1343097
Diethyl phthalate	U		0.310	3.30	1.1	09/11/2019 19:19	WG1343097
Dimethyl phthalate	U		0.311	3.30	1.1	09/11/2019 19:19	WG1343097
Di-n-octyl phthalate	U		0.306	3.30	1.1	09/11/2019 19:19	WG1343097
Pyrene	U		0.363	1.10	1.1	09/11/2019 19:19	WG1343097
1,2,4,5-Tetrachlorobenzene	U		2.65	11.0	1.1	09/11/2019 19:19	WG1343097
4-Chloro-3-methylphenol	U		0.289	11.0	1.1	09/11/2019 19:19	WG1343097
2-Chlorophenol	U		0.311	11.0	1.1	09/11/2019 19:19	WG1343097
2-Methylphenol	U		0.343	11.0	1.1	09/11/2019 19:19	WG1343097
3&4-Methyl Phenol	U		0.293	11.0	1.1	09/11/2019 19:19	WG1343097
2,4-Dichlorophenol	U		0.312	11.0	1.1	09/11/2019 19:19	WG1343097
2,4-Dimethylphenol	U		0.686	11.0	1.1	09/11/2019 19:19	WG1343097
4,6-Dinitro-2-methylphenol	U		2.88	11.0	1.1	09/11/2019 19:19	WG1343097
2,4-Dinitrophenol	U		3.58	11.0	1.1	09/11/2019 19:19	WG1343097
2-Nitrophenol	U		0.352	11.0	1.1	09/11/2019 19:19	WG1343097
4-Nitrophenol	U		2.21	11.0	1.1	09/11/2019 19:19	WG1343097
Pentachlorophenol	U		0.344	11.0	1.1	09/11/2019 19:19	WG1343097
Phenol	0.769	<u>B J</u>	0.367	11.0	1.1	09/11/2019 19:19	WG1343097
2,4,5-Trichlorophenol	U		0.260	11.0	1.1	09/11/2019 19:19	WG1343097

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 09/06/19 13:53

L1136948

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
2,4,6-Trichlorophenol	U		0.327	11.0	1.1	09/11/2019 19:19	WG1343097
(S) 2-Fluorophenol	37.6			10.0-120		09/11/2019 19:19	WG1343097
(S) Phenol-d5	23.6			10.0-120		09/11/2019 19:19	WG1343097
(S) Nitrobenzene-d5	51.5			10.0-127		09/11/2019 19:19	WG1343097
(S) 2-Fluorobiphenyl	51.2			10.0-130		09/11/2019 19:19	WG1343097
(S) 2,4,6-Tribromophenol	55.9			10.0-155		09/11/2019 19:19	WG1343097
(S) p-Terphenyl-d14	63.9			10.0-128		09/11/2019 19:19	WG1343097

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Collected date/time: 09/05/19 00:00

L1136948

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		10.0	50.0	1	09/13/2019 21:19	WG1345579
Benzene	U		0.331	1.00	1	09/13/2019 21:19	WG1345579
Bromochloromethane	U		0.520	1.00	1	09/13/2019 21:19	WG1345579
Bromodichloromethane	U		0.380	1.00	1	09/13/2019 21:19	WG1345579
Bromoform	U		0.469	1.00	1	09/13/2019 21:19	WG1345579
Bromomethane	U		0.866	5.00	1	09/13/2019 21:19	WG1345579
Carbon disulfide	U		0.275	1.00	1	09/13/2019 21:19	WG1345579
Carbon tetrachloride	U		0.379	1.00	1	09/13/2019 21:19	WG1345579
Chlorobenzene	U		0.348	1.00	1	09/13/2019 21:19	WG1345579
Chlorodibromomethane	U		0.327	1.00	1	09/13/2019 21:19	WG1345579
Chloroethane	U		0.453	5.00	1	09/13/2019 21:19	WG1345579
Chloroform	U		0.324	5.00	1	09/13/2019 21:19	WG1345579
Chloromethane	U		0.276	2.50	1	09/13/2019 21:19	WG1345579
Cyclohexane	U		0.390	1.00	1	09/13/2019 21:19	WG1345579
1,2-Dibromo-3-Chloropropane	U		1.33	5.00	1	09/13/2019 21:19	WG1345579
1,2-Dibromoethane	U		0.381	1.00	1	09/13/2019 21:19	WG1345579
1,2-Dichlorobenzene	U		0.349	1.00	1	09/13/2019 21:19	WG1345579
1,3-Dichlorobenzene	U		0.220	1.00	1	09/13/2019 21:19	WG1345579
1,4-Dichlorobenzene	U		0.274	1.00	1	09/13/2019 21:19	WG1345579
Dichlorodifluoromethane	U		0.551	5.00	1	09/13/2019 21:19	WG1345579
1,1-Dichloroethane	U		0.259	1.00	1	09/13/2019 21:19	WG1345579
1,2-Dichloroethane	U		0.361	1.00	1	09/13/2019 21:19	WG1345579
1,1-Dichloroethene	U		0.398	1.00	1	09/13/2019 21:19	WG1345579
cis-1,2-Dichloroethene	U		0.260	1.00	1	09/13/2019 21:19	WG1345579
trans-1,2-Dichloroethene	U		0.396	1.00	1	09/13/2019 21:19	WG1345579
1,2-Dichloropropane	U		0.306	1.00	1	09/13/2019 21:19	WG1345579
cis-1,3-Dichloropropene	U		0.418	1.00	1	09/13/2019 21:19	WG1345579
trans-1,3-Dichloropropene	U		0.419	1.00	1	09/13/2019 21:19	WG1345579
Ethylbenzene	U		0.384	1.00	1	09/13/2019 21:19	WG1345579
2-Hexanone	U		3.82	10.0	1	09/13/2019 21:19	WG1345579
Isopropylbenzene	U		0.326	1.00	1	09/13/2019 21:19	WG1345579
2-Butanone (MEK)	U		3.93	10.0	1	09/13/2019 21:19	WG1345579
Methyl Acetate	U		4.30	20.0	1	09/13/2019 21:19	WG1345579
Methyl Cyclohexane	U		0.380	1.00	1	09/13/2019 21:19	WG1345579
Methylene Chloride	U		1.00	5.00	1	09/13/2019 21:19	WG1345579
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	09/13/2019 21:19	WG1345579
Methyl tert-butyl ether	U		0.367	1.00	1	09/13/2019 21:19	WG1345579
Styrene	U		0.307	1.00	1	09/13/2019 21:19	WG1345579
1,1,2,2-Tetrachloroethane	U		0.130	1.00	1	09/13/2019 21:19	WG1345579
Tetrachloroethene	U		0.372	1.00	1	09/13/2019 21:19	WG1345579
Toluene	U		0.412	1.00	1	09/13/2019 21:19	WG1345579
1,2,3-Trichlorobenzene	U		0.230	1.00	1	09/13/2019 21:19	WG1345579
1,2,4-Trichlorobenzene	U		0.355	1.00	1	09/13/2019 21:19	WG1345579
1,1,1-Trichloroethane	U		0.319	1.00	1	09/13/2019 21:19	WG1345579
1,1,2-Trichloroethane	U		0.383	1.00	1	09/13/2019 21:19	WG1345579
Trichloroethene	U		0.398	1.00	1	09/13/2019 21:19	WG1345579
Trichlorofluoromethane	U		1.20	5.00	1	09/13/2019 21:19	WG1345579
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00	1	09/13/2019 21:19	WG1345579
Vinyl chloride	U		0.259	1.00	1	09/13/2019 21:19	WG1345579
Xylenes, Total	U		1.06	3.00	1	09/13/2019 21:19	WG1345579
(S) Toluene-d8	97.6			80.0-120		09/13/2019 21:19	WG1345579
(S) 4-Bromofluorobenzene	98.9			77.0-126		09/13/2019 21:19	WG1345579
(S) 1,2-Dichloroethane-d4	97.4			70.0-130		09/13/2019 21:19	WG1345579

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3448831-1 09/09/19 17:25

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury,Dissolved	U		0.0490	0.200

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3448831-2 09/09/19 17:27 • (LCSD) R3448831-3 09/09/19 17:29

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Mercury,Dissolved	3.00	3.13	3.02	104	101	80.0-120			3.58	20

L1136419-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1136419-04 09/09/19 17:47 • (MS) R3448831-4 09/09/19 17:49 • (MSD) R3448831-5 09/09/19 17:51

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury,Dissolved	3.00	U	3.05	3.34	102	111	1	75.0-125			9.08	20



Method Blank (MB)

(MB) R3449209-1 09/10/19 17:50

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	ug/l		ug/l	ug/l
Mercury,Dissolved	U		0.0490	0.200

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3449209-2 09/10/19 17:53 • (LCSD) R3449209-3 09/10/19 17:55

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	ug/l	ug/l	ug/l	%	%	%			%	%
Mercury,Dissolved	3.00	2.66	3.06	88.7	102	80.0-120			14.0	20

L1136948-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1136948-13 09/10/19 17:57 • (MS) R3449209-4 09/10/19 17:59 • (MSD) R3449209-5 09/10/19 18:01

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Mercury,Dissolved	3.00	U	3.55	3.51	118	117	1	75.0-125			1.13	20

L1137099-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1137099-03 09/10/19 18:03 • (MS) R3449209-6 09/10/19 18:06 • (MSD) R3449209-7 09/10/19 18:12

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Mercury,Dissolved	3.00	U	3.44	3.34	115	111	1	75.0-125			2.95	20

[L1136948-01,02,03,04,05,06,07,09,10,11,12,13](#)

Method Blank (MB)

(MB) R3450221-1 09/12/19 18:19

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Aluminum,Dissolved	U		5.15	100
Antimony,Dissolved	U		0.754	2.00
Arsenic,Dissolved	U		0.250	2.00
Barium,Dissolved	U		0.360	5.00
Beryllium,Dissolved	U		0.120	2.00
Cadmium,Dissolved	U		0.160	1.00
Calcium,Dissolved	U		46.0	1000
Chromium,Dissolved	1.02	U	0.540	2.00
Copper,Dissolved	U		0.520	5.00
Cobalt,Dissolved	U		0.260	2.00
Iron,Dissolved	U		15.0	100
Lead,Dissolved	0.443	U	0.240	2.00
Magnesium,Dissolved	U		100	1000
Manganese,Dissolved	U		0.250	5.00
Nickel,Dissolved	U		0.350	2.00
Potassium,Dissolved	U		37.0	1000
Selenium,Dissolved	U		0.380	2.00
Silver,Dissolved	U		0.310	2.00
Sodium,Dissolved	U		110	1000
Thallium,Dissolved	U		0.190	2.00
Vanadium,Dissolved	U		0.180	5.00
Zinc,Dissolved	U		2.56	25.0

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3450221-2 09/12/19 18:23 • (LCSD) R3450221-3 09/12/19 18:26

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Aluminum,Dissolved	5000	5140	5070	103	101	80.0-120			1.38	20
Antimony,Dissolved	50.0	57.2	55.5	114	111	80.0-120			2.87	20
Arsenic,Dissolved	50.0	48.7	47.4	97.3	94.8	80.0-120			2.60	20
Barium,Dissolved	50.0	51.4	50.7	103	101	80.0-120			1.29	20
Beryllium,Dissolved	50.0	51.7	51.4	103	103	80.0-120			0.697	20
Cadmium,Dissolved	50.0	50.5	50.2	101	100	80.0-120			0.653	20
Calcium,Dissolved	5000	5020	5000	100	100	80.0-120			0.509	20
Chromium,Dissolved	50.0	50.1	50.4	100	101	80.0-120			0.443	20
Copper,Dissolved	50.0	48.4	48.5	96.7	97.0	80.0-120			0.297	20
Cobalt,Dissolved	50.0	49.0	48.9	98.1	97.7	80.0-120			0.401	20
Iron,Dissolved	5000	4930	4840	98.6	96.9	80.0-120			1.80	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3450221-2 09/12/19 18:23 • (LCSD) R3450221-3 09/12/19 18:26

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Lead,Dissolved	50.0	51.1	51.4	102	103	80.0-120			0.488	20
Magnesium,Dissolved	5000	5100	5010	102	100	80.0-120			1.76	20
Manganese,Dissolved	50.0	49.7	47.7	99.4	95.5	80.0-120			4.03	20
Nickel,Dissolved	50.0	49.2	48.0	98.4	96.0	80.0-120			2.44	20
Potassium,Dissolved	5000	5080	4990	102	99.9	80.0-120			1.73	20
Selenium,Dissolved	50.0	54.1	50.9	108	102	80.0-120			6.24	20
Silver,Dissolved	50.0	52.8	51.6	106	103	80.0-120			2.37	20
Sodium,Dissolved	5000	5070	5020	101	100	80.0-120			0.896	20
Thallium,Dissolved	50.0	52.8	51.6	106	103	80.0-120			2.41	20
Vanadium,Dissolved	50.0	49.4	48.4	98.7	96.9	80.0-120			1.85	20
Zinc,Dissolved	50.0	48.1	47.2	96.2	94.5	80.0-120			1.85	20

L1136948-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1136948-13 09/12/19 18:29 • (MS) R3450221-5 09/12/19 18:36 • (MSD) R3450221-6 09/12/19 18:39

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aluminum,Dissolved	5000	216	5280	5170	101	99.2	1	75.0-125			2.10	20
Antimony,Dissolved	50.0	U	55.9	57.7	112	115	1	75.0-125			3.04	20
Arsenic,Dissolved	50.0	2.76	49.6	48.9	93.6	92.2	1	75.0-125			1.43	20
Barium,Dissolved	50.0	121	172	173	102	103	1	75.0-125			0.530	20
Beryllium,Dissolved	50.0	U	52.0	51.5	104	103	1	75.0-125			0.938	20
Cadmium,Dissolved	50.0	U	51.0	50.2	102	100	1	75.0-125			1.66	20
Calcium,Dissolved	5000	101000	104000	104000	61.8	60.5	1	75.0-125	V	V	0.0597	20
Chromium,Dissolved	50.0	1.49	48.1	47.9	93.2	92.9	1	75.0-125			0.311	20
Copper,Dissolved	50.0	7.32	53.7	52.9	92.9	91.1	1	75.0-125			1.66	20
Cobalt,Dissolved	50.0	1.46	48.2	47.3	93.5	91.7	1	75.0-125			1.95	20
Potassium,Dissolved	5000	4730	9660	9520	98.7	95.8	1	75.0-125			1.50	20
Iron,Dissolved	5000	1490	6550	6270	101	95.6	1	75.0-125			4.34	20
Lead,Dissolved	50.0	6.73	55.8	56.8	98.2	100	1	75.0-125			1.74	20
Magnesium,Dissolved	5000	22200	27000	26800	96.6	93.4	1	75.0-125			0.583	20
Manganese,Dissolved	50.0	271	318	315	93.2	87.0	1	75.0-125			0.969	20
Nickel,Dissolved	50.0	3.16	48.3	48.0	90.3	89.6	1	75.0-125			0.675	20
Selenium,Dissolved	50.0	0.472	53.4	51.2	106	102	1	75.0-125			4.08	20
Silver,Dissolved	50.0	U	51.3	51.3	103	103	1	75.0-125			0.0141	20
Sodium,Dissolved	5000	486000	498000	488000	243	58.6	1	75.0-125	V	V	1.87	20
Thallium,Dissolved	50.0	U	52.0	51.2	104	102	1	75.0-125			1.54	20
Vanadium,Dissolved	50.0	1.58	49.5	49.1	95.9	95.0	1	75.0-125			0.934	20
Zinc,Dissolved	50.0	5.05	52.3	53.3	94.4	96.5	1	75.0-125			1.94	20

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Method Blank (MB)

(MB) R3450662-3 09/13/19 20:06

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		10.0	50.0
Benzene	U		0.331	1.00
Bromodichloromethane	U		0.380	1.00
Bromochloromethane	U		0.520	1.00
Bromoform	U		0.469	1.00
Bromomethane	U		0.866	5.00
Carbon disulfide	U		0.275	1.00
Carbon tetrachloride	U		0.379	1.00
Chlorobenzene	U		0.348	1.00
Chlorodibromomethane	U		0.327	1.00
Chloroethane	U		0.453	5.00
Chloroform	U		0.324	5.00
Chloromethane	U		0.276	2.50
Cyclohexane	U		0.390	1.00
1,2-Dibromo-3-Chloropropane	U		1.33	5.00
1,2-Dibromoethane	U		0.381	1.00
1,2-Dichlorobenzene	U		0.349	1.00
1,3-Dichlorobenzene	U		0.220	1.00
1,4-Dichlorobenzene	U		0.274	1.00
Dichlorodifluoromethane	U		0.551	5.00
1,1-Dichloroethane	U		0.259	1.00
1,2-Dichloroethane	U		0.361	1.00
1,1-Dichloroethene	U		0.398	1.00
cis-1,2-Dichloroethene	U		0.260	1.00
trans-1,2-Dichloroethene	U		0.396	1.00
1,2-Dichloropropane	U		0.306	1.00
cis-1,3-Dichloropropene	U		0.418	1.00
trans-1,3-Dichloropropene	U		0.419	1.00
Ethylbenzene	U		0.384	1.00
2-Hexanone	U		3.82	10.0
Isopropylbenzene	U		0.326	1.00
2-Butanone (MEK)	U		3.93	10.0
Methyl Acetate	U		4.30	20.0
Methyl Cyclohexane	U		0.380	1.00
Methyl tert-butyl ether	U		0.367	1.00
Methylene Chloride	U		1.00	5.00
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0
Styrene	U		0.307	1.00
1,1,2,2-Tetrachloroethane	U		0.130	1.00
Toluene	U		0.412	1.00

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3450662-3 09/13/19 20:06

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Tetrachloroethene	U		0.372	1.00
Trichloroethene	U		0.398	1.00
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.355	1.00
1,1,1-Trichloroethane	U		0.319	1.00
1,1,2-Trichloroethane	U		0.383	1.00
Trichlorofluoromethane	U		1.20	5.00
Xylenes, Total	U		1.06	3.00
Vinyl chloride	U		0.259	1.00
(S) Toluene-d8	111			80.0-120
(S) 4-Bromofluorobenzene	95.3			77.0-126
(S) 1,2-Dichloroethane-d4	93.3			70.0-130

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3450662-1 09/13/19 18:45 • (LCSD) R3450662-2 09/13/19 19:05

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	26.1	25.9	104	103	70.0-123			0.842	20
Acetone	125	112	109	89.7	87.3	19.0-160			2.68	27
Bromodichloromethane	25.0	26.4	25.9	106	104	75.0-120			1.86	20
Bromochloromethane	25.0	26.4	26.6	106	106	76.0-122			0.686	20
Bromoform	25.0	22.9	22.9	91.7	91.5	68.0-132			0.230	20
Bromomethane	25.0	18.7	18.8	74.7	75.3	10.0-160			0.791	25
Carbon disulfide	25.0	26.2	26.2	105	105	61.0-128			0.116	20
Carbon tetrachloride	25.0	23.5	23.5	94.2	94.2	68.0-126			0.0130	20
Chlorobenzene	25.0	23.0	22.2	91.9	88.6	80.0-121			3.63	20
Chlorodibromomethane	25.0	25.1	25.2	101	101	77.0-125			0.254	20
Chloroethane	25.0	21.6	21.0	86.6	83.9	47.0-150			3.15	20
Chloroform	25.0	24.7	24.3	99.0	97.3	73.0-120			1.64	20
Chloromethane	25.0	21.4	21.0	85.4	83.9	41.0-142			1.83	20
Cyclohexane	25.0	25.3	25.4	101	102	71.0-124			0.354	20
1,2-Dibromo-3-Chloropropane	25.0	19.5	22.3	77.9	89.2	58.0-134			13.5	20
1,2-Dibromoethane	25.0	24.8	24.2	99.1	96.8	80.0-122			2.29	20
1,2-Dichlorobenzene	25.0	21.4	21.8	85.5	87.3	79.0-121			2.11	20
1,3-Dichlorobenzene	25.0	22.9	22.5	91.8	90.1	79.0-120			1.82	20
1,4-Dichlorobenzene	25.0	21.7	21.9	86.9	87.7	79.0-120			0.807	20
Dichlorodifluoromethane	25.0	21.4	20.7	85.7	83.0	51.0-149			3.18	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3450662-1 09/13/19 18:45 • (LCSD) R3450662-2 09/13/19 19:05

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Ethylbenzene	25.0	22.5	21.7	90.2	86.9	79.0-123			3.71	20
1,1-Dichloroethane	25.0	25.0	24.5	99.8	98.1	70.0-126			1.70	20
1,2-Dichloroethane	25.0	22.2	21.6	88.6	86.3	70.0-128			2.69	20
1,1-Dichloroethene	25.0	26.9	25.6	108	102	71.0-124			4.96	20
cis-1,2-Dichloroethene	25.0	24.4	24.5	97.6	97.9	73.0-120			0.320	20
trans-1,2-Dichloroethene	25.0	24.8	24.4	99.1	97.6	73.0-120			1.47	20
1,2-Dichloropropane	25.0	27.0	27.1	108	108	77.0-125			0.517	20
cis-1,3-Dichloropropene	25.0	27.7	28.0	111	112	80.0-123			1.12	20
trans-1,3-Dichloropropene	25.0	25.3	24.8	101	99.1	78.0-124			2.19	20
Methyl tert-butyl ether	25.0	23.0	22.7	91.8	90.9	68.0-125			1.03	20
2-Hexanone	125	133	131	106	105	67.0-149			1.57	20
Isopropylbenzene	25.0	22.1	21.6	88.4	86.6	76.0-127			2.06	20
Toluene	25.0	23.2	22.4	93.0	89.5	79.0-120			3.81	20
Trichloroethene	25.0	25.6	25.2	102	101	78.0-124			1.62	20
2-Butanone (MEK)	125	134	136	108	109	44.0-160			1.03	20
Methyl Acetate	125	138	135	110	108	57.0-148			1.68	20
Methyl Cyclohexane	25.0	25.3	25.6	101	102	68.0-126			0.925	20
Methylene Chloride	25.0	24.3	23.7	97.2	94.7	67.0-120			2.61	20
4-Methyl-2-pentanone (MIBK)	125	124	120	99.0	96.1	68.0-142			2.93	20
Styrene	25.0	24.2	23.5	96.9	94.0	73.0-130			3.03	20
1,1,2,2-Tetrachloroethane	25.0	28.7	28.9	115	115	65.0-130			0.714	20
Tetrachloroethene	25.0	23.9	23.0	95.7	91.9	72.0-132			4.01	20
Xylenes, Total	75.0	67.2	66.3	89.6	88.4	79.0-123			1.35	20
1,1,2-Trichlorotrifluoroethane	25.0	28.4	27.9	114	112	69.0-132			1.72	20
1,2,3-Trichlorobenzene	25.0	13.9	16.8	55.6	67.2	50.0-138			18.9	20
1,2,4-Trichlorobenzene	25.0	17.9	19.9	71.6	79.5	57.0-137			10.5	20
1,1,1-Trichloroethane	25.0	23.9	23.8	95.5	95.3	73.0-124			0.226	20
1,1,2-Trichloroethane	25.0	24.8	24.0	99.1	96.1	80.0-120			3.10	20
Trichlorofluoromethane	25.0	23.7	23.4	95.0	93.6	59.0-147			1.44	20
Vinyl chloride	25.0	23.1	22.7	92.4	90.8	67.0-131			1.79	20
(S) Toluene-d8				105	101	80.0-120				
(S) 4-Bromofluorobenzene				93.0	89.7	77.0-126				
(S) 1,2-Dichloroethane-d4				99.8	98.2	70.0-130				

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3450836-2 09/13/19 20:38

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		10.0	50.0
Benzene	U		0.331	1.00
Bromodichloromethane	U		0.380	1.00
Bromochloromethane	U		0.520	1.00
Bromoform	U		0.469	1.00
Bromomethane	U		0.866	5.00
Carbon disulfide	U		0.275	1.00
Carbon tetrachloride	U		0.379	1.00
Chlorobenzene	U		0.348	1.00
Chlorodibromomethane	U		0.327	1.00
Chloroethane	U		0.453	5.00
Chloroform	U		0.324	5.00
Chloromethane	U		0.276	2.50
Cyclohexane	U		0.390	1.00
1,2-Dibromo-3-Chloropropane	U		1.33	5.00
1,2-Dibromoethane	U		0.381	1.00
1,2-Dichlorobenzene	U		0.349	1.00
1,3-Dichlorobenzene	U		0.220	1.00
1,4-Dichlorobenzene	U		0.274	1.00
Dichlorodifluoromethane	U		0.551	5.00
1,1-Dichloroethane	U		0.259	1.00
1,2-Dichloroethane	U		0.361	1.00
1,1-Dichloroethene	U		0.398	1.00
cis-1,2-Dichloroethene	U		0.260	1.00
trans-1,2-Dichloroethene	U		0.396	1.00
1,2-Dichloropropane	U		0.306	1.00
cis-1,3-Dichloropropene	U		0.418	1.00
trans-1,3-Dichloropropene	U		0.419	1.00
Ethylbenzene	U		0.384	1.00
2-Hexanone	U		3.82	10.0
Isopropylbenzene	U		0.326	1.00
2-Butanone (MEK)	U		3.93	10.0
Methyl Acetate	U		4.30	20.0
Methyl Cyclohexane	U		0.380	1.00
Methylene Chloride	U		1.00	5.00
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0
Methyl tert-butyl ether	U		0.367	1.00
Toluene	U		0.412	1.00
Styrene	U		0.307	1.00
1,1,2,2-Tetrachloroethane	U		0.130	1.00

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3450836-2 09/13/19 20:38

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Tetrachloroethene	U		0.372	1.00
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00
1,2,3-Trichlorobenzene	1.11		0.230	1.00
1,2,4-Trichlorobenzene	0.515	J	0.355	1.00
1,1,1-Trichloroethane	U		0.319	1.00
1,1,2-Trichloroethane	U		0.383	1.00
Trichloroethene	U		0.398	1.00
Trichlorofluoromethane	U		1.20	5.00
Xylenes, Total	U		1.06	3.00
Vinyl chloride	U		0.259	1.00
(S) Toluene-d8	99.8			80.0-120
(S) 4-Bromofluorobenzene	99.8			77.0-126
(S) 1,2-Dichloroethane-d4	97.2			70.0-130

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3450836-1 09/13/19 19:57

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	25.0	24.1	96.4	70.0-123	
Acetone	125	127	102	19.0-160	
Bromodichloromethane	25.0	26.3	105	75.0-120	
Bromochloromethane	25.0	25.1	101	76.0-122	
Bromoform	25.0	27.4	110	68.0-132	
Bromomethane	25.0	22.9	91.7	10.0-160	
Carbon disulfide	25.0	23.6	94.6	61.0-128	
Carbon tetrachloride	25.0	25.8	103	68.0-126	
Chlorobenzene	25.0	25.1	100	80.0-121	
Chlorodibromomethane	25.0	26.4	106	77.0-125	
Chloroethane	25.0	24.4	97.6	47.0-150	
Chloroform	25.0	24.3	97.2	73.0-120	
Chloromethane	25.0	23.4	93.5	41.0-142	
Cyclohexane	25.0	25.9	103	71.0-124	
1,2-Dibromo-3-Chloropropane	25.0	19.5	78.1	58.0-134	
1,2-Dibromoethane	25.0	24.1	96.4	80.0-122	
Ethylbenzene	25.0	26.2	105	79.0-123	
1,2-Dichlorobenzene	25.0	23.0	92.0	79.0-121	
1,3-Dichlorobenzene	25.0	23.0	92.1	79.0-120	
1,4-Dichlorobenzene	25.0	24.9	99.7	79.0-120	



Laboratory Control Sample (LCS)

(LCS) R3450836-1 09/13/19 19:57

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Dichlorodifluoromethane	25.0	26.7	107	51.0-149	
1,1-Dichloroethane	25.0	23.8	95.2	70.0-126	
1,2-Dichloroethane	25.0	23.8	95.0	70.0-128	
1,1-Dichloroethene	25.0	25.4	101	71.0-124	
cis-1,2-Dichloroethene	25.0	23.2	93.0	73.0-120	
trans-1,2-Dichloroethene	25.0	24.7	98.8	73.0-120	
1,2-Dichloropropane	25.0	24.7	98.7	77.0-125	
cis-1,3-Dichloropropene	25.0	24.9	99.6	80.0-123	
trans-1,3-Dichloropropene	25.0	23.6	94.3	78.0-124	
Toluene	25.0	24.5	97.9	79.0-120	
2-Hexanone	125	106	85.2	67.0-149	
Isopropylbenzene	25.0	26.0	104	76.0-127	
2-Butanone (MEK)	125	111	88.4	44.0-160	
Methyl Acetate	125	128	102	57.0-148	
Methyl Cyclohexane	25.0	27.9	112	68.0-126	
Methylene Chloride	25.0	23.7	94.9	67.0-120	
4-Methyl-2-pentanone (MIBK)	125	111	89.0	68.0-142	
Methyl tert-butyl ether	25.0	23.3	93.0	68.0-125	
Xylenes, Total	75.0	75.5	101	79.0-123	
Styrene	25.0	25.2	101	73.0-130	
1,1,2,2-Tetrachloroethane	25.0	23.0	91.9	65.0-130	
Tetrachloroethene	25.0	26.3	105	72.0-132	
1,1,2-Trichlorotrifluoroethane	25.0	27.8	111	69.0-132	
1,2,3-Trichlorobenzene	25.0	16.9	67.7	50.0-138	
1,2,4-Trichlorobenzene	25.0	18.7	75.0	57.0-137	
1,1,1-Trichloroethane	25.0	26.7	107	73.0-124	
1,1,2-Trichloroethane	25.0	24.2	96.6	80.0-120	
Trichloroethene	25.0	25.9	104	78.0-124	
Trichlorofluoromethane	25.0	26.6	107	59.0-147	
Vinyl chloride	25.0	24.2	96.7	67.0-131	
(S) Toluene-d8			99.8	80.0-120	
(S) 4-Bromofluorobenzene			89.5	77.0-126	
(S) 1,2-Dichloroethane-d4			107	70.0-130	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Volatile Organic Compounds (GC/MS) by Method 8260B

L1136948-12,13,14

L1136948-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1136948-13 09/14/19 01:26 • (MS) R3450836-3 09/14/19 03:49 • (MSD) R3450836-4 09/14/19 04:10

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	U	21.7	22.7	86.7	90.9	1	17.0-158			4.71	27
Acetone	125	U	76.0	60.9	60.8	48.7	1	10.0-160			22.1	35
Bromodichloromethane	25.0	U	23.7	25.1	94.9	101	1	31.0-150			5.81	27
Bromochloromethane	25.0	U	22.6	22.9	90.3	91.7	1	38.0-142			1.58	26
Bromoform	25.0	U	23.6	27.7	94.5	111	1	29.0-150			16.0	29
Bromomethane	25.0	U	20.6	19.8	82.6	79.0	1	10.0-160			4.42	38
Carbon disulfide	25.0	U	21.2	21.0	85.0	83.9	1	10.0-156			1.29	28
Carbon tetrachloride	25.0	U	23.3	22.7	93.2	90.9	1	23.0-159			2.50	28
Chlorobenzene	25.0	U	21.3	24.8	85.3	99.2	1	33.0-152			15.1	27
Chlorodibromomethane	25.0	U	22.4	26.8	89.5	107	1	37.0-149			18.2	27
Chloroethane	25.0	U	22.2	21.5	88.8	85.8	1	10.0-160			3.46	30
Chloroform	25.0	U	22.3	23.1	89.0	92.5	1	29.0-154			3.84	28
Chloromethane	25.0	U	21.0	20.7	83.9	82.7	1	10.0-160			1.43	29
Cyclohexane	25.0	1.93	25.0	25.1	92.4	92.8	1	19.0-160			0.416	23
Ethylbenzene	25.0	U	21.5	24.8	86.0	99.4	1	30.0-155			14.5	27
1,2-Dibromo-3-Chloropropane	25.0	U	19.0	19.9	75.9	79.5	1	22.0-151			4.65	34
1,2-Dibromoethane	25.0	U	21.3	26.8	85.3	107	1	34.0-147			22.9	27
1,2-Dichlorobenzene	25.0	U	21.3	21.6	85.1	86.6	1	34.0-149			1.68	28
1,3-Dichlorobenzene	25.0	U	22.0	22.7	88.1	91.0	1	36.0-146			3.15	27
1,4-Dichlorobenzene	25.0	U	24.0	24.8	96.1	99.4	1	35.0-142			3.34	27
Dichlorodifluoromethane	25.0	U	26.2	24.5	105	98.0	1	10.0-160			6.77	29
1,1-Dichloroethane	25.0	U	21.9	22.4	87.8	89.4	1	25.0-158			1.84	27
1,2-Dichloroethane	25.0	U	23.0	24.1	91.9	96.5	1	29.0-151			4.85	27
1,1-Dichloroethene	25.0	U	23.4	22.6	93.6	90.5	1	11.0-160			3.34	29
cis-1,2-Dichloroethene	25.0	U	21.7	22.1	86.8	88.6	1	10.0-160			2.04	27
trans-1,2-Dichloroethene	25.0	U	22.5	22.6	90.1	90.2	1	17.0-153			0.0745	27
1,2-Dichloropropane	25.0	U	23.3	24.5	93.0	98.1	1	30.0-156			5.26	27
cis-1,3-Dichloropropene	25.0	U	22.7	24.6	90.8	98.6	1	34.0-149			8.19	28
trans-1,3-Dichloropropene	25.0	U	20.9	25.4	83.4	102	1	32.0-149			19.7	28
Toluene	25.0	U	20.4	23.9	81.6	95.8	1	26.0-154			16.0	28
2-Hexanone	125	U	120	151	96.2	121	1	21.0-160			22.7	29
Isopropylbenzene	25.0	1.19	21.9	24.4	82.9	93.0	1	28.0-157			10.9	27
2-Butanone (MEK)	125	U	118	117	94.2	93.8	1	10.0-160			0.493	32
Methyl Acetate	125	U	100	171	80.4	137	1	18.0-151		J3	52.0	30
Methyl Cyclohexane	25.0	U	25.7	25.2	103	101	1	11.0-160			1.85	24
Methylene Chloride	25.0	U	20.9	21.0	83.6	84.0	1	23.0-144			0.456	28
4-Methyl-2-pentanone (MIBK)	125	U	104	124	83.2	99.4	1	29.0-160			17.7	29
Methyl tert-butyl ether	25.0	U	20.3	20.6	81.0	82.3	1	28.0-150			1.60	29
Xylenes, Total	75.0	U	61.3	69.7	81.7	92.9	1	29.0-154			12.8	28
Styrene	25.0	U	20.9	24.7	83.7	98.9	1	33.0-155			16.7	28

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



L1136948-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1136948-13 09/14/19 01:26 • (MS) R3450836-3 09/14/19 03:49 • (MSD) R3450836-4 09/14/19 04:10

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,1,2,2-Tetrachloroethane	25.0	U	24.1	24.3	96.4	97.3	1	33.0-150			0.975	28
Tetrachloroethene	25.0	U	22.2	25.3	88.7	101	1	10.0-160			13.3	27
1,1,2-Trichlorotrifluoroethane	25.0	U	25.5	24.7	102	99.0	1	23.0-160			3.18	30
1,2,3-Trichlorobenzene	25.0	U	13.5	15.8	54.1	63.3	1	17.0-150			15.6	36
1,2,4-Trichlorobenzene	25.0	U	16.7	18.2	66.6	73.0	1	24.0-150			9.11	33
1,1,1-Trichloroethane	25.0	U	23.6	24.0	94.5	95.9	1	23.0-160			1.48	28
1,1,2-Trichloroethane	25.0	U	21.7	26.8	86.8	107	1	35.0-147			21.0	27
Trichloroethene	25.0	U	24.6	25.6	98.3	102	1	10.0-160			4.01	25
Trichlorofluoromethane	25.0	U	25.4	24.7	102	98.7	1	17.0-160			3.05	31
Vinyl chloride	25.0	U	21.8	21.1	87.1	84.6	1	10.0-160			2.94	27
(S) Toluene-d8					87.1	98.6		80.0-120				
(S) 4-Bromofluorobenzene					82.2	91.6		77.0-126				
(S) 1,2-Dichloroethane-d4					109	108		70.0-130				

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Method Blank (MB)

(MB) R3451274-2 09/16/19 11:20

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
Ethylbenzene	U		0.384	1.00
Toluene	U		0.412	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	102			80.0-120
(S) 4-Bromofluorobenzene	99.2			77.0-126
(S) 1,2-Dichloroethane-d4	101			70.0-130

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3451274-1 09/16/19 10:19

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	25.0	25.2	101	70.0-123	
Ethylbenzene	25.0	26.0	104	79.0-123	
Toluene	25.0	24.9	99.8	79.0-120	
Xylenes, Total	75.0	78.4	105	79.0-123	
(S) Toluene-d8			103	80.0-120	
(S) 4-Bromofluorobenzene			100	77.0-126	
(S) 1,2-Dichloroethane-d4			114	70.0-130	



Method Blank (MB)

(MB) R3449121-1 09/10/19 10:08

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
PCB 1260	U		0.120	0.500
PCB 1016	U		0.100	0.500
PCB 1221	U		0.0730	0.500
PCB 1232	U		0.0420	0.500
PCB 1242	U		0.0470	0.500
PCB 1248	U		0.0860	0.500
PCB 1254	U		0.0470	0.500
(S) Decachlorobiphenyl	58.1			10.0-128
(S) Tetrachloro-m-xylene	12.1			10.0-127

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3449121-2 09/10/19 10:23

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
PCB 1260	2.50	1.52	60.8	42.0-131	
PCB 1016	2.50	1.03	41.2	36.0-135	
(S) Decachlorobiphenyl			60.5	10.0-128	
(S) Tetrachloro-m-xylene			28.1	10.0-127	

L1136948-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1136948-13 09/10/19 18:08 • (MS) R3449121-3 09/10/19 18:23 • (MSD) R3449121-4 09/10/19 18:38

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
PCB 1260	2.50	U	1.44	1.54	57.6	61.6	1	20.0-142			6.71	27
PCB 1016	2.50	U	1.25	1.26	50.0	50.4	1	11.0-160			0.797	38
(S) Decachlorobiphenyl					57.9	57.0		10.0-128				
(S) Tetrachloro-m-xylene					30.2	32.2		10.0-127				

Method Blank (MB)

(MB) R3449894-2 09/11/19 16:42

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acenaphthene	U		0.316	1.00
Acenaphthylene	U		0.309	1.00
Anthracene	U		0.291	1.00
Benzo(a)anthracene	U		0.0975	1.00
Benzo(b)fluoranthene	U		0.0896	1.00
Benzo(k)fluoranthene	U		0.355	1.00
Benzo(g,h,i)perylene	U		0.161	1.00
Benzo(a)pyrene	U		0.340	1.00
Bis(2-chlorethoxy)methane	U		0.329	10.0
Bis(2-chloroethyl)ether	U		1.62	10.0
Bis(2-chloroisopropyl)ether	U		0.445	10.0
4-Bromophenyl-phenylether	U		0.335	10.0
Carbazole	U		0.260	10.0
2-Chloronaphthalene	U		0.330	1.00
4-Chlorophenyl-phenylether	U		0.303	10.0
Chrysene	U		0.332	1.00
Dibenz(a,h)anthracene	U		0.279	1.00
3,3-Dichlorobenzidine	U		2.02	10.0
2,4-Dinitrotoluene	U		1.65	10.0
2,6-Dinitrotoluene	U		0.279	10.0
Fluoranthene	U		0.310	1.00
Fluorene	U		0.323	1.00
Hexachlorobenzene	U		0.341	1.00
Hexachloro-1,3-butadiene	U		0.329	10.0
Hexachlorocyclopentadiene	U		2.33	10.0
Hexachloroethane	U		0.365	10.0
Indeno(1,2,3-cd)pyrene	U		0.279	1.00
Isophorone	U		0.272	10.0
Naphthalene	U		0.372	1.00
Nitrobenzene	U		0.367	10.0
n-Nitrosodiphenylamine	U		1.19	10.0
n-Nitrosodi-n-propylamine	U		0.403	10.0
Phenanthrene	U		0.366	1.00
Benzylbutyl phthalate	U		0.275	3.00
Bis(2-ethylhexyl)phthalate	U		0.709	3.00
Di-n-butyl phthalate	U		0.266	3.00
Diethyl phthalate	U		0.282	3.00
Dimethyl phthalate	U		0.283	3.00
Di-n-octyl phthalate	U		0.278	3.00
Pyrene	U		0.330	1.00

1

Cp

2

Tc

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Ss

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Cn

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Sr

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Qc

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Gl

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Al

9

Sc



Method Blank (MB)

(MB) R3449894-2 09/11/19 16:42

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
4-Chloroaniline	U		0.382	10.0
4-Chloro-3-methylphenol	U		0.263	10.0
2-Chlorophenol	U		0.283	10.0
2-Nitrophenol	U		0.320	10.0
4-Nitrophenol	U		2.01	10.0
Pentachlorophenol	U		0.313	10.0
Phenol	0.373	U	0.334	10.0
2,4,6-Trichlorophenol	U		0.297	10.0
Dibenzofuran	U		0.338	10.0
2,4-Dichlorophenol	U		0.284	10.0
2,4-Dimethylphenol	U		0.624	10.0
4,6-Dinitro-2-methylphenol	U		2.62	10.0
2,4-Dinitrophenol	U		3.25	10.0
2-Methylnaphthalene	U		0.311	1.00
2-Methylphenol	U		0.312	10.0
3&4-Methyl Phenol	U		0.266	10.0
2-Nitroaniline	U		1.90	10.0
3-Nitroaniline	U		0.308	10.0
4-Nitroaniline	U		0.349	10.0
Acetophenone	U		2.71	10.0
1,2,4,5-Tetrachlorobenzene	U		2.41	10.0
2,4,5-Trichlorophenol	U		0.236	10.0
Biphenyl	U		0.325	10.0
Atrazine	U		0.260	10.0
Benzaldehyde	U		1.40	10.0
Caprolactam	U		2.59	10.0
(S) Nitrobenzene-d5	26.8			10.0-127
(S) 2-Fluorobiphenyl	28.1			10.0-130
(S) p-Terphenyl-d14	60.9			10.0-128
(S) Phenol-d5	13.8			10.0-120
(S) 2-Fluorophenol	20.9			10.0-120
(S) 2,4,6-Tribromophenol	30.2			10.0-155

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3449894-1 09/11/19 16:20

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Acenaphthene	50.0	26.3	52.6	41.0-120	
Acenaphthylene	50.0	27.3	54.6	43.0-120	
Anthracene	50.0	31.8	63.6	45.0-120	
Biphenyl	50.0	25.9	51.8	38.0-120	
Benzo(a)anthracene	50.0	34.1	68.2	47.0-120	
Benzo(b)fluoranthene	50.0	35.5	71.0	46.0-120	
Benzo(k)fluoranthene	50.0	34.6	69.2	46.0-120	
Benzo(g,h,i)perylene	50.0	35.0	70.0	48.0-121	
Benzo(a)pyrene	50.0	36.3	72.6	47.0-120	
Bis(2-chlorethoxy)methane	50.0	23.8	47.6	33.0-120	
Bis(2-chloroethyl)ether	50.0	23.6	47.2	23.0-120	
Bis(2-chloroisopropyl)ether	50.0	23.3	46.6	28.0-120	
4-Bromophenyl-phenylether	50.0	30.9	61.8	45.0-120	
Carbazole	50.0	35.1	70.2	51.0-122	
2-Chloronaphthalene	50.0	25.0	50.0	37.0-120	
4-Chlorophenyl-phenylether	50.0	30.2	60.4	44.0-120	
Chrysene	50.0	34.9	69.8	48.0-120	
Dibenz(a,h)anthracene	50.0	34.8	69.6	47.0-120	
3,3-Dichlorobenzidine	100	55.3	55.3	44.0-120	
2,4-Dinitrotoluene	50.0	34.0	68.0	49.0-124	
2,6-Dinitrotoluene	50.0	31.8	63.6	46.0-120	
Fluoranthene	50.0	34.7	69.4	51.0-120	
Fluorene	50.0	30.6	61.2	47.0-120	
Hexachlorobenzene	50.0	30.1	60.2	44.0-120	
Hexachloro-1,3-butadiene	50.0	21.0	42.0	19.0-120	
Hexachlorocyclopentadiene	50.0	19.7	39.4	15.0-120	
Hexachloroethane	50.0	22.0	44.0	15.0-120	
Indeno(1,2,3-cd)pyrene	50.0	36.5	73.0	49.0-122	
Isophorone	50.0	25.5	51.0	36.0-120	
Naphthalene	50.0	21.4	42.8	27.0-120	
Nitrobenzene	50.0	22.3	44.6	27.0-120	
n-Nitrosodiphenylamine	50.0	30.0	60.0	47.0-120	
n-Nitrosodi-n-propylamine	50.0	27.1	54.2	31.0-120	
Phenanthrene	50.0	31.7	63.4	46.0-120	
Benzylbutyl phthalate	50.0	34.8	69.6	43.0-121	
Bis(2-ethylhexyl)phthalate	50.0	33.9	67.8	43.0-122	
Di-n-butyl phthalate	50.0	37.3	74.6	49.0-121	
Diethyl phthalate	50.0	34.6	69.2	48.0-122	
Dimethyl phthalate	50.0	33.1	66.2	48.0-120	
Di-n-octyl phthalate	50.0	34.0	68.0	42.0-125	

1

Cp

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Tc

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Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

[L1136948-01,02,03,04,05,06,07,09,10,11,12,13](#)

Laboratory Control Sample (LCS)

(LCS) R3449894-1 09/11/19 16:20

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Pyrene	50.0	34.6	69.2	47.0-120	
4-Chloroaniline	50.0	22.6	45.2	25.0-120	
4-Chloro-3-methylphenol	50.0	28.0	56.0	40.0-120	
2-Chlorophenol	50.0	21.3	42.6	25.0-120	
Dibenzofuran	50.0	28.8	57.6	44.0-120	
2,4-Dichlorophenol	50.0	23.6	47.2	36.0-120	
2,4-Dimethylphenol	50.0	23.3	46.6	33.0-120	
4,6-Dinitro-2-methylphenol	50.0	31.0	62.0	38.0-138	
2,4-Dinitrophenol	50.0	29.2	58.4	10.0-120	
2-Methylnaphthalene	50.0	21.4	42.8	33.0-120	
2-Methylphenol	50.0	21.4	42.8	28.0-120	
3&4-Methyl Phenol	50.0	23.9	47.8	31.0-120	
2-Nitroaniline	50.0	31.9	63.8	43.0-120	
3-Nitroaniline	50.0	33.0	66.0	38.0-120	
4-Nitroaniline	50.0	34.5	69.0	18.0-160	
2-Nitrophenol	50.0	22.7	45.4	31.0-120	
4-Nitrophenol	50.0	16.0	32.0	10.0-120	
Pentachlorophenol	50.0	31.4	62.8	23.0-120	
Phenol	50.0	9.85	19.7	10.0-120	
2,4,6-Trichlorophenol	50.0	29.4	58.8	42.0-120	
Acetophenone	50.0	24.2	48.4	29.0-120	
1,2,4,5-Tetrachlorobenzene	50.0	25.3	50.6	31.0-121	
2,4,5-Trichlorophenol	50.0	29.5	59.0	44.0-120	
Atrazine	50.0	34.1	68.2	39.0-141	
Benzaldehyde	50.0	25.3	50.6	10.0-160	
Caprolactam	50.0	13.1	26.2	10.0-120	
(S) Nitrobenzene-d5			38.1	10.0-127	
(S) 2-Fluorobiphenyl			47.6	10.0-130	
(S) p-Terphenyl-d14			66.8	10.0-128	
(S) Phenol-d5			18.6	10.0-120	
(S) 2-Fluorophenol			28.0	10.0-120	
(S) 2,4,6-Tribromophenol			57.5	10.0-155	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1136948-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1136948-13 09/11/19 19:19 • (MS) R3449894-3 09/11/19 19:41 • (MSD) R3449894-4 09/11/19 20:03

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	50.0	U	25.5	31.1	51.0	61.6	1	28.0-120			19.8	25
Acenaphthylene	50.0	U	26.9	33.0	53.8	65.3	1	31.0-121			20.4	25
Anthracene	50.0	U	27.0	33.5	54.0	66.3	1	36.0-120			21.5	23
Benzo(a)anthracene	50.0	U	29.3	35.2	58.6	69.7	1	39.0-120			18.3	23
Benzo(b)fluoranthene	50.0	U	30.7	36.8	61.4	72.9	1	37.0-120			18.1	23
Benzo(k)fluoranthene	50.0	U	29.6	36.2	59.2	71.7	1	37.0-120			20.1	26
Benzo(g,h,i)perylene	50.0	U	29.9	35.7	59.8	70.7	1	37.0-123			17.7	25
Benzo(a)pyrene	50.0	U	31.3	37.9	62.6	75.0	1	37.0-120			19.1	24
Bis(2-chlorethoxy)methane	50.0	U	23.0	27.8	46.0	55.0	1	17.0-120			18.9	31
Bis(2-chloroethyl)ether	50.0	U	24.7	29.6	49.4	58.6	1	14.0-120			18.0	33
Bis(2-chloroisopropyl)ether	50.0	U	24.0	29.1	48.0	57.6	1	18.0-120			19.2	34
4-Bromophenyl-phenylether	50.0	U	27.2	34.2	54.4	67.7	1	37.0-120			22.8	24
2-Chloronaphthalene	50.0	U	25.3	30.9	50.6	61.2	1	29.0-120			19.9	28
4-Chlorophenyl-phenylether	50.0	U	27.4	33.5	54.8	66.3	1	36.0-120			20.0	23
Chrysene	50.0	U	29.6	35.8	59.2	70.9	1	38.0-120			19.0	23
Dibenz(a,h)anthracene	50.0	U	29.7	36.0	59.4	71.3	1	36.0-121			19.2	24
3,3-Dichlorobenzidine	100	U	37.7	46.0	37.7	45.5	1	10.0-134			19.8	30
2,4-Dinitrotoluene	50.0	U	29.3	37.3	58.6	73.9	1	39.0-125			24.0	25
2,6-Dinitrotoluene	50.0	U	29.2	36.5	58.4	72.3	1	36.0-120			22.2	27
Fluoranthene	50.0	U	29.6	36.6	59.2	72.5	1	41.0-121			21.1	22
Fluorene	50.0	U	28.0	34.0	56.0	67.3	1	37.0-120			19.4	24
Hexachlorobenzene	50.0	U	25.9	32.3	51.8	64.0	1	35.0-122			22.0	24
Hexachloro-1,3-butadiene	50.0	U	22.2	26.6	44.4	52.7	1	12.0-120			18.0	34
Hexachlorocyclopentadiene	50.0	U	21.9	27.3	43.8	54.1	1	10.0-120			22.0	33
Hexachloroethane	50.0	U	24.6	31.7	49.2	62.8	1	10.0-120			25.2	40
Indeno(1,2,3-cd)pyrene	50.0	U	31.4	37.8	62.8	74.9	1	38.0-125			18.5	24
Isophorone	50.0	U	24.4	29.1	48.8	57.6	1	21.0-120			17.6	27
Naphthalene	50.0	U	22.3	26.4	44.6	52.3	1	10.0-120			16.8	31
Nitrobenzene	50.0	U	23.0	27.3	46.0	54.1	1	12.0-120			17.1	30
n-Nitrosodiphenylamine	50.0	U	27.9	34.6	55.8	68.5	1	37.0-120			21.4	24
n-Nitrosodi-n-propylamine	50.0	U	27.0	32.6	54.0	64.6	1	16.0-120			18.8	30
Phenanthrene	50.0	U	27.2	33.5	54.4	66.3	1	33.0-120			20.8	22
Benzylbutyl phthalate	50.0	U	31.5	37.5	63.0	74.3	1	34.0-126			17.4	24
Bis(2-ethylhexyl)phthalate	50.0	U	29.7	35.2	59.4	69.7	1	33.0-126			16.9	25
Di-n-butyl phthalate	50.0	0.302	32.2	39.0	63.8	76.6	1	35.0-128			19.1	23
Diethyl phthalate	50.0	U	30.2	36.7	60.4	72.7	1	39.0-125			19.4	24
Dimethyl phthalate	50.0	U	29.1	35.8	58.2	70.9	1	37.0-120			20.6	24
Di-n-octyl phthalate	50.0	U	30.5	36.4	61.0	72.1	1	25.0-135			17.6	26
Pyrene	50.0	U	29.8	35.9	59.6	71.1	1	39.0-120			18.6	22
Acetophenone	50.0	U	24.6	30.0	49.2	59.4	1	20.0-120			19.8	35

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

[L1136948-01,02,03,04,05,06,07,09,10,11,12,13](#)

L1136948-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1136948-13 09/11/19 19:19 • (MS) R3449894-3 09/11/19 19:41 • (MSD) R3449894-4 09/11/19 20:03

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
4-Chloro-3-methylphenol	50.0	U	25.4	31.1	50.8	61.6	1	26.0-120			20.2	27
2-Chlorophenol	50.0	U	22.2	26.6	44.4	52.7	1	18.0-120			18.0	34
Atrazine	50.0	U	30.2	36.4	60.4	72.1	1	39.0-130			18.6	23
Benzaldehyde	50.0	U	25.8	31.0	51.6	61.4	1	10.0-160			18.3	40
2,4-Dichlorophenol	50.0	U	24.4	28.9	48.8	57.2	1	19.0-120			16.9	27
2,4-Dimethylphenol	50.0	U	23.0	27.1	46.0	53.7	1	15.0-120			16.4	28
4,6-Dinitro-2-methylphenol	50.0	U	29.9	36.1	59.8	71.5	1	10.0-144			18.8	39
2,4-Dinitrophenol	50.0	U	32.1	39.6	64.2	78.4	1	10.0-120			20.9	40
Biphenyl	50.0	U	25.3	31.0	50.6	61.4	1	29.0-120			20.2	33
2-Nitrophenol	50.0	U	24.2	29.2	48.4	57.8	1	20.0-120			18.7	30
4-Nitrophenol	50.0	U	12.5	17.4	25.0	34.5	1	10.0-120			32.8	40
Caprolactam	50.0	U	12.4	13.6	24.8	26.9	1	10.0-120			9.23	40
Carbazole	50.0	U	30.2	37.3	60.4	73.9	1	38.0-127			21.0	21
Pentachlorophenol	50.0	U	30.5	37.4	61.0	74.1	1	10.0-128			20.3	37
4-Chloroaniline	50.0	U	22.0	25.7	44.0	50.9	1	10.0-120			15.5	31
Phenol	50.0	0.769	10.8	11.8	20.1	21.8	1	10.0-120			8.85	40
2,4,6-Trichlorophenol	50.0	U	28.4	35.6	56.8	70.5	1	26.0-120			22.5	31
Dibenzofuran	50.0	U	27.1	33.2	54.2	65.7	1	32.0-120			20.2	26
2-Methylnaphthalene	50.0	U	21.8	25.9	43.6	51.3	1	17.0-120			17.2	28
2-Nitroaniline	50.0	U	28.8	36.2	57.6	71.7	1	33.0-120			22.8	27
3-Nitroaniline	50.0	U	27.5	33.6	55.0	66.5	1	20.0-120			20.0	27
4-Nitroaniline	50.0	U	29.9	36.4	59.8	72.1	1	10.0-160			19.6	26
2-Methylphenol	50.0	U	21.5	25.0	43.0	49.5	1	10.0-120			15.1	30
3&4-Methyl Phenol	50.0	U	22.7	26.4	45.4	52.3	1	10.0-120			15.1	36
1,2,4,5-Tetrachlorobenzene	50.0	U	26.0	31.0	52.0	61.4	1	19.0-122			17.5	32
2,4,5-Trichlorophenol	50.0	U	28.8	35.9	57.6	71.1	1	33.0-120			21.9	31
(S) Nitrobenzene-d5					40.4	48.8		10.0-127				
(S) 2-Fluorobiphenyl					46.0	57.7		10.0-130				
(S) p-Terphenyl-d14					59.9	70.9		10.0-128				
(S) Phenol-d5					18.5	21.3		10.0-120				
(S) 2-Fluorophenol					29.3	34.0		10.0-120				
(S) 2,4,6-Tribromophenol					54.0	66.8		10.0-155				

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
V	The sample concentration is too high to evaluate accurate spike recoveries.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 GI

8 AI

9 Sc



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico ¹	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1 6}	90010	South Carolina	84004
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana ¹	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

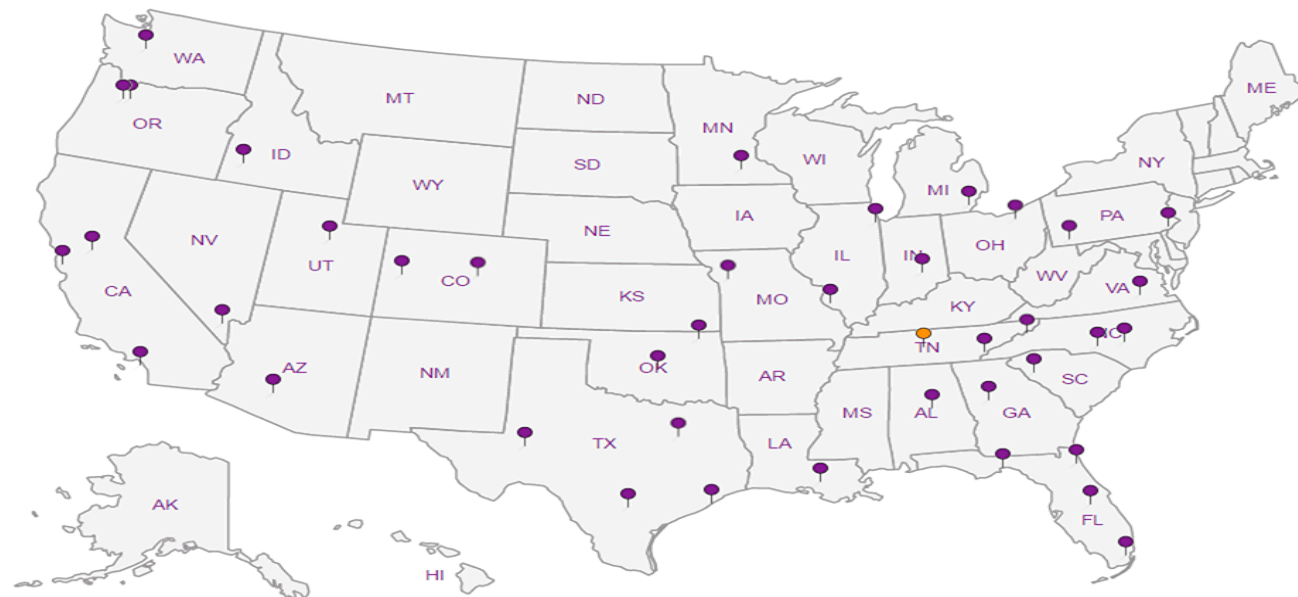
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP, LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



GHD - Glenn Springs Holdings

2055 Niagara Falls Blvd. #3
Niagara Falls, NY 14034

Report to:
Angela Bown

Project
Description: **Cline Avenue Ditch**

Phone: **716-297-6150**
Fax:

Collected by (print):
Yara Yang

Collected by (signature):
[Signature]

Immediately
Packed on Ice N ☐ Y ☒

Billing Information:
Accounts Payable
PO Box 2148
Houston, TX 77252-2148

Email To: **Angela.Bown@ghd.com,**
Paul.Fowler@ghd.com, GSH-LabDataMgmt-

City/State
Collected:

Lab Project #
GHDGSH-11129311

P.O. #
4502201561

Quote #

Rush? (Lab MUST Be Notified)

Same Day ☐ Five Day ☐
Next Day ☐ 5 Day (Rad Only) ☐
Two Day ☐ 10 Day (Rad Only) ☐
Three Day ☐

Date Results Needed

STD

No.
of
Cnts

Analysis / Container / Preservative

Pres
Chk

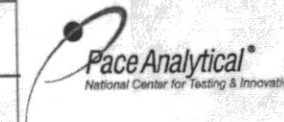
8082 100ml Amb-NoPres

8270TCL 100ml Amb NoPres

M6020TAL-D 250mlHDPE-HNO3

V8260TCL 40mlAmb-HCl

Chain of Custody Page of



12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



L# **1136948**
C171

Acctnum: **GHDGSH**

Template: **T144646**

Prelogin: **P721116**

TSR: **134 - Mark W. Beasley**

BP: **KB 7/25/19**

Shipped Via: **FedEX Ground**

Remarks Sample # (lab only)

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts	8082 100ml Amb-NoPres	8270TCL 100ml Amb NoPres	M6020TAL-D 250mlHDPE-HNO3	V8260TCL 40mlAmb-HCl										
GW-11198545-090519-YY-001	G	GW	—	9/5/2019	9:40	8	X	X	X	X										1
GW-11198545-090519-YY-002	G	GW	—	9/5/2019	11:22	8	X	X	X	X										2
GW-11198545-090519-YY-003	G	GW	—	9/5/2019	13:53	8	X	X	X	X										3
GW-11198545-090519-YY-004	G	GW	—	9/5/2019	13:55	8	X	X	X	X										4
GW-11198545-090519-YY-005	G	GW	—	9/5/2019	15:08	8	X	X	X	X										5
GW-11198545-090519-YY-006	G	GW	—	9/5/2019	16:18	8	X	X	X	X										6
GW-11198545-090519-YY-007	G	GW	—	9/5/2019	17:43	8	X	X	X	X										7
TRIP BLANK-1	G	GW	—	9/5/2019	8:00	1				X										8
		GW																		
		GW																		

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks: ****Level IV data package (5%)****

Samples returned via:
☐ UPS ☐ FedEx ☒ Courier

Tracking # **108259936202**

pH Temp
Flow Other

Sample Receipt Checklist
COC Seal Present/Intact: ☒ NP ☐ Y ☐ N
COC Signed/Accurate: ☒ ☐ ☐ N
Bottles arrive intact: ☒ ☐ ☐ N
Correct bottles used: ☒ ☐ ☐ N
Sufficient volume sent: ☒ ☐ ☐ N
If Applicable
VOA Zero Headspace: ☒ ☐ ☐ N
Preservation Correct/Checked: ☒ ☐ ☐ N
RAD SCREEN: <0.5 mR/hr

Relinquished by: (Signature)

Date: **9/6/2019**
Time: **1800**

Received by: (Signature)

Trip Blank Received: ☒ Yes / No ☐
2 HCl/ MeOH TBR

Relinquished by: (Signature)

Date:
Time:

Received by: (Signature)

Temp: **42.3=39.5** °C Bottles Received: **114**

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:
Time:

Received for lab by: (Signature)

Date: **9/7/19** Time: **0900**

Hold: Condition: NCF / ☒ OK

Attachment C

Low-flow Sampling Records

Monitoring Well Record for Low-Flow Purging
(Form SP-09)

Project Data:

Project Name: Cline Ave
Ref. No.: 11198545

Date: 9/5/2019
Personnel: Y. Yang

Monitoring Well Data:

Well No.: MW-02-07
Vapour PID (ppm): _____
Measurement Point: TOC
Constructed Well Depth (m/ft): _____
Measured Well Depth (m/ft): 15.58
Depth of Sediment (m/ft): _____

Saturated Screen Length (m/ft): _____
Depth to Pump Intake (m/ft)⁽¹⁾: 12
Well Diameter, D (cm/in): _____
Well Screen Volume, V_s (L)⁽²⁾: _____
Initial Depth to Water (m/ft): 6.10



Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level ⁽³⁾ (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, V _p (L)	No. of Well Screen Volumes Purged ⁽⁴⁾
Precision Required ⁽⁵⁾ :				±3 %	±0.005 or 0.01 ⁽⁶⁾	±10 %	±10 %	±0.1 Units	±10 mV		
9:06	300	6.14	0.04								
9:11	250	6.11	0.01	15.46	0.626	154	10.7	6.85	27.8	2.75	
9:16	250	6.12	0.02	15.52	0.618	141	9.7	6.94	37.7	5	
9:21	250	6.11	0.01	15.64	0.608	114	12.7	6.96	4.6	7.5	
9:26	250	6.11	0.01	15.71	0.607	85.6	10.1	6.96	-1.7	10	
9:31	250	6.11	0.01	15.74	0.607	70.9	9.5	6.98	-5.9	12.5	
9:36	250	6.11	0.01	15.78	0.606	78.3	8.0	6.98	-7.6	15	

Sample ID: GW-11198545-090519-YY-001

Sample Time: 9:40

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s = n \cdot (r^2) \cdot L$ in mL, where $r = (D/2)$ and L are in cm. For Imperial units, $V_s = n \cdot (r^2) \cdot L \cdot (2.54)^3$, where r and L are in inches
- (3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 500 mL/min.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged = V_p/V_s .
- (5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

Monitoring Well Record for Low-Flow Purging
(Form SP-09)

Project Data:

Project Name: Cline Ave
Ref. No.: 1198545

Date: 9/5/2015
Personnel: Y. Yang

Monitoring Well Data:

Well No.: MW-13-19
Vapour PID (ppm): _____
Measurement Point: _____
Constructed Well Depth (m/ft): _____
Measured Well Depth (m/ft): 16.45
Depth of Sediment (m/ft): _____

Saturated Screen Length (m/ft): +2
Depth to Pump Intake (m/ft)⁽¹⁾: 12
Well Diameter, D (cm/in): 2 in
Well Screen Volume, V_s (L)⁽²⁾: _____
Initial Depth to Water (m/ft): 9.47

Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level ⁽³⁾ (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged ⁽⁴⁾
Precision Required ⁽⁵⁾ :				±3 %	±0.005 or 0.01 ⁽⁶⁾	±10 %	±10 %	±0.1 Units	±10 mV		
1043	200	9.58	0.12								
1050	200	9.54	0.07	16.40	1.300	385	16.6	6.70	-56.1	0.25 4.5	2.5
1055	200	9.55	0.08	16.48	1.309	273	14.4	6.71	-64.6	3.5	
1100	200	9.54	0.07	16.34	1.306	186	10.1	6.72	-70.9	4.5	
1105	200	9.55	0.08	16.29	1.278	89.2	7.3	6.72	-77.5	6.0	
1110	200	9.55	0.08	16.43	1.266	67.5	6.7	6.72	-80.1	7.0	
1115	200	9.55	0.08	16.51	1.231	53.0	5.6	6.73	-86.1	8.0	
1120	200	9.54	0.07	16.55	1.232	48.8	5.4	6.73	-85.9	9.0	

Sample ID: GW-1198545-090519-YY-002

Sample Time: 11:22

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s = \pi \cdot (r^2) \cdot L$ in mL, where r (r=D/2) and L are in cm.
For Imperial units, $V_s = \pi \cdot (r^2) \cdot L \cdot (2.54)^3$, where r and L are in inches
- (3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 500 mL/min.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.
- (5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

Monitoring Well Record for Low-Flow Purging
(Form SP-09)

Project Data:

Project Name: Cline Ave
Ref. No.: 11198545

Date: 9/5/2019
Personnel: y.yang

Monitoring Well Data:

Well No.: MW-1279
Vapour PID (ppm): _____
Measurement Point: TOC
Constructed Well Depth (m/ft): _____
Measured Well Depth (m/ft): 17.41
Depth of Sediment (m/ft): _____

Saturated Screen Length (m/ft): _____
Depth to Pump Intake (m/ft)⁽¹⁾: 14
Well Diameter, D (cm/in): _____
Well Screen Volume, V_s (L)⁽²⁾: _____
Initial Depth to Water (m/ft): 8.29

Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level ⁽³⁾ (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged ⁽⁴⁾
Precision Required ⁽⁵⁾ :				±3 %	±0.005 or 0.01 ⁽⁶⁾	±10 %	±10 %	±0.1 Units	±10 mV		
1310	450	8.34	0.05							0	
1315	200	8.34	0.05	17.31	0.630	684	0.78	6.83	-36.6	1.75	
1320	200	8.35	0.06	17.43	0.618	613	0.80	6.82	-31.3	2.75	
1325	200	8.34	0.05	17.51	0.612	421	0.92	6.83	-29.0	3.75	
1330	200	8.34	0.05	17.49	0.613	314	0.68	6.86	-26.5	5	
1335	200	8.34	0.05	16.41	0.629	248	0.53	6.84	-31.1	6	
1340	200	8.34	0.05	16.47	0.622	174	0.59	6.77	-33.8	7	
1345	200	8.34	0.05	16.42	0.617	162	0.59	6.77	-34.2	8	
1350	200	8.34	0.05	16.38	0.616	159	0.56	6.80	-35.0	9	

Sample ID:

GW-11198545-090519-YY-003

Sample Time:

1353

Notes:

GW-11198545-090519-YY-004 Duplicate

1355

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s = \pi \cdot (r^2) \cdot L$ in mL, where r ($r=D/2$) and L are in cm. For Imperial units, $V_s = \pi \cdot (r^2) \cdot L \cdot (2.54)^3$, where r and L are in inches
- (3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 500 mL/min.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged = V_p/V_s .
- (5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

Monitoring Well Record for Low-Flow Purging
(Form SP-09)

Project Data:

Project Name: Cline Ave
Ref. No.: 11198545

Date: 9/5/2019
Personnel: Yong Yang

Monitoring Well Data:

Well No.: MW-11-19
Vapour PID (ppm):
Measurement Point: TOC
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft): 16.40
Depth of Sediment (m/ft):

Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft): 13'
Well Diameter, D (cm/in):
Well Screen Volume, V_s (L):
Initial Depth to Water (m/ft): 8.48

Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level ⁽³⁾ (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged ⁽⁴⁾
Precision Required ⁽⁵⁾ :				±3 %	±0.005 or 0.01 ⁽⁶⁾	±10 %	±10 %	±0.1 Units	±10 mV		
1425	325	8.52								0	
1430	300	8.53	0.05	18.49	0.410	714	1.60	7.42	108.8	1.5	
1435	300	8.54	0.06	18.32	0.417	634	0.78	7.40	112.0	3	
1440	300	8.52	0.04	18.53	0.447	517	1.09	7.40	109.2	4.5	
1445	300	8.52	0.04	18.81	0.464	436	0.53	7.27	96.9	5.75	
1450	300	8.52	0.04	18.90	0.467	278	0.52	7.34	92.5	7.0	
1455	300	8.52	0.04	19.03	0.471	269	0.54	7.37	88.0	8.5	
1500	300	8.52	0.04	18.84	0.474	233	0.51	7.25	78.4	10	
1505	300	8.52	0.04	18.68	0.473	224	0.49	7.35	64.3	11.5	

Sample ID: GW-11198545-090519-YY-005

Sample Time: 1508

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s = \pi \cdot (r^2) \cdot L$ in mL, where r ($r = D/2$) and L are in cm. For Imperial units, $V_s = \pi \cdot (r^2) \cdot L \cdot (2.54)^3$, where r and L are in inches
- (3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 500 mL/min.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged = V_p/V_s .
- (5) For conductivity, the average value of three readings < 1 mS/cm ± 0.005 mS/cm or where conductivity > 1 mS/cm ± 0.01 mS/cm.

Monitoring Well Record for Low-Flow Purging
(Form SP-09)

Project Data:

Project Name: Cline Ave
Ref. No.: 11198545

Date: 9/5/2019
Personnel: Yona Yang

Monitoring Well Data:

Well No.: MW-14-19
Vapour PID (ppm): _____
Measurement Point: _____
Constructed Well Depth (m/ft): _____
Measured Well Depth (m/ft): 16.49
Depth of Sediment (m/ft): _____

Saturated Screen Length (m/ft): _____
Depth to Pump Intake (m/ft)⁽¹⁾: _____
Well Diameter, D (cm/in): _____
Well Screen Volume, V_s (L)⁽²⁾: _____
Initial Depth to Water (m/ft): 6.69



Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level ⁽³⁾ (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, V _p (L)	No. of Well Screen Volumes Purged ⁽⁴⁾
Precision Required ⁽⁵⁾ :				±3 %	±0.005 or 0.01 ⁽⁶⁾	±10 %	±10 %	±0.1 Units	±10 mV		
1545	450	6.85									
1550	350	6.75	0.06	16.35	1.013	362	0.98	6.71	-29.2	2	
1555	300	6.74	0.05	16.95	1.004	271	0.99	6.72	-34.8	3.5	
1600	300	6.74	0.05	16.99	0.977	217	0.72	6.73	-39.2	5	
1605	300	6.74	0.05	16.96	0.954	164	0.60	6.73	-42.8	8.5	
1610	300	6.78	0.06	16.85	0.921	153.7	0.43	6.73	-42.8	8.0	
1615	300	6.74	0.05	16.88	0.914	141.9	0.40	6.73	-43.9	9.5	

Sample ID: GW-11198545-090519-YY-006

Sample Time: 1618

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s = \pi \cdot (r^2) \cdot L$ in mL, where r (r=D/2) and L are in cm.
For Imperial units, $V_s = \pi \cdot (r^2) \cdot L \cdot (2.54)^3$, where r and L are in inches
- (3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 500 mL/min.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= V_p/V_s.
- (5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

Monitoring Well Record for Low-Flow Purging
(Form SP-09)

Project Data:

Project Name: Cline Ave
Ref. No.: 11198545

Date: 9/5/2015
Personnel: Y. Yang

Monitoring Well Data:

Well No.: MW-15-19
Vapour PID (ppm): _____
Measurement Point: _____
Constructed Well Depth (m/ft): _____
Measured Well Depth (m/ft): 16.07
Depth of Sediment (m/ft): _____

Saturated Screen Length (m/ft): _____
Depth to Pump Intake (m/ft)⁽¹⁾: 13'
Well Diameter, D (cm/in)⁽²⁾: 2
Well Screen Volume, V_s (L)⁽²⁾: _____
Initial Depth to Water (m/ft): 7.86



Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level ⁽³⁾ (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, V _p (L)	No. of Well Screen Volumes Purged ⁽⁴⁾
Precision Required ⁽⁵⁾ :				±3 %	±0.005 or 0.01 ⁽⁶⁾	±10 %	±10 %	±0.1 Units	±10 mV		
1715	400	7.93	0.09							0	
1720	300	7.93	0.07	14.66	1.153	172.0	0.86	6.87	6.2	2.5	
1725	300	7.93	0.06	14.64	1.152	151	0.81	6.89	4.7	4	
1730	300	7.91	0.05	14.54	1.153	137	0.73	6.91	8.4	5.5	
1735	300	7.91	0.05	14.61	1.150	127	0.66	6.92	11.7	7	
1740	300	7.91	0.05	14.64	1.149	118	0.58	6.93	14.0	8.5	

Sample ID: GW-11198545-090519-YY-007

Sample Time: 1743

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s = \pi \cdot (r^2) \cdot L$ in mL, where r (r=D/2) and L are in cm.
For Imperial units, $V_s = \pi \cdot (r^2) \cdot L \cdot (2.54)^3$, where r and L are in inches
- (3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 500 mL/min.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= V_p/V_s.
- (5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

Monitoring Well Record for Low-Flow Purging
(Form SP-09)

Project Data:

Project Name: Cline Avenue
Ref. No.: 11198545

Date: 9/5/2019
Personnel: Youn Yang

Monitoring Well Data:

Well No.: MW-16-19
Vapour PID (ppm): _____
Measurement Point: TOC
Constructed Well Depth (m/ft): _____
Measured Well Depth (m/ft): 15.95
Depth of Sediment (m/ft): _____

Saturated Screen Length (m/ft): _____
Depth to Pump Intake (m/ft)⁽¹⁾: 12
Well Diameter, D (cm/ID): 2
Well Screen Volume, V_s (L)⁽²⁾: _____
Initial Depth to Water (m/ft): 6.28

Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level ⁽³⁾ (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged ⁽⁴⁾
Precision Required ⁽⁶⁾ :				±3 %	±0.005 or 0.01 ⁽⁶⁾	±10 %	±10 %	±0.1 Units	±10 mV		
1813	450	6.41								0	
1818	300	6.32	0.04	16.71	0.711	7100	0.80	6.96	3.5	2	
1823	300	6.32	0.04	17.09	0.714	7100	0.92	6.96	4.7	3.5	
1828	300	6.32	0.04	17.19	0.716	548	0.78	6.96	5.0	5.0	
1833	300	6.32	0.04	16.83	0.719	495	0.48	6.96	6.6	6.5	
1838	300	6.32	0.04	16.67	0.719	515	0.43	6.96	8.4	8.0	
1843	300	6.32	0.04	16.58	0.719	488	0.41	6.96	9.7	9.5	

Sample ID:

GW-11198545-090519-YY-008

Sample Time:

1845

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s = \pi \cdot (r^2) \cdot L$ in mL, where r (r=D/2) and L are in cm.
For Imperial units, $V_s = \pi \cdot (r^2) \cdot L \cdot (2.54)^3$, where r and L are in inches
- (3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 500 mL/min.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.
- (5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

Monitoring Well Record for Low-Flow Purging
(Form SP-09)

Project Data:

Project Name:

Ref. No.:

Cline Avenue

11198545

Date:

Personnel:

9/6/2019

Yana Yang

Monitoring Well Data:

Well No.:

Vapour PID (ppm):

Measurement Point:

Constructed Well Depth (m/ft):

Measured Well Depth (m/ft):

Depth of Sediment (m/ft):

MW-09-19

+3.0 YY

13.0

Saturated Screen Length (m/ft):

Depth to Pump Intake (m/ft)⁽¹⁾:

Well Diameter, D (cm/in):

Well Screen Volume, V_s (L)⁽²⁾:

Initial Depth to Water (m/ft)⁽³⁾:

11.0

3.40

Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level ⁽³⁾ (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, V _p (L)	No. of Well Screen Volumes Purged ⁽⁴⁾
Precision Required ⁽⁵⁾ :				±3 %	±0.005 or 0.01 ⁽⁶⁾	±10 %	±10 %	±0.1 Units	±10 mV		
855	450	3.45	0.05							0	
900	350	3.41	0.01	17.84	0.702	232	3.30	7.00	-44.2	2	
905	250	3.42	0.02	17.73	0.715	250	0.75	7.06	-23.7	3.25	
910	250	3.42	0.02	17.59	0.715	190	0.84	7.07	-28.1	4.5	
915	250	3.42	0.02	17.49	0.719	135	0.67	7.11	-30.4	6	
920	250	3.42	0.02	17.67	0.720	105	0.65	7.13	-46.0	7.25	
925	250	3.42	0.02	17.54	0.733	89.1	0.66	7.14	-54.5	8.5	
930	250	3.42	0.02	17.60	0.734	73.4	0.65	7.15	-55.0	9.75	
935	250	3.42	0.02	17.60	0.735	80.6	0.62	7.16	-55.5	11.0	

Sample ID:

GW-11198545-090519-YY-009

Sample Time:

9:38

Notes:

- The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.
- The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s = \pi \cdot (r^2) \cdot L$ in mL, where r ($r=D/2$) and L are in cm. For Imperial units, $V_s = \pi \cdot (r^2) \cdot L \cdot (2.54)^3$, where r and L are in inches
- The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 500 mL/min.
- Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged = V_p/V_s .
- For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

Monitoring Well Record for Low-Flow Purging
(Form SP-09)

Project Data:

Project Name: Cline Avenue
Ref. No.: 11198545

Date: 9/6/2019
Personnel: Yona Yang

Monitoring Well Data:

Well No.: MW-08-19
Vapour PID (ppm): _____
Measurement Point: _____
Constructed Well Depth (m/ft): _____
Measured Well Depth (m/ft): 13.88
Depth of Sediment (m/ft): _____

Saturated Screen Length (m/ft): _____
Depth to Pump Intake (m/ft): 10.5
Well Diameter, D (cm): 2
Well Screen Volume, V_s (L)⁽²⁾: _____
Initial Depth to Water (m/ft): 5.45 5.56

Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level ⁽³⁾ (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged ⁽⁴⁾
Precision Required ⁽⁵⁾ :				±3 %	±0.005 or 0.01 ⁽⁶⁾	±10 %	±10 %	±0.1 Units	±10 mV		
10:12	300	5.58	0.02								0
10:17	300	5.57	0.01	19.49	2.287	635	0.81	7.19	-45.7	1.25	
10:22	300	5.58	0.02	19.30	2.277	420	0.67	7.19	-59.4	2.5	
10:27	300	5.58	0.02	19.19	2.268	335	0.57	7.18	-62.7	3.75	
10:32	300	5.57	0.01	19.14	2.273	231	0.54	7.19	-66.7	5.0	
10:37	300	5.58	0.02	19.15	2.267	211	0.49	7.18	-70.2	6.25	
10:42	300	5.58	0.02	19.14	2.266	192	0.46	7.18	-71.4	7.5	
10:47	300	5.58	0.02	19.16	2.263	186	0.44	7.18	-66.4	9.0	

Sample ID: G-W-11198545-090619-YY-010

Sample Time: 10:50

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s = \pi \cdot (r^2) \cdot L$ in mL, where r (r=D/2) and L are in cm.
For Imperial units, $V_s = \pi \cdot (r^2) \cdot L \cdot (2.54)^3$, where r and L are in inches
- (3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 500 mL/min.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.
- (5) For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

Monitoring Well Record for Low-Flow Purging
(Form SP-09)

Project Data:

Project Name: Cline Avenue
Ref. No.: 1198545

Date: 9/6/2019
Personnel: Yona Yang

Monitoring Well Data:

Well No.: MW-07-19
Vapour PID (ppm): _____
Measurement Point: _____
Constructed Well Depth (m/ft): _____
Measured Well Depth (m/ft): 13.91
Depth of Sediment (m/ft): _____

Saturated Screen Length (m/ft): _____
Depth to Pump Intake (m/ft): 10.5
Well Diameter, D (cm/in): _____
Well Screen Volume, V_s (L)⁽²⁾: _____
Initial Depth to Water (m/ft): 6.22

Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level ⁽³⁾ (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged ⁽⁴⁾
Precision Required ⁽⁵⁾ :				±3 %	±0.005 or 0.01 ⁽⁶⁾	±10 %	±10 %	±0.1 Units	±10 mV		
11:12	200	6.24	0.02							0	
11:17	200	6.24	0.02	19.72	1.598	669	0.77	7.45	24.3	1	
11:22	200	6.24	0.02	19.34	1.580	566	0.60	7.40	22.7	2	
11:27	200	6.24	0.02	19.11	1.568	384	0.53	7.41	-5.9	3	
11:32	200	6.24	0.02	18.92	1.582	246	0.46	7.36	-41.4	4	
11:37	200	6.24	0.02	18.89	1.590	249	0.39	7.35	-46.7	5	
11:42	200	6.24	0.02	18.85	1.591	212	0.39	7.36	-41.6	6	
11:47	200	6.24	0.02	18.80	1.589	191.2	0.39	7.36	-44.9	7	
11:52	200	6.24	0.02	18.83	1.587	182.9	0.37	7.35	-45.6	8	

Sample ID:

G-W-11198545-090619-YY-011

Sample Time:

11:55

Notes:

- The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.
- The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s = \pi \cdot (r^2) \cdot L$ in mL, where r (r=D/2) and L are in cm. For Imperial units, $V_s = \pi \cdot (r^2) \cdot L \cdot (2.54)^3$, where r and L are in inches
- The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 500 mL/min.
- Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= Vp/Vs.
- For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.

Monitoring Well Record for Low-Flow Purging
(Form SP-09)

Project Data:

Project Name: Cline Ave
Ref. No.: 11198545

Date: 9/6/2019
Personnel: Y. Yang

Monitoring Well Data:

Well No.: MW-10-19
Vapour PID (ppm): _____
Measurement Point: _____
Constructed Well Depth (m/ft): _____
Measured Well Depth (m/ft): 12.82
Depth of Sediment (m/ft): _____

Saturated Screen Length (m/ft): _____
Depth to Pump Intake (m/ft)⁽¹⁾: 9
Well Diameter, D (cm/in)⁽²⁾: 2
Well Screen Volume, V_s (L)⁽³⁾: _____
Initial Depth to Water (m/ft)⁽⁴⁾: 2.18

Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level ⁽³⁾ (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, V _p (L)	No. of Well Screen Volumes Purged ⁽⁴⁾
Precision Required ⁽⁵⁾ :				±3 %	±0.005 or 0.01 ⁽⁶⁾	±10 %	±10 %	±0.1 Units	±10 mV		
1300	350	2.21	0.03							0	
1305	250	2.22	0.04	16.29	3.173	916	0.71	7.47	14.7	1.25	
1310	250	2.23	0.05	16.38	2.953	71000	0.41	7.53	1.0	2.5	
1315	250	2.23	0.05	16.29	2.697	752	0.42	7.58	-19.2	3.75	
1320	250	2.23	0.05	16.24	2.656	513	0.41	7.58	-18.7	5	
1325	250	2.23	0.05	16.24	2.628	414	0.34	7.58	-25.3	6.5	
1330	250	2.23	0.05	16.19	2.632	288	0.40	7.58	-25.8	7.75	
1335	250	2.23	0.05	16.16	2.625	265	0.41	7.58	-28.1	8.5	
1340	250	2.23	0.05	16.15	2.624	258	0.41	7.58	-28.6	10	
1345	250	2.23	0.05	16.12	2.620	249	0.41	7.58	-29.4	11.5	
1350	250	2.23	0.05	16.15	2.619	235	0.40	7.58	-30.0	12.75	

Sample ID: GW-11198545-090619-YY-012

Sample Time: 1353

Notes:

MS/MSD sample

- The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.
- The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s = \pi \cdot (r^2) \cdot L$ in mL, where r (r=D/2) and L are in cm. For Imperial units, $V_s = \pi \cdot (r^2) \cdot L \cdot (2.54)^3$, where r and L are in inches
- The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 500 mL/min.
- Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged= V_p/V_s.
- For conductivity, the average value of three readings <1 mS/cm ±0.005 mS/cm or where conductivity >1 mS/cm ±0.01 mS/cm.