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March 23, 2018

Mr. Randolph Bayliss, P.E.
Hydrologist, Districts III and IV
NMOCD Environmental Bureau
1220 S. St. Francis Street
Santa Fe, New Mexico 87505

Mr. Bayliss:

TRC Environmental Corporation (TRC) is providing this report to the New Mexico Oil Conservation Division (NMOCD) on behalf of Baker Hughes, a GE Company (BHGE) to document soil and groundwater investigation activities that were conducted at the former underground field waste tank (FWT) area at the BHGE facility located at 3250 Southside River Road, Farmington, New Mexico (the Site). As documented in a report entitled *6,000 Gallon Underground Acidic Waste Tank and 18,000 Gallon Underground Field Waste Tank Removal Documentation Report* dated June 26, 1998, and submitted to Mr. Mark Ashley of the NMOCD, this tank was permanently removed from service and visibly impact soils were over-excavated during February and March 1998. As discussed in further detail below, elevated total petroleum hydrocarbon (TPH) concentrations were detected in soil at the completion of removal and over-excavation activities. Additional investigation of the FWT area was recommended in the aforementioned report, but there are no records to indicate that additional activities were performed.

Ms. Myna Letlow of BHGE spoke with you on December 5, 2017, regarding historical activities performed at this Site and to determine if records were available at the NMOCD that indicated either regulatory closure was granted after the 1998 FWT removal or records of additional investigations conducted following the 1998 FWT removal were available. Based on review of the site files you provided in your electronic mail correspondence to Ms. Letlow on December 26, 2017, NMOCD files contained no records of further activities performed at the former FWT area.

This report documents additional investigation activities that were performed at the former FWT area in 2017 and 2018. As this Site is currently being considered for purchase, Phase I and II Environmental Site Assessments (ESAs) were performed in 2017 by others on behalf of the prospective buyer, the results of which indicated the absence of residual impacts to soil but the

potential presence of residual impacts to groundwater. BHGE retained TRC to perform additional investigation activities in 2018 to characterize current soil and groundwater conditions and the nature and extent of potential residual contamination at the former FWT area to determine if additional response actions are warranted. TRC performed these investigation activities during the week of February 19, 2018. The site background, results of historical and recent sampling activities, and the results of TRC's investigation activities are discussed below.

SITE BACKGROUND

The Site formerly housed an approximately 18,000-gallon steel underground FWT that was used to contain washout debris and liquids from the adjacent concrete truck wash pad. In February 1998, BJ Services (now BHGE) removed the FWT and the horizontal steel drain line connecting the concrete washout pad to the FWT. The FWT bottom was located approximately 18 feet below ground surface (bgs). Upon removal, the FWT was found to be partially collapsed with holes corroded in the tank walls. BHGE documented soil staining on the tank hold floor and at the north wall of the tank hold. Once the FWT was removed from the ground, the surrounding soil was over-excavated to a depth of approximately 28 feet bgs (10 feet over-excavated) and the excavation extended 5 feet horizontally to the north. In total, seven soil samples from the FWT walls and floor were collected by BHGE during tank removal. Laboratory analyses indicated the presence of chemicals of concern (COCs), but only TPH exceeded the applicable NMOCD remediation action level (RAL) of 100 milligrams per kilogram (mg/kg). The tank removal activities were documented in a report entitled *6,000 Gallon Underground Acidic Waste Tank and 18,000 Gallon Underground Field Waste Tank Removal Documentation Report* dated June 26, 1998, and submitted to Mr. Mark Ashley of the NMOCD. Samples collected during the tank removal activities are shown on Figure 1 and the analytical results are presented in Table 1.

TRC understands this facility is currently being considered for purchase by a third party. Phase I and II Environmental Site Assessments (ESAs) were performed at the Site in 2017 by another consultant (Environmental Resources Management [ERM]) on behalf of the third party. The July 2017 Phase I ESA Report identified the former FWT in the northeast corner of the Site as a Recognized Environmental Condition (REC). ERM subsequently conducted soil sampling during a Limited Phase II ESA in July and August 2017 and limited groundwater sampling during a Supplemental Phase II ESA in October 2017 in the area of the former FWT to identify the current potential absence or presence of residual impacts.

Soil samples were collected from two borings (one sample per boring) installed during the July/August 2017 Limited Phase II ESA. Boring SB-8 was installed in the approximately center of the former FWT location, and boring SB-7 was installed approximately 75 feet west of the former FWT in the presumed downgradient direction. Soil samples were collected at a depth of 29 feet bgs at boring SB-7 and a depth of 27 feet bgs at boring SB-8. Samples were analyzed for



volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), Resource Conservation and Recovery Act (RCRA) total metals (eight metals), and TPH. For purposes of the Phase II ESA, ERM compared the soil results to New Mexico Environmental Department (NMED) soil screening levels (SSLs) and United States Environmental Protection Agency (EPA) Regional Screening Levels (RSLs). Although various COCs were detected, none of the concentrations exceeded either NMED or USEPA standards. Additionally, TRC compared the soil analytical results from the 2017 Phase II ESA to NMOCD RALs, and there were no COC exceedances. The sample collected from SB-8 confirmed that the TPH concentration of 2,600 mg/kg at the bottom of the over-excavated tank hold in 1998, as represented by sample BTM-TANK HOLE-FWT at 28 feet bgs, had attenuated to below the NMOCD RAL.

One groundwater sample was collected directly from a soil boring (SB-7S) that was installed west of the FWT (presumed downgradient direction) during the October 2017 Phase II ESA. The groundwater sample was analyzed for VOCs, SVOCs, RCRA metals, and TPH. The analytical results revealed detections of benzene, naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene above the NMWQCC standards. The soil and groundwater sampling results for the 2017 Phase II ESA activities are also provided in Table 1. The location of the Phase II ESA borings are shown on Figure 2.

Based on the results of the historical tank removal activities and recent Phase I and II ESA activities, BHGE retained TRC to assess the nature and extent of current soil and groundwater conditions at the former FWT and to confirm the findings of the Phase II ESA. TRC installed four permanent monitoring wells, FWT-1 through FWT-4, to facilitate collection of soil and groundwater samples. Well FWT-1 was installed at the former FWT to assess conditions at the source area and to confirm current COC concentrations where a sample collected from the west sidewall of the tank hold excavation exceeded the TPH RAL in 1998 (sample #7). Well FWT-2 was installed to the north of the former FWT to confirm current COC concentrations where a sample collected from the north sidewall of the former FWT excavation exceeded the TPH RAL in 1998 (sample NORTHWALL-FWT). Well FWT-3 was installed to assess current conditions to the south of the former FWT. Well FWT-4 was installed in the presumed downgradient direction from the former FWT and to confirm conditions indicated in the October 2017 Phase II ESA. The locations of wells FWT-1 through FWT-4 are shown on Figure 2. The field activities, sampling results, and conclusions of the investigation are described below.

FIELD INVESTIGATION

Prior to mobilizing, TRC prepared a site-specific Health and Safety Plan (HASP), contacted New Mexico 811 One Call for utility locating services, and obtained the necessary drilling permit from the New Mexico Office of State Engineer (NMOSE). TRC retained the services of Enviro-Drill



(EDI), a New Mexico-licensed well driller, to install the monitoring wells. TRC mobilized to the Site on Monday February 19, 2018.

Well Installation and Sampling

Well installation and sampling activities were conducted from February 19 to 22, 2018. Four wells (FWT-1, FWT-2, FWT-3, and FWT-4) were installed under permit File Number SJ-4277 POD1-POD4. EDI advanced the well bore holes using hollow-stem auger (HSA) drilling methods. The bore holes were continuously sampled using split-spoon samplers advanced by automatic hammer to recover relatively undisturbed samples, where feasible based on lithologic conditions. Boring lithology and field screening of recovered soils with a properly calibrated photoionization detector (PID) were logged in the field by TRC's on-site geologist. Bore hole total depths ranged from 45 feet bgs to 50 feet bgs and were adjusted in the field based on the lithology and where the top of the saturated zone was observed at each boring. Figure 2 shows the monitoring well locations.

Five soil samples were collected from the four borings as follows:

- Soil samples were collected from wells FWT-1 and FWT-2 at 14 feet bgs to confirm current concentrations at the depth where TPH exceeded the NMOCD RAL at the completion of the former FWT removal in 1998 (samples #7 and NORTHWALL-FWT, respectively).
- A second sample was collected from well FWT-1 at a depth 34 to 36 feet bgs, which was the interval with the highest field evidence of contamination (elevated PID reading and odor).
- A sample was collected from well FWT-3 at a depth of 33 to 34 feet bgs, which was the bottom of unconsolidated soils encountered immediately above a shale unit (i.e., zone of lithology change in the absence of saturation and field evidence of contamination).
- A sample was collected from well FWT-4 from the capillary fringe encountered at a depth of 27.5 to 29 feet bgs immediately above anticipated groundwater, as there was no field evidence of contamination in this boring.

The four monitoring wells were installed at depths ranging from 40 ft bgs to 50 ft bgs. Wells were constructed from Schedule 40 polyvinyl chloride (PVC) well casing, and 0.010 inch slotted Schedule 40 PVC well screen. Monitoring well depths and screened intervals were adjusted in the field based on the lithology and anticipated water level encountered at each boring, so that the screened interval intersected the top of the saturated zone, if present. The annulus for each well was filled with 10/20 grade silica filter sand to at least two feet above the screened interval, hydrated bentonite chips were above the sand pack, and Portland cement/bentonite grout was installed via tremie pipe from the bentonite seal to the surface. Wells were completed with a



concrete seal and flush-mount traffic-rated manhole. Boring logs and well construction details are included in Attachment A.

Groundwater was not encountered in wells FWT-1 and FWT-3, as discussed further below in the *Site Geology* section. Groundwater was present in wells FWT-2 and FWT-4, which were developed using pump and surge methods as follows:

- Well FWT-2 was purged dry three times and had achieved stable turbidity.
- Well FWT-4 was purged dry twice and had achieved stable turbidity.

Each well was surveyed for horizontal geoposition (longitude and latitude), top of casing elevation, and ground surface elevation. Casing and ground surface elevations were surveyed from the northernmost point on the casing and the nearest ground level immediately north of a well using the North American Vertical Datum of 1988 (NAVD 88). Horizontal geoposition coordinates were collected in the New Mexico State Plane West datum.

Groundwater samples were collected from wells FWT-2 and FWT-4 on February 22, 2018. Sampling was conducted using EPA low-flow low-stress methods. A Proactive SS Monsoon Pro Series stainless steel pump was used to purge groundwater and physical parameters for stability were monitored using a YSI 556 with flow-thru cell. The YSI was calibrated prior to use each day.

All non-dedicated, non-disposable sampling equipment was decontaminated by removing any loose solids, scrubbing with a water/Alconox solution, and double rinsing with distilled water prior to the first use and between subsequent uses.

Quality control and quality assurance (QA/QC) samples were collected as follows: one soil matrix duplicate for all analytes, one water matrix duplicate sample for all analytes, one equipment blank collected from non-dedicated soil sampling equipment for all analytes, one equipment blank collected from non-dedicated groundwater sampling equipment for all analytes. Additionally, a trip blank in each cooler was analyzed for VOCs only.

Waste Management

Investigation derived waste (IDW), which included ten properly labeled 55-gallon drums of soil cuttings and two 55-gallon drums of purged groundwater and decontamination water, were stored onsite. Determination of disposal options is pending.

SITE GEOLOGY

Based on the United States Geological Survey (USGS) 1990 publication entitled *Geologic Map Emphasizing the Surficial Deposits of the Farmington 30' x 60' Quadrangle, New Mexico and Colorado* authored by A.W. Ward, area soils are weakly developed quaternary soils, underlain by Holocene channel and floodplain alluvium from approximately 25 to 40 feet bgs, underlain by the Kirtland Shale, Upper Shale Member. Other than the minor alluvium deposits, the site is located on an outcrop of the Kirtland Shale. This formation has a thickness of approximately 1,300 feet beneath the site according to the 1990 USGS document entitled *Hydrogeology of the Kirtland Shale and Fruitland Formation in the San Juan Structural Basin, New Mexico, Colorado, Arizona and Utah, Hydrologic Atlas 720-C* authored by Kernodle, Thorn, Levings, Craig, and Dam.

The geology of the Site consists of a generally poorly-graded, very fine to fine, silty sand to a depth of approximately 25 feet bgs, underlain by interbeds of poorly-graded sandy gravel and gravelly sand, and clayey or silty sand. From approximately 25 feet bgs to approximately 40 feet bgs, cobbles of well-rounded shale and quartzite were present and negatively impacted split-spoon recovery. From approximately 40 feet bgs to the total depth explored, a dry blue-green claystone/shale was present, which appears to be part of the Kirtland Shale formation.

Wells FWT-1 and FWT-3 encountered the dry shale unit at approximately 35 to 38 feet bgs, with no evidence of saturation in the overlying unconsolidated soils. The borings were allowed to stand open for several hours to assess the possible presence of groundwater. No groundwater was observed. The wells were completed at depths of 45 feet bgs and 40 feet bgs, respectively, and were screened across the interface of the unconsolidated soils and shale, similar to wells FWT-2 and FWT-4. Wells FWT-1 and FWT-3 did not produce groundwater. The wells were gauged again approximately three weeks later on March 16, 2018; no groundwater was present in wells FWT-1 and FWT-3. Based on the USGS publications discussed above, the shale appears to be part of the Kirtland Shale formation and acts as a local lower confining unit.

Following installation and development, static groundwater was measured at 38.04 feet below top of casing (btoc) at well FWT-2 and at 35.54 feet btoc at well FWT-4, with corresponding groundwater elevations of 5,350.88 feet above mean sea level (amsl) and 5,350.11 feet amsl, respectively. Based on ground surface elevation and the depth of the top of the shale encountered during drilling, the top of the shale unit has an elevation of 5,350.65 feet amsl at well FWT-1 and 5,353.81 amsl at well FWT-3. Therefore, the top of the shale unit encountered at wells FWT-1 and FWT-3 is at elevations near or higher than the static groundwater elevations in the area. It appears that groundwater is present in the unconsolidated soils in the lower portion where the interface with the shale unit lies below the static groundwater elevation. Elevation data is summarized in the table below.

Well ID	Ground Surface Elevation (feet amsl)	Depth to Top of Shale (feet bgs)	Top of Shale Elevation (feet amsl)	Top of Casing Elevation (feet amsl)	Depth to Groundwater (feet btoc)	Groundwater Elevation (feet amsl)
FWT-1	5,389.15	38.5	5,350.65	5,389.17	NM	--
FWT-2	5,389.46	41.5	5,348.06	5,388.92	38.04	5,350.88
FWT-3	5,388.81	35.0	5,353.81	5,388.69	NM	--
FWT-4	5,385.65	42.0	5,343.65	5,385.65	35.54	5,350.11

amsl – above mean sea level

bgs – below ground surface

btoc – below top of casing

NM – Not measured

LABORATORY ANALYTICAL RESULTS

Soil and groundwater samples were analyzed by ESC Lab Sciences in Mount Juliet, Tennessee. All samples were submitted to the lab in good condition, properly preserved, and analyzed within applicable holding times. Soil and groundwater samples were analyzed for VOCs by EPA Method 8260B, SVOCs by EPA Method 8270C, TPH by EPA Method 8015/8015D, and chlorides by EPA Method 9056A. Groundwater samples were also for total dissolved solids (TDS) by EPA Method 2540C. A summary of soil analytical results is presented in Table 2, and a summary of groundwater analytical results is presented in Table 3. Only COCs that were detected during the 2017 Phase II ESAs or for this report are shown on the tables. The full laboratory reports are provided in Attachment B.

Soil sample analytical results were compared to NMOCD RALs for sites with a depth to groundwater less than 50 feet bgs (based on the groundwater encountered in FWT-2 and FWT-4), the most stringent NMOCD soil standards. There was only one COC detected in soil above its NMOCD RAL. TPH was detected at a concentration of 1,335 mg/kg in the sample collected from source area well FWT-1 at a depth of 34 to 36 feet bgs, which exceeded the TPH RAL of 100 mg/kg. Other VOCs and SVOCs were detected in this sample, but none of the concentrations exceeded NMOCD RALs. This sample was collected from the unconsolidated soils overlying the shale unit. PID readings from the underlying shale unit indicated a reading of 12.1 parts per million (ppm), providing vertical delineation of the TPH exceedance at the source area. No other soil sample exhibited COC concentrations above NMOCD RALs. Additionally, the samples collected at locations and depth intervals to confirm current concentrations of former tank removal samples collected in 1998 demonstrated that TPH has attenuated to below the NMOCD RAL (e.g., FWT-1 at 14 to 16 feet bgs for tank removal sample #7, and FWT-2 for tank removal sample NORTHWALL-FWT). Based on these results, residual contamination at the former FWT area

was present only at depth and was horizontally and vertically delineated. Soil analytical results are summarized in Table 2.

Groundwater sample results for samples collected from FWT-2 and FWT-4 were compared to NMWQCC standards. Low concentrations of TPH were detected in the groundwater samples, but there are no NMWQCC standards for TPH. There were few detected COCs, and none of the concentrations exceeded NMWQCC standards. The benzene and naphthalene plus monomethylnaphthalenes exceedances in groundwater identified in the 2017 Phase II ESA were not confirmed. Although residual TPH was present in soil above the NMOCD RAL in the source area, the extent is limited and appears to not be in direct connection to groundwater, as there is no exceedance in groundwater of the NMWQCC standards.

CONCLUSIONS

The following conclusions are based on the results of the soil and groundwater sampling performed to assess soil and groundwater current conditions at the former FWT area and comparison to historical tank removal and 2017 Phase II ESA results:

- Historical TPH concentrations detected at the limits of the excavation at the completion of the 1998 tank removal activities were demonstrated to have attenuated to below the NMOCD RAL. Decreasing concentrations over time are a primary line of evidence that natural attenuation is occurring.
- Soil sampling performed in 2017 and 2018 indicated that there are no NMOCD RAL exceedances, with the exception of one TPH exceedance at a depth of 34 to 36 feet bgs at well FWT-1 (source area). No other exceedances were detected in soil samples. Analytical results for soil demonstrated horizontal delineation of contamination, and field screening demonstrated vertical delineation of contamination in the underlying confining unit (shale) at a depth of approximately 40 feet bgs. Therefore, the areal extent of residual TPH in soil above the NMOCD RAL is limited.
- Groundwater was present in only two monitoring wells, FWT-2 and FWT-4. Based on site data, groundwater is likely perched in the lower portion of the unconsolidated materials on top of the shale unit, where the elevation of the top of the shale is lower than static groundwater elevations. For wells FWT-1 and FWT-3, the elevation of the top of the shale is higher than static groundwater elevations, and groundwater was absent from these wells, as verified by a second gauging event performed three weeks after well installation.

- Analytical results for groundwater samples collected from wells FWT-2 and FWT-4 indicate that no COCs were detected above NMWQCC standards. Although residual TPH was present in soil above the NMOCD RAL in the source area, the extent is limited and is not a contributing source to groundwater in exceedance of NMWQCC standards.

The results of this investigation indicate that any remaining impacted soil is limited in extent to the immediate former FWT area and is not contributing to COC concentrations in groundwater above NMWQCC standards. BHGE requests that NMOCD grant a no further action determination for the Site and concurrence that the monitoring wells can be properly plugged and abandoned. Due to the pending sale of the property, BHGE respectfully requests an expedited response.

If you have any questions regarding this report or would like to discuss the findings, please feel free to contact Ms. Myna Letlow of BHGE at (713) 879-1135 or myna.letlow@bhge.com, Ms. Shannon Hoover of TRC at (512) 684-3127 or shoover@trcsolutions.com, or Mr. Josh Ward of TRC at (512) 684-3191 or jward@trcsolutions.com.

Sincerely,



Josh Ward, P.G.
Associate Project Manager/Geologist



Shannon Hoover, P.G.
Senior Project Manager/Senior Geologist

cc: Leo Dielmann, P.E., TRC Austin

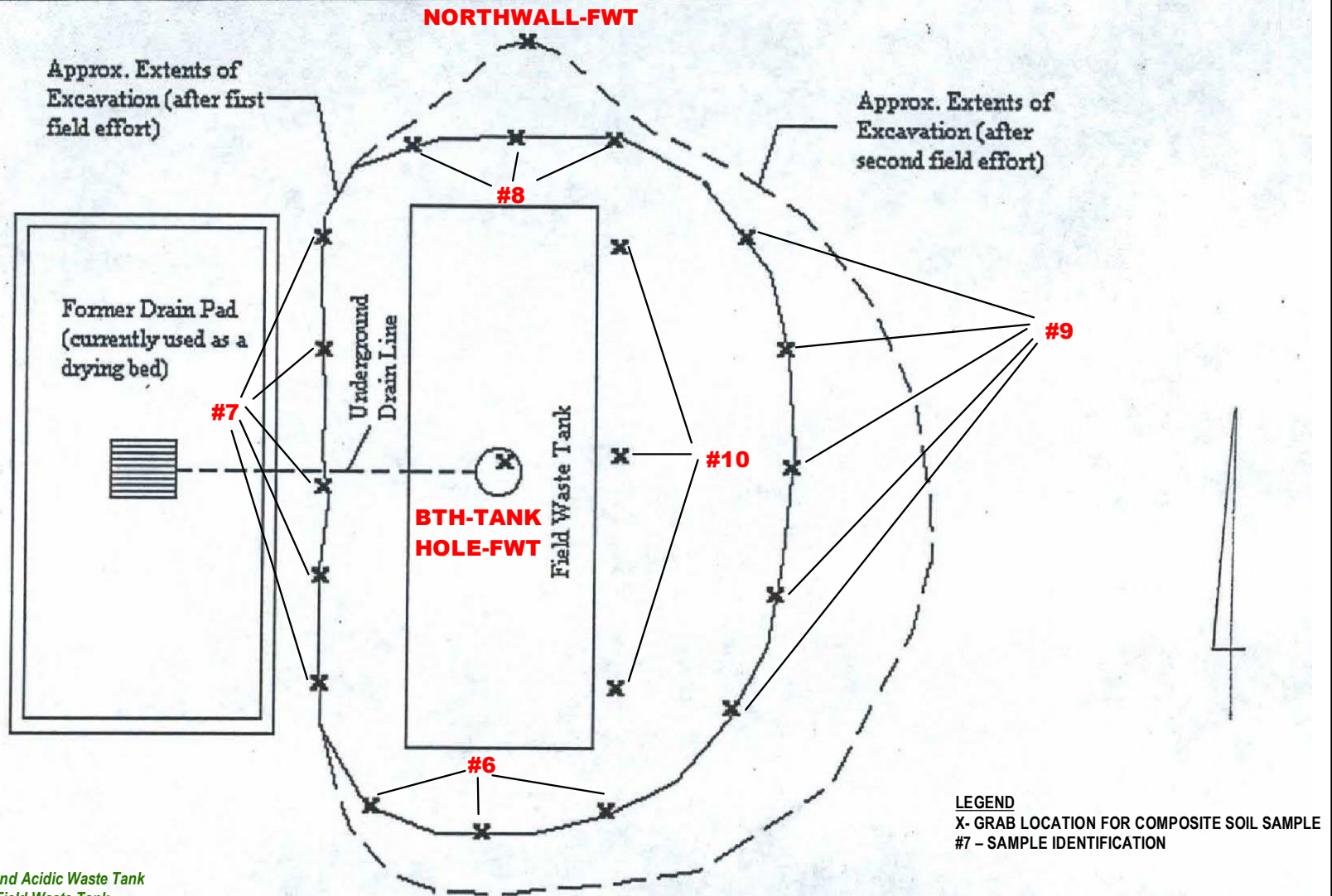
Attachments:

Figure 1 Soil Sample Locations – Field Waste Tank Removal Excavation (1998)
Figure 2 2018 Field Waste Tank Investigation – Monitoring Well and Soil Boring Locations

Table 1 Historical Soil and Groundwater Analytical Results – Former Field Waste Tank
Table 2 Soil Sample Analytical Results
Table 3 Groundwater Sample Analytical Results

Attachment A Well Construction and Boring Logs
Attachment B Laboratory Reports

FIGURES



Source: "6,000 Gallon Underground Acidic Waste Tank and 18,000 Gallon Underground Field Waste Tank Removal Documentation Report" Report dated June 26, 1998; prepared by BJ Services Company, U.S.A.

Note: Figure extracted from sourced report for illustration purposes. Samples identified based on locations described in report.



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TRC - GIS

PROJECT:

**BHGE FARMINGTON FACILITY
3250 SOUTHSIDE RIVER ROAD
FARMINGTON, NEW MEXICO**

TITLE:

**SOIL SAMPLE LOCATIONS
FIELD WASTE TANK REMOVAL EXCAVATION (1998)**

DRAWN BY:

REEVES

CHECKED BY:

PLANA

APPROVED BY:

HOOVER

DATE:

MARCH 2018

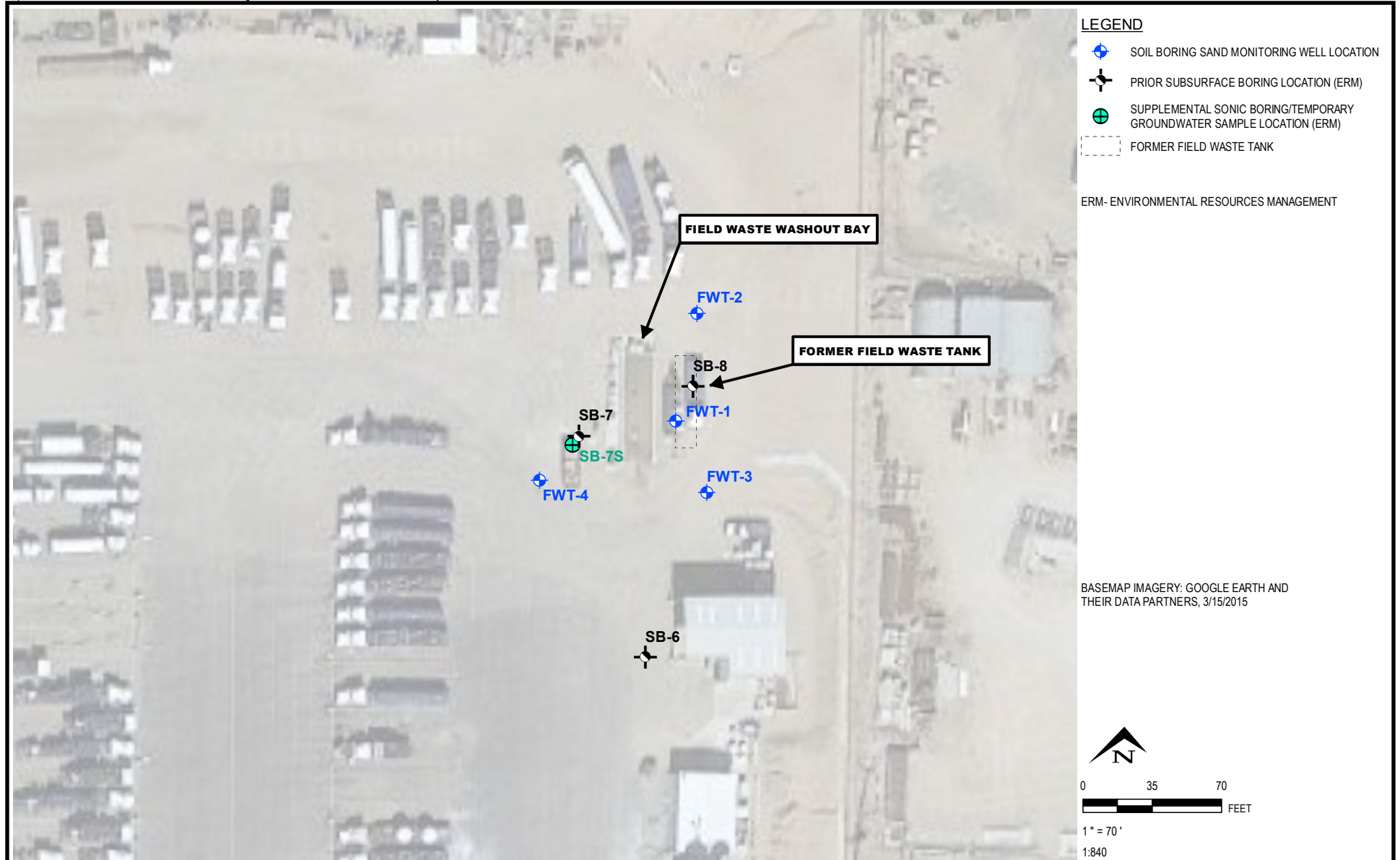
PROJ. NO.:

292348.0000.0000

FILE:

292348_1.mxd

FIGURE 1



 505 East Huntland Drive Suite #250 Austin, TX 78752 Phone: 512.329.6080 TRC - GIS	PROJECT:	BHGE FARMINGTON FACILITY 3250 SOUTHSIDE RIVER ROAD FARMINGTON, NEW MEXICO	DRAWN BY: MREEVES
	TITLE:	2018 FIELD WASTE TANK INVESTIGATION MONITORING WELL AND SOIL BORING LOCATIONS	CHECKED BY: ZBOUTAGHOUE APPROVED BY: JWARD DATE: MARCH 2018 PROJ. NO.: 292348 FILE: 292348_2.mxd
			FIGURE 2

TABLES

Table 1 - Historical Soil and Groundwater Analytical Results - Former Field Waste Tank Area
Former Field Waste Tank Investigation
BHGE Farmington Facility
3250 Southside River Road, Farmington, New Mexico

Boring Location/Sample ID														
Soil Results (mg/kg)													Groundwater Results (mg/L)	
1998 FWT Removal											2017 Phase II ESA		2017 Phase II ESA	
Analyte Group	Constituent	NMOCD Soil Standard (mg/kg)		WQCC Groundwater Standard (mg/L)	#6	#7	#8	#9	#10	BTM-TANK HOLE-FWT	NORTHWALL-FWT	SB7-SL-29'	SB8-SL-27'	SB7S-GW-1017
	Estimated Sample Depth (ft bgs)				14	14	14	14	14	28	14	29	27	38-41
RCRA Metals (6010 or 6020/7471)	Arsenic	--	--	0.1	2.6	2.8	2.3	2.5	2.6	1.2	NA	2.6	2.23	0.000548 J
	Barium	--	--	1.0	178	134	173	132	220	159	NA	258	195	0.0659
	Cadmium	--	--	0.01	<0.54	<0.55	<0.55	<0.54	<0.57	<0.55	NA	0.130 J	0.0913 J	< 0.000160
	Chromium	--	--	0.05	6.5	5.7	4.6	5.8	4.4	3.0	NA	5.51	6.79	< 0.000540
	Lead	--	--	0.05	7.1	4.6	3.9	5.2	4.5	2.8	NA	5.23	4.6	< 0.000240
	Mercury	--	--	0.002	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	NA	< 0.00280	< 0.00280	< 0.0000490
	Selenium	--	--	0.05	<0.54	<0.55	<0.55	<0.54	<0.57	<0.55	NA	0.677	0.638	0.00103 J
Volatile Organic Compounds (8260)	Acetone	--	--	--	NA	NA	NA	NA	NA	0.78	NA	< 0.0100	< 0.0100	0.403
	Benzene	10	50	0.01	< 0.0054	<0.055	<0.0091	< 0.0054	<0.71	<0.027	<0.0011	0.00223	0.0026	0.0236
	Toluene	--		0.75	< 0.0054	0.54	< 0.0091	< 0.0054	0.92	0.35	<0.0011	0.00178 J	0.0020 J	< 0.00412
	Ethylbenzene	--		0.75	< 0.0054	0.44	< 0.0091	< 0.0054	1.6	0.31	<0.0011	< 0.000297	< 0.000297	0.0971
	Xylenes (Total) *	--		0.62	0.0119	3.48	0.055	< 0.0054	14	8.2 D	<0.0011	0.00106 J	0.00113 J	0.123
	sec-Butylbenzene	--	--	--	< 0.0054	0.1	< 0.0091	< 0.0054	0.86	NA	NA	< 0.000201	< 0.000201	0.0181
	Methyl Tert-Butyl Ether	--	--	--	NA	NA	NA	NA	NA	NA	NA	< 0.000212	< 0.000212	< 0.00367
	Isopropylbenzene	--	--	--	< 0.0054	0.11	< 0.0091	< 0.0054	< 0.71	NA	NA	< 0.000243	< 0.000243	0.0336
	p-Isopropyltoluene	--	--	--	< 0.0054	< 0.055	< 0.0091	< 0.0054	3.0	NA	NA	< 0.000204	< 0.000204	0.0146
	Naphthalene	--	--	0.03	NA	NA	NA	NA	NA	NA	NA	< 0.00100	< 0.00100	0.199
	1-Methylnapthalene	--	--		NA	NA	NA	NA	NA	NA	NA	<0.000827	<0.000827	0.199
	2-Methylnapthalene	--	--		NA	NA	NA	NA	NA	NA	NA	< 0.000833	< 0.000833	0.123
	n-Propylbenzene	--	--	--	< 0.0054	0.21	< 0.0091	< 0.0054	1.3	NA	NA	< 0.000206	< 0.000206	0.0688
	1,2,4-Trimethylbenzene	--	--	--	0.02	1.6	0.045	< 0.0054	11.0	NA	NA	0.00233 J	0.000246 J	0.469
	1,3,5-Trimethylbenzene	--	--	--	< 0.0054	< 0.055	< 0.0091	< 0.0054	4.6	NA	NA	< 0.000266	< 0.000266	0.143
Semi-Volatile Organic Compounds (8270)	o-Xylene	--	--	--	0.0045	0.88	0.032	< 0.0027	4.0	NA	NA	NA	NA	NA
	m-Xylene, p-Xylene	--	--	--	0.0074	2.6	0.023	< 0.0027	10.0	NA	NA	NA	NA	NA
	Acenaphthene	--	--	--	< 0.36	< 3.6	< 3.6	< 0.36	< 3.8	0.65	NA	< 0.00642	< 0.00642	0.0136
	Anthracene	--	--	--	< 0.36	< 3.6	< 3.6	< 0.36	< 3.8	0.41	NA	< 0.00632	< 0.00632	0.00258 J
	Fluoranthene	--	--	--	< 0.36	< 3.6	< 3.6	< 0.36	< 3.8	0.41	NA	< 0.00496	< 0.00496	0.00210 J
	Fluorene	--	--	--	< 0.36	< 3.6	< 3.6	< 0.36	4.1	1.4	NA	< 0.00682	< 0.00682	0.0224
	Napthalene	--	--	0.03	<0.36	5.4	< 3.6	< 0.36	11	5.8 D	NA	< 0.00889	< 0.00889	0.0747
	2-Methylnapthalene	--	--		<0.36	20	4.6	< 0.36	44	17 D	NA	NA	NA	NA
	bis (2-Ethylexyl) phthalate	--	--		1.1	< 3.6	< 3.6	1.5 B	< 3.8	< 0.36	NA	< 0.0120	< 0.0120	< 0.00354
	Di-n-octyl phthalate	--	--	--	< 0.36	< 3.6	< 3.6	0.38 B	< 3.8	< 0.36	NA	< 0.00907	< 0.00907	< 0.00139
TPH (8015)	TPH-GRO	--	100	--	< 0.11	160	0.13	< 0.11	170	NA	NA	< 0.0217	< 0.0217	7.86
	TPH-DRO	--		--	87	190	860	20	< 190	2,600 E	190	< 0.769	< 0.769	150

TPH = Total Petroleum Hydrocarbons

NMOCD = New Mexico Oil Conservation Division

WQCC = Water Quality Control Commission

mg/kg = milligrams per kilogram

mg/L = milligrams per liter

ft bgs = feet below ground surface

-- = No cleanup standard established

NA = Not Analyzed

* = Value represents sum of m-, o-, and p-xylenes for comparison to NMOCD soil cleanup standard, if total xylenes not reported.

B = Constituent detected in laboratory method blank; likely represents laboratory contamination.

E = Estimated concentration; result exceeds calibration range.

D = Result obtained from analysis of a dilution.

J = Result is estimated; concentration detected greater than the Method Detection Limit but less than the Reporting Limit.

Notes:

Bold value indicates constituent detected.

Bold and shaded value indicates constituent exceeds NMOCD soil or WQCC groundwater standard.

Tank pull samples #8 and #10 were over-excavated; results are shown as faded text and shading. Samples NORTHWALL-FWT and BTM-TANK HOLE-FWT represent post-excavation confirmation samples, respectively.

Sample SB-8 at 27 ft bgs confirms current concentrations detected at BTM TANK HOLE-FWT sample in 1998. BTM TANK HOLE-FWT results shown as faded text and shading.

Analytes in this table were only compared to NMOCD Soil Cleanup Standards and WQCC Groundwater Human Health Standards. Notations of exceedances of New Mexico Environment Department (NMED) or Environmental Protection

Agency (EPA) standards in the ERM Phase II ESA Reports are not represented on this table.

Table 2 - Soil Sample Analytical Results
Former Field Waste Tank Investigation
BHGE Farmington Facility
3250 Southside River Road, Farmington, New Mexico

Analyte	NMOCD RAL	Units	FWT-1 14.0 - 16.0	FWT-1 34.0 - 36.0	FWT-2 14.0 - 15.0	FWT-3 33.0 - 34.0	FWT-4 27.5 - 29.0	FWT-4 DUP
			02/21/18	02/21/18	02/19/18	02/21/18	02/19/18	02/19/18
Acetone	--	mg/kg	<0.0109	<0.265	0.0207 J	<0.0112	0.0160 J	0.0187 J
Benzene	10 ¹ (50 ²)	mg/kg	<0.000294	<0.00714	0.00142	<0.000301	0.00323	0.00321
n-butylbenzene	--	mg/kg	<0.000281	0.207	<0.000268	<0.000288	<0.000268	<0.000269
sec-Butylbenzene	--	mg/kg	<0.000219	0.139	<0.000232	<0.000224	<0.000209	<0.000210
tert-Butylbenzene	--	mg/kg	<0.000224	0.00630 J	<0.000238	<0.000230	<0.000214	<0.000215
Ethylbenzene	50 ²	mg/kg	<0.000323	0.334	<0.000343	<0.000331	0.000366 J	0.000354 J
Isopropylbenzene	--	mg/kg	<0.000264	0.139	<0.000280	<0.000271	<0.000253	<0.000253
p-Isopropyltoluene	--	mg/kg	<0.000222	0.138	<0.000235	<0.000228	<0.000212	<0.000213
Methylene Chloride	--	mg/kg	<0.00109	<0.0265	<0.00115	<0.00112	0.00117 B J	<0.00104
Naphthalene	--	mg/kg	<0.00109	1.51	<0.00115	<0.00112	<0.00104	<0.00104
n-Propylbenzene	--	mg/kg	<0.000224	0.336	<0.000238	<0.000230	<0.000214	<0.000215
Toluene	50 ²	mg/kg	<0.000472	0.0320 J	0.00151 J	<0.000484	0.00297 J	0.00288 J
1,2,4-Trimethylbenzene	--	mg/kg	<0.000230	2.15	0.000375 J	<0.000235	0.000569 J	0.000507 J
1,2,3-Trimethylbenzene	--	mg/kg	<0.000312	0.770	<0.000331	<0.000320	<0.000298	<0.000299
1,3,5-Trimethylbenzene	--	mg/kg	<0.000289	0.660	<0.000307	<0.000297	0.000311 J	0.000278 J
Xylenes, Total	50 ²	mg/kg	<0.000760	2.13	0.00115 J	<0.000778	0.00201 J	0.00209 J
Acenaphthene	--	mg/kg	<0.00699	0.348	<0.00740	<0.00716	<0.00668	<0.00669
Anthracene	--	mg/kg	<0.00688	0.0973	<0.00729	<0.00705	<0.00657	<0.00659
Fluoranthene	--	mg/kg	<0.00540	0.0735	<0.00572	<0.00553	<0.00516	<0.00517
Fluorene	--	mg/kg	<0.00742	0.463	<0.00787	<0.00761	<0.00709	<0.00711
Naphthalene (by 8270C)	--	mg/kg	<0.00967	3.16	<0.0103	<0.00992	<0.00925	<0.00927
Phenanthrene	--	mg/kg	<0.00575	2.00	<0.00609	<0.00589	<0.00549	<0.00551
Pyrene	--	mg/kg	<0.0134	0.136	<0.0142	<0.0137	<0.0128	<0.0128
TPH Low Fraction	--	mg/kg	<0.0236	75.1	0.0832 J	<0.0242	0.0700 J	0.0712 J
Diesel Range (C10 - C28)	--	mg/kg	10.7	1040	<1.86	16.2	<1.67	<1.68
Oil Range (C28 - C40)	--	mg/kg	6.36	220	<0.316	0.673 J	<0.285	<0.286
Total TPH	100 ³	mg/kg	17.1	1,335	0.0832 J	16.87	0.0700 J	0.0712 J
Chlorides	--	mg/kg	117	264	79.5	78.7	161	103

Notes:

NMOCD RAL - New Mexico Oil Conservation District (NMOCD) Remedial Action Level (RAL) for sites with a depth to groundwater less than 50 feet.

DUP - Duplicate sample

mg/kg - milligrams per kilogram

-- No NMOCD RAL exists for this analyte.

1 - The NMOCD RAL for benzene is the lower of 10 mg/kg for benzene, or of 50 mg/kg as the sum of all BTEX component concentrations.

2 - the NMOCD RAL of 50 mg/kg for BTEX is the sum of benzene, toluene, ethylbenzene, and xylenes concentrations.

3 - the NMOCD RAL for Total Petroleum Hydrocarbons (TPH) of 100 mg/kg is the sum of all TPH fractions, including gasoline, diesel, and oil range hydrocarbons.

Results in bold were detected above the method quantitation limit (MQL).

J - Analyte detected below the MQL.

B - Reported analyte found in associated blank.

Bold and shaded cells shaded exceed the NM OCD RAL.

Only chemicals of concern (COCs) detected during TRC's investigation are shown in this table.

Table 3 - Groundwater Sample Analytical Results
Field Waste Tank Investigation
BHGE Farmington Facility
3250 Southside River Road, Farmington, New Mexico

Analyte	Applicable NMWQCC Standard	Units	FWT-2	FWT-2 DUP	FWT-4
Date Sampled			02/22/18	02/22/18	02/22/18
Acetone	--	mg/L	<0.0100	<0.0100	0.0165 J
Benzene	0.01	mg/L	<0.000331	<0.000331	<0.000331
Di-isopropyl ether	--	mg/L	0.000668 J	0.000663 J	<0.000320
Naphthalene (by 8260B)	0.03¹	mg/L	<0.00100	<0.00100	<0.00100
Toluene	0.75	mg/L	<0.000412	<0.000412	0.000424 J
1,2,4-Trimethylbenzene	--	mg/L	<0.000373	<0.000373	<0.000373
1,3,5-Trimethylbenzene	--	mg/L	<0.000387	<0.000387	<0.000387
Di-n-butyl phthalate	--	mg/L	0.000686 J	0.000703 J	0.000823 J
1-Methylnaphthalene	0.03¹	mg/L	<0.0000470	<0.0000470	0.000137 J
2-Methylnaphthalene	0.03¹	mg/L	<0.000311	<0.000311	<0.000311
TPH Low Fraction	--	mg/L	<0.0314	<0.0314	<0.0314
TPH - Diesel Range (C10 - C28)	--	mg/L	0.152	0.161	0.543
TPH - Oil Range (C28 - C40)	--	mg/L	0.0177 J	<0.0118	0.103
Chloride	--	mg/L	138	139	242
Total Dissolved Solids (TDS)	--	mg/L	2,260	2,440	2,760

Notes:

NMWQCC - New Mexico Water Quality Control Commission

DUP - Duplicate sample

-- No NMWQCC standard exists for this analyte.

mg/L - milligrams per liter

J - Analyte detected below the MQL.

Results in bold were detected above the method quantitation limit (MQL).

1 - Includes all naphthalene and monomethylnaphthalenes.

Only chemicals of concern (COCs) detected during TRC's investigation or with NMWQCC exceedances during ERM's investigation are shown in this table.

Applicable NMWQCC Standard - NMWQCC Standard for Ground Water with <10,000 mg/l TDS.

ATTACHMENT A
Well Construction and Boring Logs



BORING LOG and WELL CONSTRUCTION

FWT-1

Client: Baker Hughes, a GE Company		TRC Project #: 292348.0000.0000
Site: Farmington Facility		Start Date: 2/21/2018
Address: 3250 Southside River Rd, Farmington, New Mexico		Finish Date: 2/22/2018
Project: Site Investigation		Permit #: SJ-4277 POD1-POD4
Drilling Company: Enviro-Drill, Inc.	Drilling Crew: John Aguirre and Crew	TRC Site Rep.: Z. Boutaghou
Drilling Method: John Aguirre and Crew		TRC Reviewer: S. Hoover
Boring Diameter (in): 8-inch outer diameter Boring Depth (ft bgs): 45.0		X-Y Coord. System: US State Plane 1983
Sampling Method: Split spoon		Northing (ft): 2085010.565
Blow Count Method: Not applicable		Easting (ft): 2625670.573
Field Screening Parameter: Volatile Organic Compounds		Elevation Datum: NAD 1983 (Conus)
Meter: MiniRAE 3000	Units: ppm	Ground Elevation (ft): 5389.145
Well Depth (ft bgs): 44.67	Well Depth (ft toc): 44.57	Well Elevation (ft): 5389.171
Casing Length (ft): 29.57	Screen Length (ft): 15.0	Well Measuring Point: TOC
Surface Completion: Flush-mount manhole and concrete pad		Depth to Water (ft toc): Dry
Well Development: Not applicable		Date/Time: 2/23/2018 0830

Sample

Depth (ft)

Interval

Recovery

Analytical

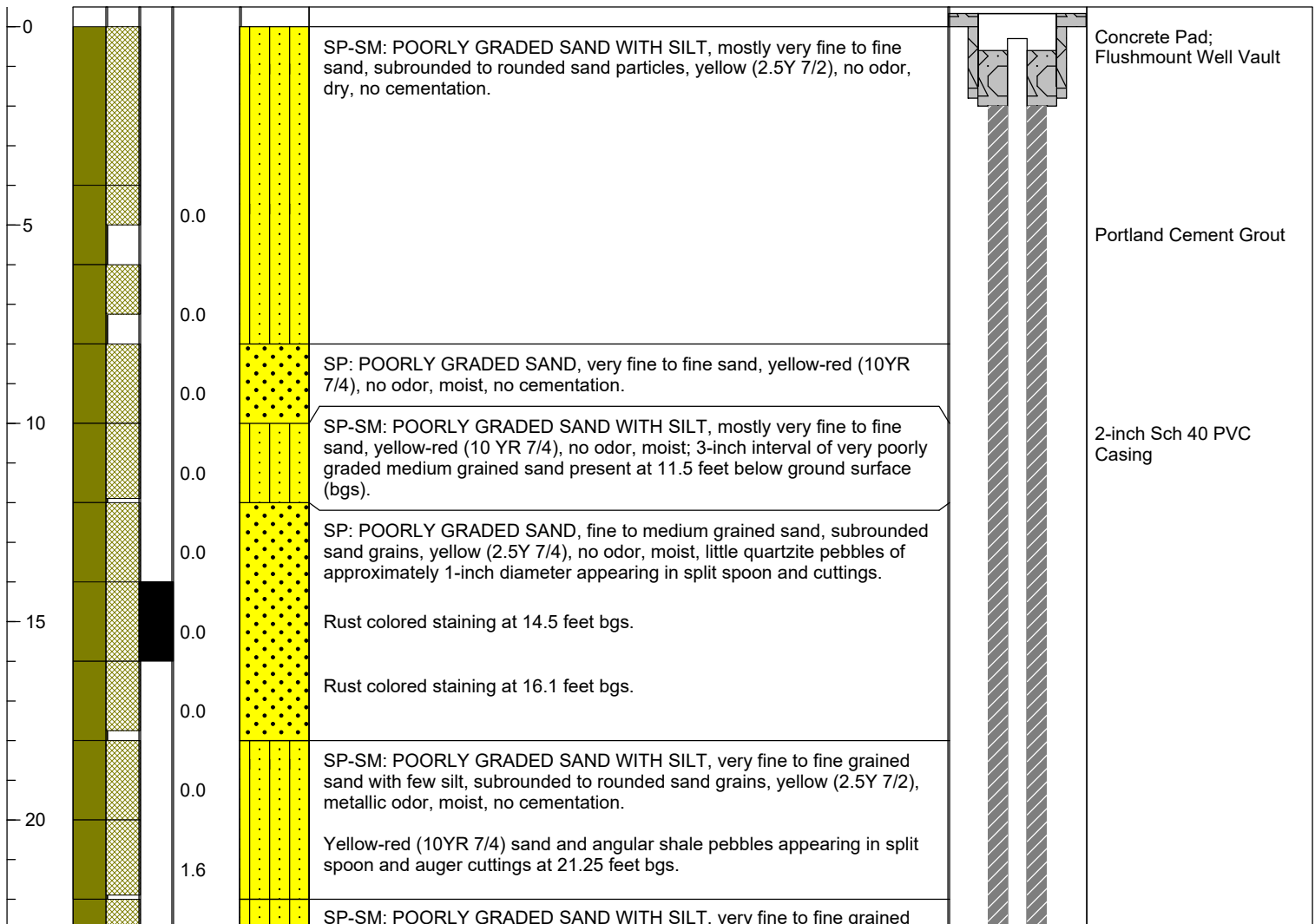
Field

Screening

Lithology

Lithologic Description

Well Construction Diagram





BORING LOG and WELL CONSTRUCTION

FWT-1

Client: Baker Hughes, a GE Company

Site: Farmington Facility

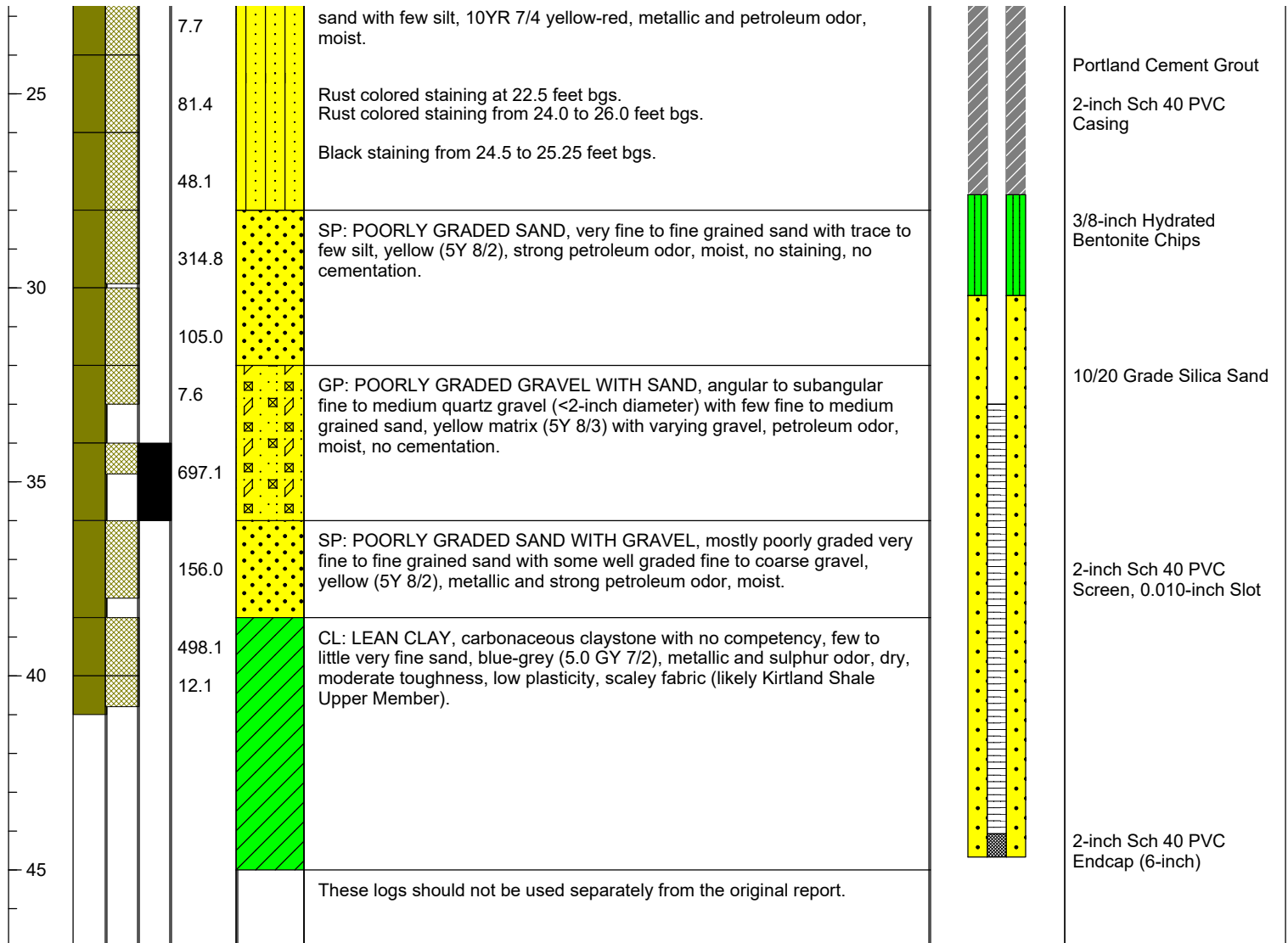
Page 2 of 2

Sample

Depth (ft)
Interval
Recovery
Analytical
Field
Screening
Lithology

Lithologic Description

Well Construction Diagram





BORING LOG and WELL CONSTRUCTION

FWT-2

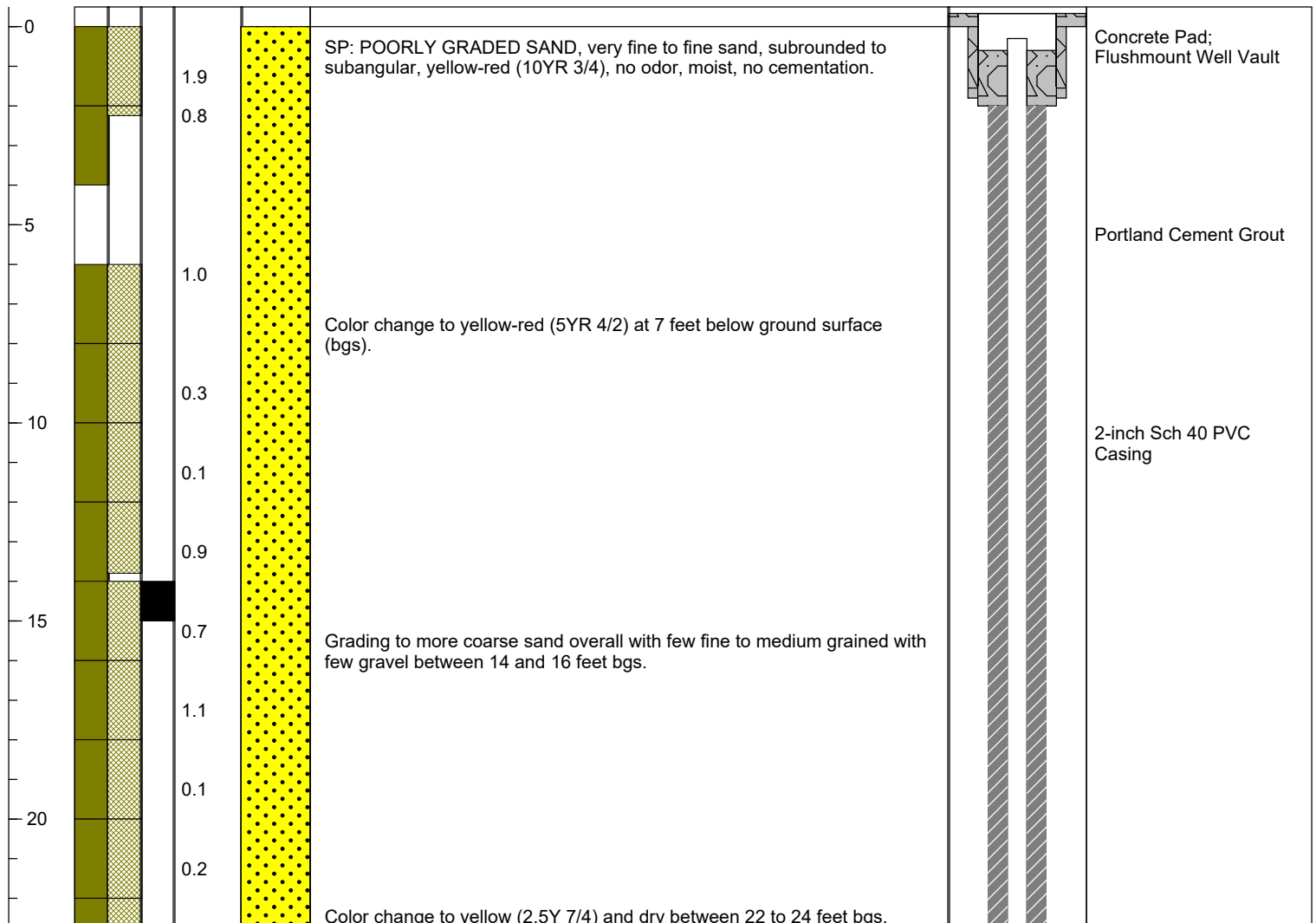
Client: Baker Hughes, a GE Company		TRC Project #: 292348.0000.0000
Site: Farmington Facility		Start Date: 2/20/2018
Address: 3250 Southside River Rd, Farmington, New Mexico		Finish Date: 2/20/2018
Project: Site Investigation		Permit #: SJ-4277 POD1-POD4
Drilling Company: Enviro-Drill, Inc.	Drilling Crew: John Aguirre and Crew	TRC Site Rep.: Z. Boutaghrou
Drilling Method: Hollow-stem auger		TRC Reviewer: S. Hoover
Boring Diameter (in): 8-inch outer diameter Boring Depth (ft bgs): 50.0		X-Y Coord. System: US State Plane 1983
Sampling Method: Split spoon		Northing (ft): 2085064.891
Blow Count Method: Not applicable		Easting (ft): 2625681.095
Field Screening Parameter: Volatile Organic Compounds		Elevation Datum: NAD 1983 (Conus)
Meter: MiniRAE 3000	Units: ppm	Ground Elevation (ft): 5389.455
Well Depth (ft bgs): 50.08	Well Depth (ft toc): 49.54	Well Elevation (ft): 5388.919
Casing Length (ft): 34.54	Screen Length (ft): 15.0	Well Measuring Point: TOC
Surface Completion: Flush-mount manhole and concrete pad		Depth to Water (ft toc): 37.55
Well Development: Pump		Date/Time: 2/23/2018 0835

Sample

Depth (ft)
Interval
Recovery
Analytical
Field
Screening
Lithology

Lithologic Description

Well Construction Diagram





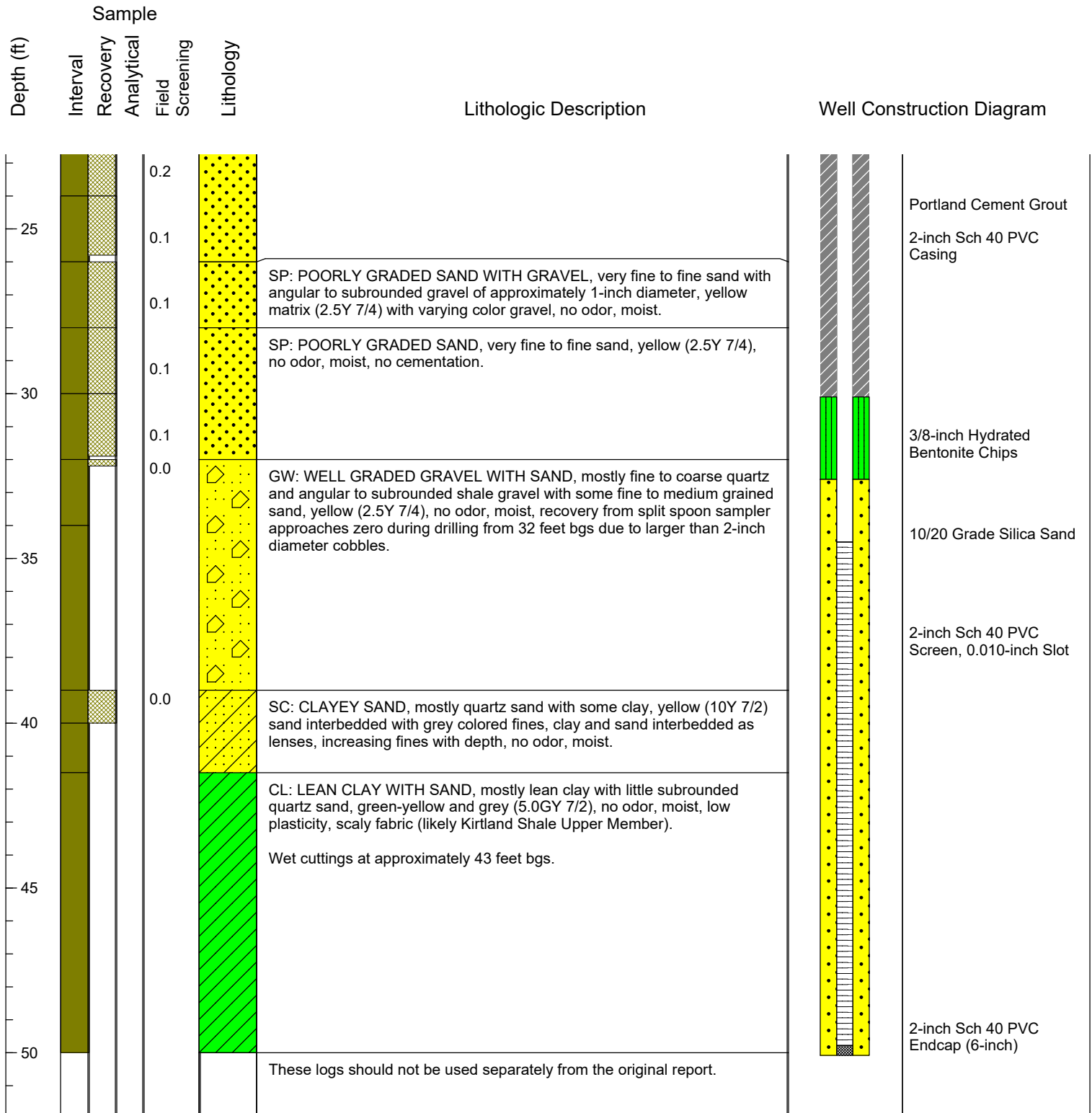
BORING LOG and WELL CONSTRUCTION

FWT-2

Client: Baker Hughes, a GE Company

Site: Farmington Facility

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BORING LOG and WELL CONSTRUCTION

FWT-3

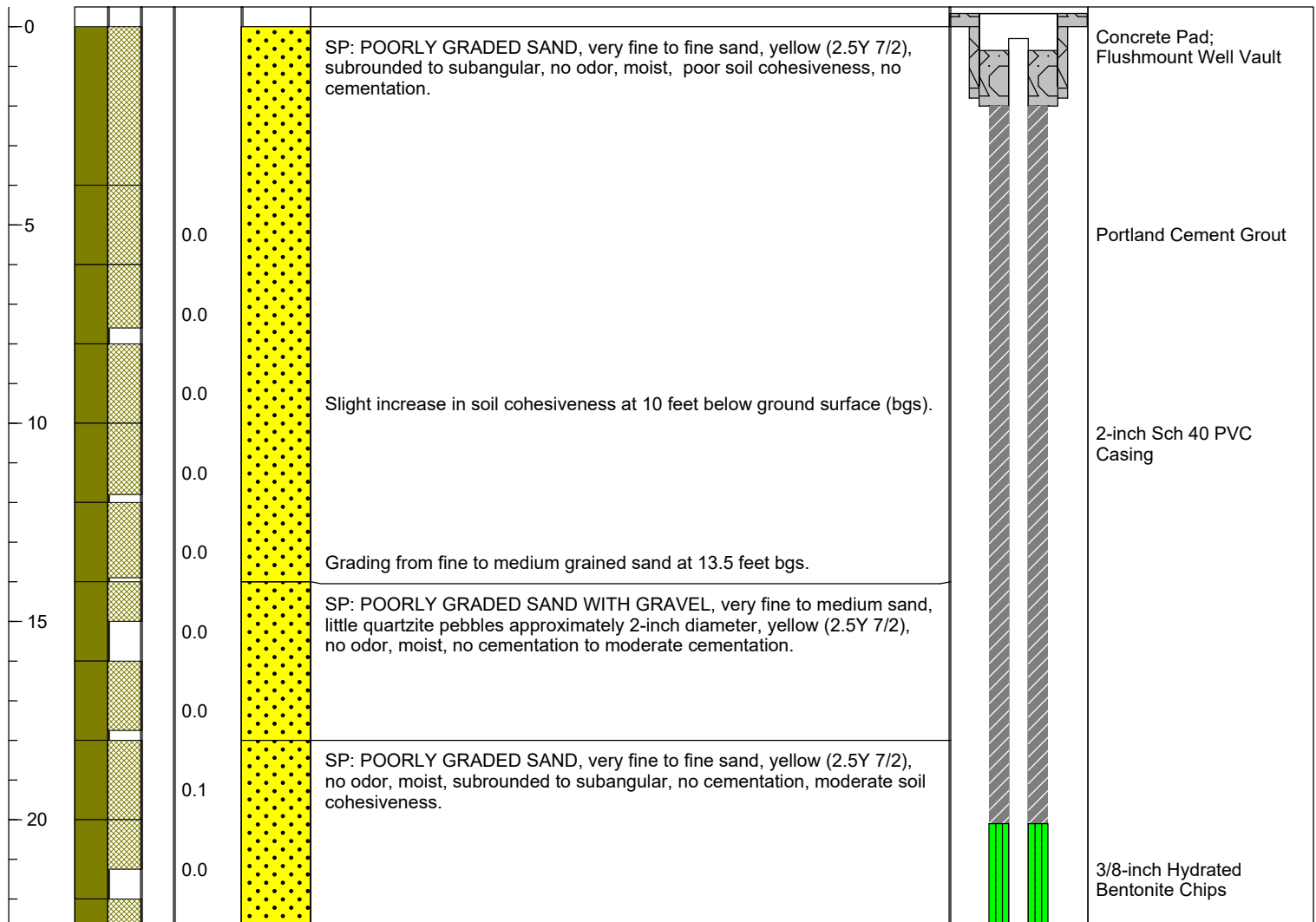
Client: Baker Hughes, a GE Company		TRC Project #: 292348.0000.0000
Site: Farmington Facility		Start Date: 2/21/2018
Address: 3250 Southside River Rd, Farmington, New Mexico		Finish Date: 2/21/2018
Project: Site Investigation		Permit #: SJ-4277 POD1-POD4
Drilling Company: Enviro-Drill, Inc.	Drilling Crew: John Aguirre and Crew	TRC Site Rep.: Z. Boutaghrou
Drilling Method: Hollow-stem auger		TRC Reviewer: S. Hoover
Boring Diameter (in): 8-inch outer diameter Boring Depth (ft bgs): 50.0		X-Y Coord. System: US State Plane 1983
Sampling Method: Split spoon		Northing (ft): 2084974.494
Blow Count Method: Not applicable		Easting (ft): 2625686.142
Field Screening Parameter: Volatile Organic Compounds		Elevation Datum: NAD 1983 (Conus)
Meter: MiniRAE 3000	Units: ppm	Ground Elevation (ft): 5388.805
Well Depth (ft bgs): 40.15	Well Depth (ft toc): 40.04	Well Elevation (ft): 5388.694
Casing Length (ft): 24.5	Screen Length (ft): 15.0	Well Measuring Point: TOC
Surface Completion: Flush-mount manhole and concrete pad		Depth to Water (ft toc): Dry
Well Development: Not applicable		Date/Time: 2/23/2018 0840

Sample

Depth (ft)
Interval
Recovery
Analytical
Field
Screening
Lithology

Lithologic Description

Well Construction Diagram





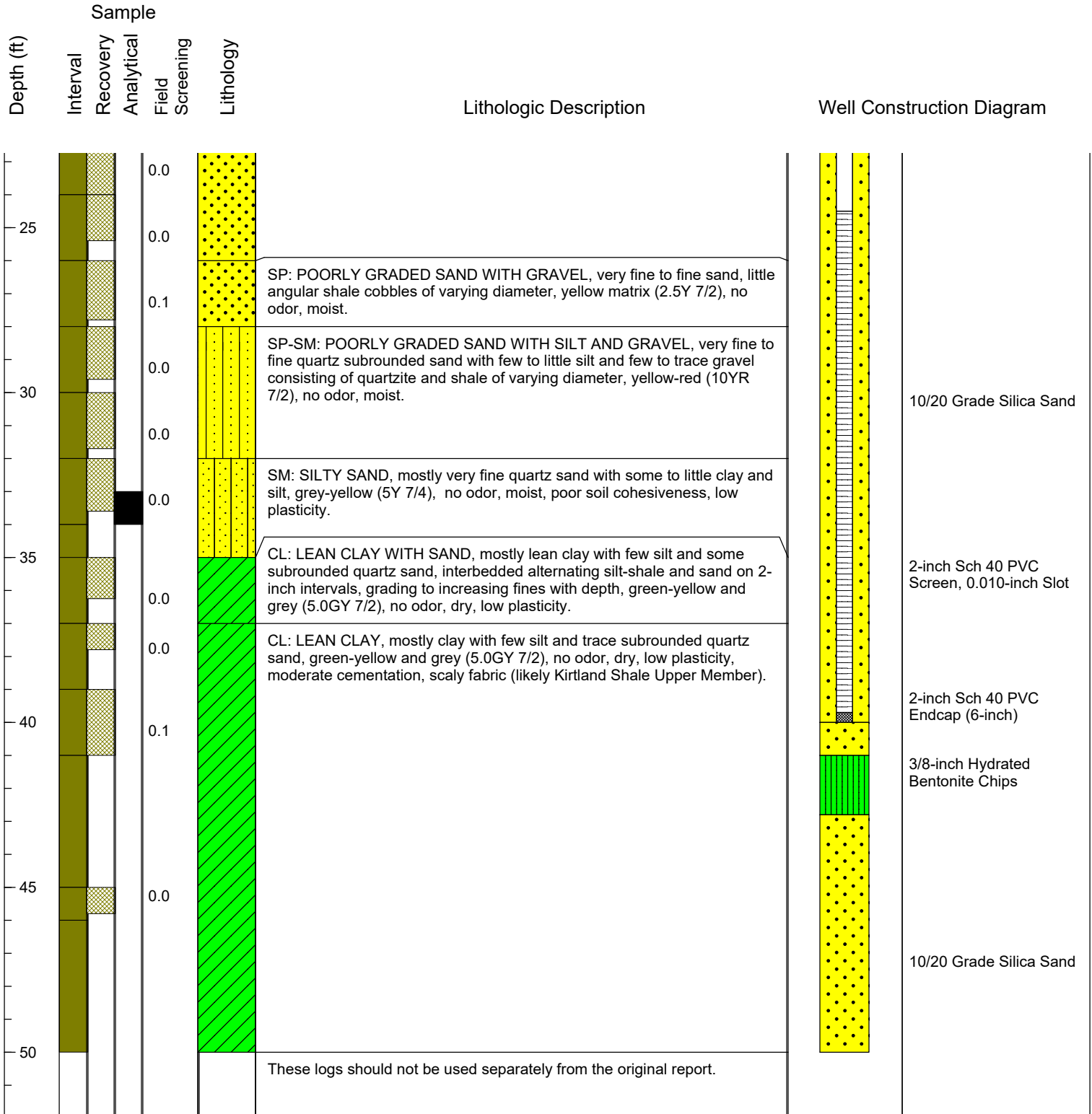
BORING LOG and WELL CONSTRUCTION

FWT-3

Client: Baker Hughes, a GE Company

Site: Farmington Facility

Page 2 of 2



**BORING LOG and
WELL CONSTRUCTION****FWT-4**

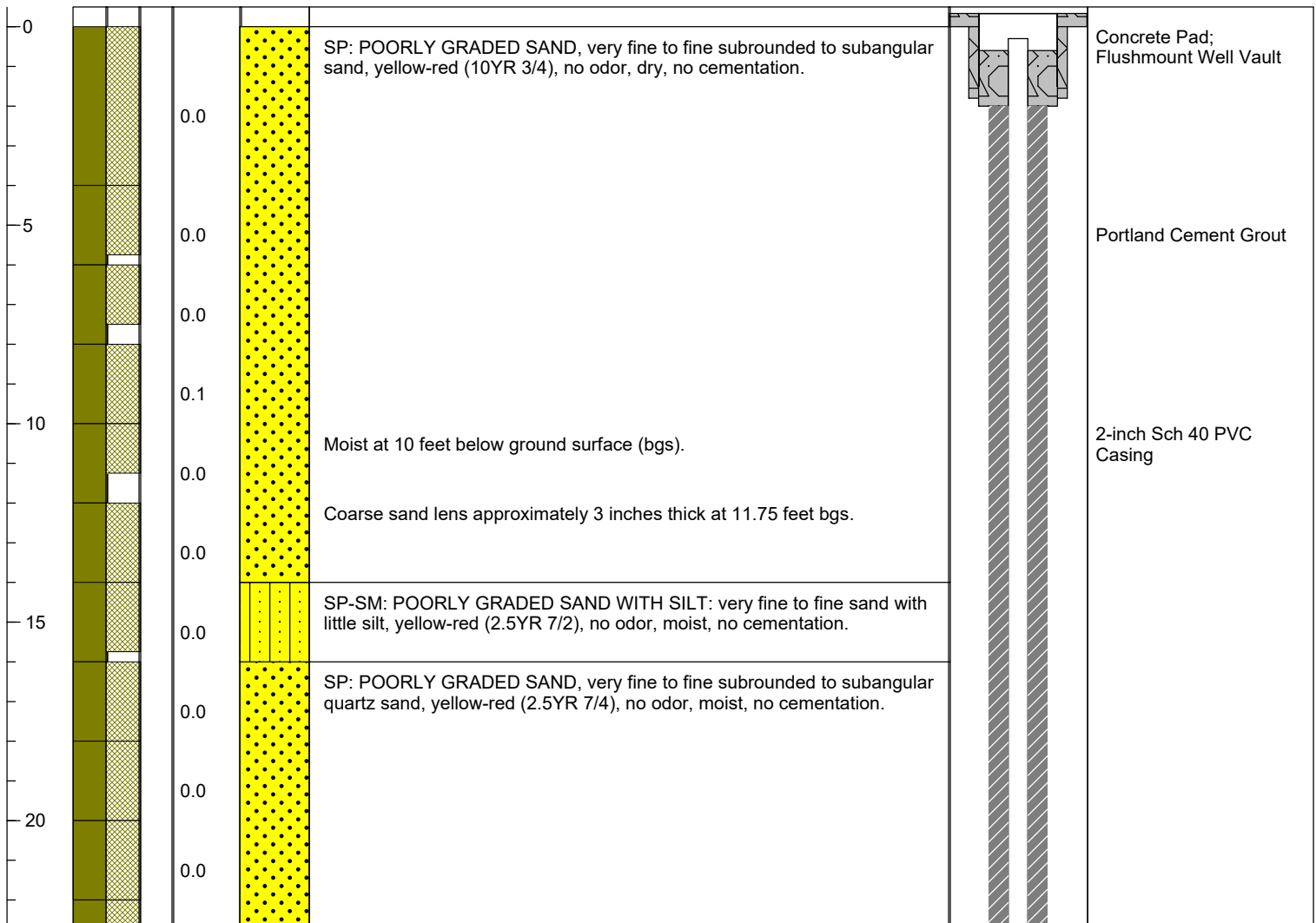
Client: Baker Hughes, a GE Company		TRC Project #: 292348.0000.0000
Site: Farmington Facility		Start Date: 2/19/2018
Address: 3250 Southside River Rd, Farmington, New Mexico		Finish Date: 2/19/2018
Project: Site Investigation		Permit #: SJ-4277 POD1-POD4
Drilling Company: Enviro-Drill, Inc.	Drilling Crew: John Aguirre and Crew	TRC Site Rep.: Z. Boutaghau
Drilling Method: Hollow-stem auger		TRC Reviewer: S. Hoover
Boring Diameter (in): 8-inch outer diameter Boring Depth (ft bgs): 48.0		X-Y Coord. System: US State Plane 1983
Sampling Method: Split spoon		Northing (ft): 2084980.968
Blow Count Method: Not applicable		Easting (ft): 2625601.571
Field Screening Parameter: Volatile Organic Compounds		Elevation Datum: NAD 1983 (Conus)
Meter: MiniRAE 3000	Units: ppm	Ground Elevation (ft): 5385.963
Well Depth (ft bgs): 47.6	Well Depth (ft toc): 47.28	Well Elevation (ft): 5385.645
Casing Length (ft): 32.28	Screen Length (ft): 15.0	Well Measuring Point: TOC
Surface Completion: Flush-mount manhole and concrete pad		Depth to Water (ft toc): 35.32
Well Development: Pump		Date/Time: 2/23/2018 0845

Sample

Depth (ft)
Interval
Recovery
Analytical
Field
Screening
Lithology

Lithologic Description

Well Construction Diagram





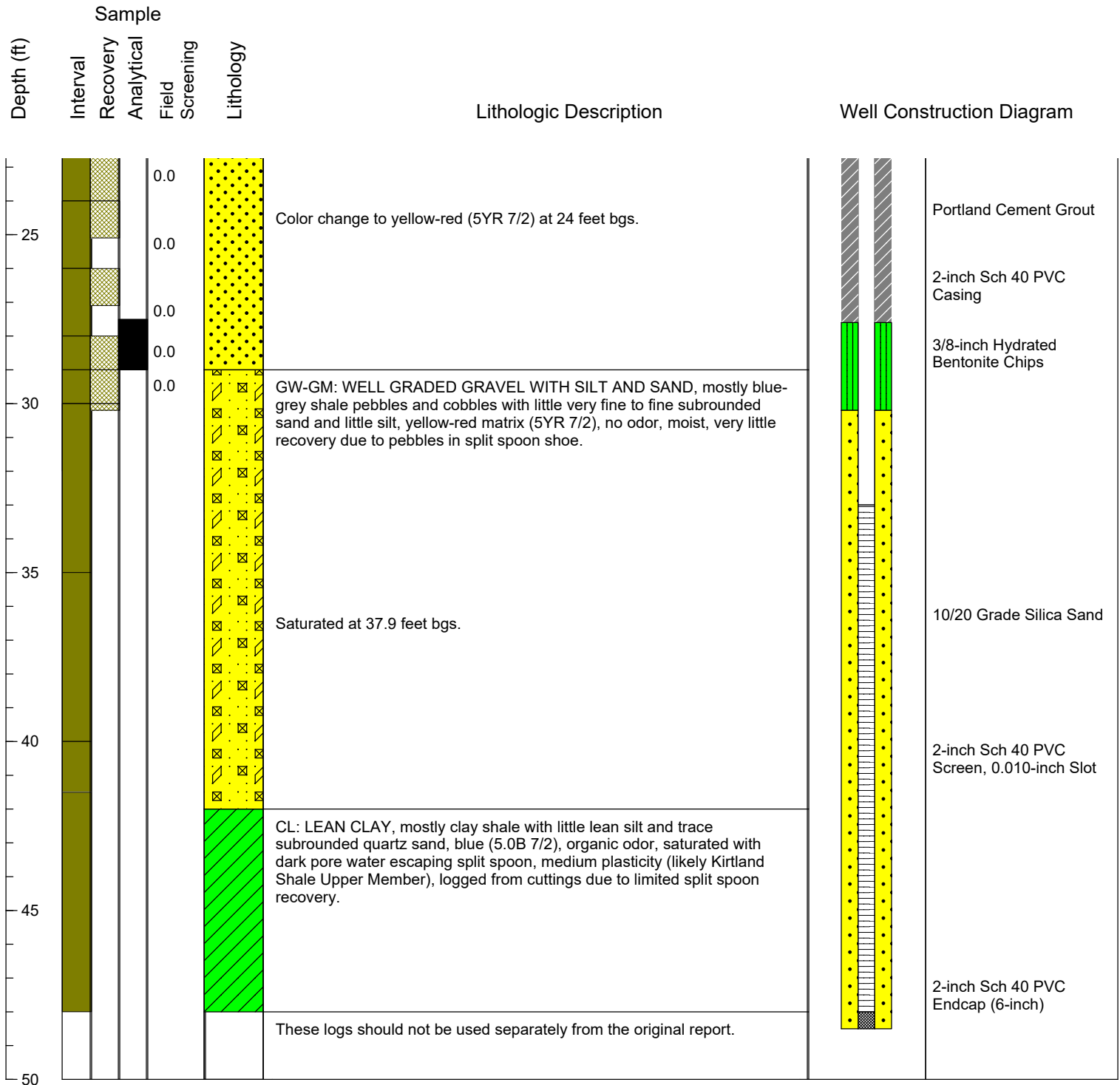
BORING LOG and WELL CONSTRUCTION

FWT-4

Client: Baker Hughes, a GE Company

Site: Farmington Facility

Page 2 of 2



ATTACHMENT B
Laboratory Reports

February 28, 2018

Baker Hughes

Sample Delivery Group: L971930
Samples Received: 02/21/2018
Project Number: 292348
Description: Farmington BHGE
Site: FARMINGTON, NM BHGE
Report To: Zarek Boutaghou
501 W. Lake Park Blvd, Ste 28180D
Houston, TX 77079

Entire Report Reviewed By:



Mark W. Beasley
Technical Service Representative

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 ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



Cp: Cover Page	1
Tc: Table of Contents	2
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FWT-4 27.5-29.0 L971930-01	5
FWT-4 DUP L971930-02	8
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FWT-2 14.0-15.0 L971930-04	13
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Volatile Organic Compounds (GC) by Method 8015D/GRO	18
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SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



FWT-4 27.5-29.0 L971930-01 Solid

Collected by Z. Boutaghou
Collected date/time 02/19/18 13:53
Received date/time 02/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1078003	1	02/27/18 06:52	02/27/18 07:07	KDW
Wet Chemistry by Method 9056A	WG1076727	1	02/22/18 16:02	02/22/18 20:53	MAJ
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1076343	1	02/21/18 19:15	02/22/18 00:18	LRL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1076315	1	02/21/18 19:15	02/22/18 03:06	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1076682	1	02/22/18 15:16	02/22/18 21:27	AAT
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1076830	1	02/22/18 21:10	02/23/18 12:12	CJR

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

FWT-4 DUP L971930-02 Solid

Collected by Z. Boutaghou
Collected date/time 02/19/18 13:53
Received date/time 02/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1078003	1	02/27/18 06:52	02/27/18 07:07	KDW
Wet Chemistry by Method 9056A	WG1076727	1	02/22/18 16:02	02/22/18 21:02	MAJ
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1076343	1	02/21/18 19:15	02/22/18 00:41	LRL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1076315	1	02/21/18 19:15	02/22/18 03:26	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1076682	1	02/22/18 15:16	02/22/18 21:41	MTJ
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1076830	1	02/22/18 21:10	02/23/18 12:35	CJR

TRIP BLANK 2-19 L971930-03 GW

Collected by Z. Boutaghou
Collected date/time 02/19/18 00:00
Received date/time 02/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1076486	1	02/22/18 12:59	02/22/18 12:59	JBE

FWT-2 14.0-15.0 L971930-04 Solid

Collected by Z. Boutaghou
Collected date/time 02/20/18 08:52
Received date/time 02/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1078003	1	02/27/18 06:52	02/27/18 07:07	KDW
Wet Chemistry by Method 9056A	WG1076727	1	02/22/18 16:02	02/22/18 21:19	MAJ
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1076343	1	02/21/18 19:15	02/22/18 01:03	LRL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1076315	1	02/21/18 19:15	02/22/18 03:45	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1076682	1	02/22/18 15:16	02/22/18 21:55	AAT
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1076830	1	02/22/18 21:10	02/23/18 12:58	CJR



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 radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. 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
Technical Service Representative

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	96.1		1	02/27/2018 07:07	WG1078003

Wet Chemistry by Method 9056A

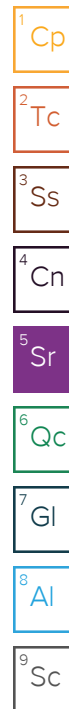
Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	161		0.827	10.0	10.4	1	02/22/2018 20:53	WG1076727

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0700	J	0.0226	0.100	0.104	1	02/22/2018 00:18	WG1076343
(S) a,a,a-Trifluorotoluene(FID)	93.9				77.0-120		02/22/2018 00:18	WG1076343

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	0.0160	J	0.0104	1.00	1.04	1	02/22/2018 03:06	WG1076315
Acrylonitrile	U		0.00186	0.0100	0.0104	1	02/22/2018 03:06	WG1076315
Benzene	0.00323		0.000281	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
Bromobenzene	U		0.000295	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
Bromodichloromethane	U		0.000264	0.00125	0.00130	1	02/22/2018 03:06	WG1076315
Bromoform	U		0.000441	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
Bromomethane	U		0.00139	0.00500	0.00520	1	02/22/2018 03:06	WG1076315
n-Butylbenzene	U		0.000268	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
sec-Butylbenzene	U		0.000209	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
tert-Butylbenzene	U		0.000214	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
Carbon tetrachloride	U		0.000341	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
Chlorobenzene	U		0.000220	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
Chlorodibromomethane	U		0.000388	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
Chloroethane	U		0.000984	0.00500	0.00520	1	02/22/2018 03:06	WG1076315
Chloroform	U		0.000238	0.00500	0.00520	1	02/22/2018 03:06	WG1076315
Chloromethane	U		0.000390	0.00250	0.00260	1	02/22/2018 03:06	WG1076315
2-Chlorotoluene	U		0.000313	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
4-Chlorotoluene	U		0.000250	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
1,2-Dibromo-3-Chloropropane	U		0.00109	0.00500	0.00520	1	02/22/2018 03:06	WG1076315
1,2-Dibromoethane	U		0.000357	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
Dibromomethane	U		0.000397	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
1,2-Dichlorobenzene	U		0.000317	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
1,3-Dichlorobenzene	U		0.000249	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
1,4-Dichlorobenzene	U		0.000235	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
Dichlorodifluoromethane	U		0.000742	0.00500	0.00520	1	02/22/2018 03:06	WG1076315
1,1-Dichloroethane	U		0.000207	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
1,2-Dichloroethane	U		0.000276	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
1,1-Dichloroethene	U		0.000315	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
cis-1,2-Dichloroethene	U		0.000244	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
trans-1,2-Dichloroethene	U		0.000275	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
1,2-Dichloropropane	U		0.000372	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
1,1-Dichloropropene	U		0.000330	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
1,3-Dichloropropane	U		0.000215	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
cis-1,3-Dichloropropene	U		0.000272	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
trans-1,3-Dichloropropene	U		0.000278	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
2,2-Dichloropropane	U		0.000290	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
Di-isopropyl ether	U		0.000258	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
Ethylbenzene	0.000366	J	0.000309	0.00100	0.00104	1	02/22/2018 03:06	WG1076315





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

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Hexachloro-1,3-butadiene	U	J3	0.000356	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
Isopropylbenzene	U		0.000253	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
p-Isopropyltoluene	U		0.000212	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
2-Butanone (MEK)	U		0.00487	0.0100	0.0104	1	02/22/2018 03:06	WG1076315
Methylene Chloride	0.00117	B J	0.00104	0.00500	0.00520	1	02/22/2018 03:06	WG1076315
4-Methyl-2-pentanone (MIBK)	U		0.00196	0.0100	0.0104	1	02/22/2018 03:06	WG1076315
Methyl tert-butyl ether	U		0.000220	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
Naphthalene	U		0.00104	0.00500	0.00520	1	02/22/2018 03:06	WG1076315
n-Propylbenzene	U		0.000214	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
Styrene	U		0.000243	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
1,1,1,2-Tetrachloroethane	U		0.000275	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
1,1,2,2-Tetrachloroethane	U		0.000380	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
1,1,2-Trichlorotrifluoroethane	U		0.000380	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
Tetrachloroethene	U		0.000287	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
Toluene	0.00297	J	0.000451	0.00500	0.00520	1	02/22/2018 03:06	WG1076315
1,2,3-Trichlorobenzene	U	J3	0.000318	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
1,2,4-Trichlorobenzene	U		0.000404	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
1,1,1-Trichloroethane	U		0.000297	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
1,1,2-Trichloroethane	U		0.000288	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
Trichloroethene	U		0.000290	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
Trichlorofluoromethane	U		0.000397	0.00500	0.00520	1	02/22/2018 03:06	WG1076315
1,2,3-Trichloropropane	U		0.000771	0.00250	0.00260	1	02/22/2018 03:06	WG1076315
1,2,4-Trimethylbenzene	0.000569	J	0.000219	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
1,2,3-Trimethylbenzene	U		0.000298	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
1,3,5-Trimethylbenzene	0.000311	J	0.000277	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
Vinyl chloride	U		0.000303	0.00100	0.00104	1	02/22/2018 03:06	WG1076315
Xylenes, Total	0.00201	J	0.000726	0.00300	0.00312	1	02/22/2018 03:06	WG1076315
(S) Toluene-d8	98.8				80.0-120		02/22/2018 03:06	WG1076315
(S) Dibromofluoromethane	108				74.0-131		02/22/2018 03:06	WG1076315
(S) 4-Bromofluorobenzene	96.9				64.0-132		02/22/2018 03:06	WG1076315

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	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.67	4.00	4.16	1	02/22/2018 21:27	WG1076682
C28-C40 Oil Range	U		0.285	4.00	4.16	1	02/22/2018 21:27	WG1076682
(S) o-Terphenyl	94.7				18.0-148		02/22/2018 21:27	WG1076682

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

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00668	0.0330	0.0343	1	02/23/2018 12:12	WG1076830
Acenaphthylene	U		0.00698	0.0330	0.0343	1	02/23/2018 12:12	WG1076830
Anthracene	U		0.00657	0.0330	0.0343	1	02/23/2018 12:12	WG1076830
Benidine	U	J4	0.0663	0.333	0.346	1	02/23/2018 12:12	WG1076830
Benzo(a)anthracene	U		0.00445	0.0330	0.0343	1	02/23/2018 12:12	WG1076830
Benzo(b)fluoranthene	U		0.00723	0.0330	0.0343	1	02/23/2018 12:12	WG1076830
Benzo(k)fluoranthene	U		0.00605	0.0330	0.0343	1	02/23/2018 12:12	WG1076830
Benzo(g,h,i)perylene	U		0.00750	0.0330	0.0343	1	02/23/2018 12:12	WG1076830
Benzo(a)pyrene	U		0.00570	0.0330	0.0343	1	02/23/2018 12:12	WG1076830
Bis(2-chlorethoxy)methane	U		0.00801	0.333	0.346	1	02/23/2018 12:12	WG1076830
Bis(2-chloroethyl)ether	U		0.00932	0.333	0.346	1	02/23/2018 12:12	WG1076830
Bis(2-chloroisopropyl)ether	U		0.00790	0.333	0.346	1	02/23/2018 12:12	WG1076830
4-Bromophenyl-phenylether	U		0.0119	0.333	0.346	1	02/23/2018 12:12	WG1076830
2-Chloronaphthalene	U		0.00665	0.0330	0.0343	1	02/23/2018 12:12	WG1076830

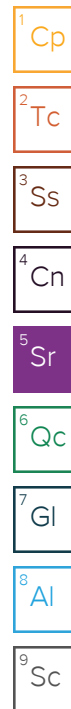


Collected date/time: 02/19/18 13:53

L971930

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

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Chlorophenyl-phenylether	U		0.00652	0.333	0.346	1	02/23/2018 12:12	WG1076830
Chrysene	U		0.00577	0.0330	0.0343	1	02/23/2018 12:12	WG1076830
Dibenz(a,h)anthracene	U		0.00854	0.0330	0.0343	1	02/23/2018 12:12	WG1076830
3,3-Dichlorobenzidine	U		0.0826	0.333	0.346	1	02/23/2018 12:12	WG1076830
2,4-Dinitrotoluene	U		0.00631	0.333	0.346	1	02/23/2018 12:12	WG1076830
2,6-Dinitrotoluene	U		0.00767	0.333	0.346	1	02/23/2018 12:12	WG1076830
Fluoranthene	U		0.00516	0.0330	0.0343	1	02/23/2018 12:12	WG1076830
Fluorene	U		0.00709	0.0330	0.0343	1	02/23/2018 12:12	WG1076830
Hexachlorobenzene	U		0.00890	0.333	0.346	1	02/23/2018 12:12	WG1076830
Hexachloro-1,3-butadiene	U		0.0104	0.333	0.346	1	02/23/2018 12:12	WG1076830
Hexachlorocyclopentadiene	U		0.0611	0.333	0.346	1	02/23/2018 12:12	WG1076830
Hexachloroethane	U		0.0139	0.333	0.346	1	02/23/2018 12:12	WG1076830
Indeno(1,2,3-cd)pyrene	U		0.00803	0.0330	0.0343	1	02/23/2018 12:12	WG1076830
Isophorone	U		0.00543	0.333	0.346	1	02/23/2018 12:12	WG1076830
Naphthalene	U		0.00925	0.0330	0.0343	1	02/23/2018 12:12	WG1076830
Nitrobenzene	U		0.00723	0.333	0.346	1	02/23/2018 12:12	WG1076830
n-Nitrosodimethylamine	U		0.0673	0.333	0.346	1	02/23/2018 12:12	WG1076830
n-Nitrosodiphenylamine	U		0.00618	0.333	0.346	1	02/23/2018 12:12	WG1076830
n-Nitrosodi-n-propylamine	U		0.00942	0.333	0.346	1	02/23/2018 12:12	WG1076830
Phenanthrene	U		0.00549	0.0330	0.0343	1	02/23/2018 12:12	WG1076830
Benzylbutyl phthalate	U		0.0107	0.333	0.346	1	02/23/2018 12:12	WG1076830
Bis(2-ethylhexyl)phthalate	U		0.0125	0.333	0.346	1	02/23/2018 12:12	WG1076830
Di-n-butyl phthalate	U		0.0113	0.333	0.346	1	02/23/2018 12:12	WG1076830
Diethyl phthalate	U		0.00719	0.333	0.346	1	02/23/2018 12:12	WG1076830
Dimethyl phthalate	U		0.00562	0.333	0.346	1	02/23/2018 12:12	WG1076830
Di-n-octyl phthalate	U		0.00943	0.333	0.346	1	02/23/2018 12:12	WG1076830
Pyrene	U		0.0128	0.0330	0.0343	1	02/23/2018 12:12	WG1076830
1,2,4-Trichlorobenzene	U		0.00911	0.333	0.346	1	02/23/2018 12:12	WG1076830
4-Chloro-3-methylphenol	U		0.00496	0.333	0.346	1	02/23/2018 12:12	WG1076830
2-Chlorophenol	U		0.00864	0.333	0.346	1	02/23/2018 12:12	WG1076830
2,4-Dichlorophenol	U		0.00776	0.333	0.346	1	02/23/2018 12:12	WG1076830
2,4-Dimethylphenol	U		0.0490	0.333	0.346	1	02/23/2018 12:12	WG1076830
4,6-Dinitro-2-methylphenol	U		0.129	0.333	0.346	1	02/23/2018 12:12	WG1076830
2,4-Dinitrophenol	U		0.102	0.333	0.346	1	02/23/2018 12:12	WG1076830
2-Nitrophenol	U		0.0135	0.333	0.346	1	02/23/2018 12:12	WG1076830
4-Nitrophenol	U		0.0546	0.333	0.346	1	02/23/2018 12:12	WG1076830
Pentachlorophenol	U		0.0499	0.333	0.346	1	02/23/2018 12:12	WG1076830
Phenol	U		0.00723	0.333	0.346	1	02/23/2018 12:12	WG1076830
2,4,6-Trichlorophenol	U		0.00810	0.333	0.346	1	02/23/2018 12:12	WG1076830
(S) 2-Fluorophenol	75.4				20.0-120		02/23/2018 12:12	WG1076830
(S) Phenol-d5	67.7				20.0-120		02/23/2018 12:12	WG1076830
(S) Nitrobenzene-d5	68.4				18.0-125		02/23/2018 12:12	WG1076830
(S) 2-Fluorobiphenyl	79.1				28.0-120		02/23/2018 12:12	WG1076830
(S) 2,4,6-Tribromophenol	83.7				17.0-137		02/23/2018 12:12	WG1076830
(S) p-Terphenyl-d14	64.6				13.0-131		02/23/2018 12:12	WG1076830





Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.9		1	02/27/2018 07:07	WG1078003

Wet Chemistry by Method 9056A

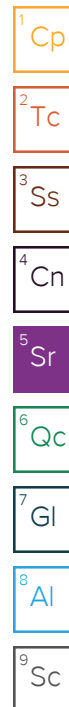
Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	103		0.829	10.0	10.4	1	02/22/2018 21:02	WG1076727

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0712	J	0.0226	0.100	0.104	1	02/22/2018 00:41	WG1076343
(S) a,a,a-Trifluorotoluene(FID)	92.8				77.0-120		02/22/2018 00:41	WG1076343

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	0.0187	J	0.0104	1.00	1.04	1	02/22/2018 03:26	WG1076315
Acrylonitrile	U		0.00187	0.0100	0.0104	1	02/22/2018 03:26	WG1076315
Benzene	0.00321		0.000282	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
Bromobenzene	U		0.000296	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
Bromodichloromethane	U		0.000265	0.00125	0.00130	1	02/22/2018 03:26	WG1076315
Bromoform	U		0.000442	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
Bromomethane	U		0.00140	0.00500	0.00521	1	02/22/2018 03:26	WG1076315
n-Butylbenzene	U		0.000269	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
sec-Butylbenzene	U		0.000210	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
tert-Butylbenzene	U		0.000215	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
Carbon tetrachloride	U		0.000342	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
Chlorobenzene	U		0.000221	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
Chlorodibromomethane	U		0.000389	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
Chloroethane	U		0.000987	0.00500	0.00521	1	02/22/2018 03:26	WG1076315
Chloroform	U		0.000239	0.00500	0.00521	1	02/22/2018 03:26	WG1076315
Chloromethane	U		0.000391	0.00250	0.00261	1	02/22/2018 03:26	WG1076315
2-Chlorotoluene	U		0.000314	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
4-Chlorotoluene	U		0.000250	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
1,2-Dibromo-3-Chloropropane	U		0.00109	0.00500	0.00521	1	02/22/2018 03:26	WG1076315
1,2-Dibromoethane	U		0.000358	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
Dibromomethane	U		0.000398	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
1,2-Dichlorobenzene	U		0.000318	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
1,3-Dichlorobenzene	U		0.000249	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
1,4-Dichlorobenzene	U		0.000236	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
Dichlorodifluoromethane	U		0.000744	0.00500	0.00521	1	02/22/2018 03:26	WG1076315
1,1-Dichloroethane	U		0.000208	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
1,2-Dichloroethane	U		0.000276	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
1,1-Dichloroethene	U		0.000316	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
cis-1,2-Dichloroethene	U		0.000245	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
trans-1,2-Dichloroethene	U		0.000275	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
1,2-Dichloropropane	U		0.000373	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
1,1-Dichloropropene	U		0.000331	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
1,3-Dichloropropane	U		0.000216	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
cis-1,3-Dichloropropene	U		0.000273	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
trans-1,3-Dichloropropene	U		0.000278	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
2,2-Dichloropropane	U		0.000291	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
Di-isopropyl ether	U		0.000259	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
Ethylbenzene	0.000354	J	0.000310	0.00100	0.00104	1	02/22/2018 03:26	WG1076315





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

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Hexachloro-1,3-butadiene	U	J3	0.000357	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
Isopropylbenzene	U		0.000253	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
p-Isopropyltoluene	U		0.000213	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
2-Butanone (MEK)	U		0.00488	0.0100	0.0104	1	02/22/2018 03:26	WG1076315
Methylene Chloride	U		0.00104	0.00500	0.00521	1	02/22/2018 03:26	WG1076315
4-Methyl-2-pentanone (MIBK)	U		0.00196	0.0100	0.0104	1	02/22/2018 03:26	WG1076315
Methyl tert-butyl ether	U		0.000221	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
Naphthalene	U		0.00104	0.00500	0.00521	1	02/22/2018 03:26	WG1076315
n-Propylbenzene	U		0.000215	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
Styrene	U		0.000244	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
1,1,1,2-Tetrachloroethane	U		0.000275	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
1,1,2,2-Tetrachloroethane	U		0.000381	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
1,1,2-Trichlorotrifluoroethane	U		0.000381	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
Tetrachloroethene	U		0.000288	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
Toluene	0.00288	J	0.000453	0.00500	0.00521	1	02/22/2018 03:26	WG1076315
1,2,3-Trichlorobenzene	U	J3	0.000319	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
1,2,4-Trichlorobenzene	U		0.000405	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
1,1,1-Trichloroethane	U		0.000298	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
1,1,2-Trichloroethane	U		0.000289	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
Trichloroethene	U		0.000291	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
Trichlorofluoromethane	U		0.000398	0.00500	0.00521	1	02/22/2018 03:26	WG1076315
1,2,3-Trichloropropane	U		0.000773	0.00250	0.00261	1	02/22/2018 03:26	WG1076315
1,2,4-Trimethylbenzene	0.000507	J	0.000220	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
1,2,3-Trimethylbenzene	U		0.000299	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
1,3,5-Trimethylbenzene	0.000278	J	0.000277	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
Vinyl chloride	U		0.000303	0.00100	0.00104	1	02/22/2018 03:26	WG1076315
Xylenes, Total	0.00209	J	0.000728	0.00300	0.00313	1	02/22/2018 03:26	WG1076315
(S) Toluene-d8	97.6				80.0-120		02/22/2018 03:26	WG1076315
(S) Dibromofluoromethane	107				74.0-131		02/22/2018 03:26	WG1076315
(S) 4-Bromofluorobenzene	94.5				64.0-132		02/22/2018 03:26	WG1076315

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	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.68	4.00	4.17	1	02/22/2018 21:41	WG1076682
C28-C40 Oil Range	U		0.286	4.00	4.17	1	02/22/2018 21:41	WG1076682
(S) o-Terphenyl	87.7				18.0-148		02/22/2018 21:41	WG1076682

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

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00669	0.0330	0.0344	1	02/23/2018 12:35	WG1076830
Acenaphthylene	U		0.00700	0.0330	0.0344	1	02/23/2018 12:35	WG1076830
Anthracene	U		0.00659	0.0330	0.0344	1	02/23/2018 12:35	WG1076830
Benzdine	U	J4	0.0664	0.333	0.347	1	02/23/2018 12:35	WG1076830
Benzo(a)anthracene	U		0.00446	0.0330	0.0344	1	02/23/2018 12:35	WG1076830
Benzo(b)fluoranthene	U		0.00725	0.0330	0.0344	1	02/23/2018 12:35	WG1076830
Benzo(k)fluoranthene	U		0.00607	0.0330	0.0344	1	02/23/2018 12:35	WG1076830
Benzo(g,h,i)perylene	U		0.00752	0.0330	0.0344	1	02/23/2018 12:35	WG1076830
Benzo(a)pyrene	U		0.00571	0.0330	0.0344	1	02/23/2018 12:35	WG1076830
Bis(2-chlorethoxy)methane	U		0.00803	0.333	0.347	1	02/23/2018 12:35	WG1076830
Bis(2-chloroethyl)ether	U		0.00934	0.333	0.347	1	02/23/2018 12:35	WG1076830
Bis(2-chloroisopropyl)ether	U		0.00793	0.333	0.347	1	02/23/2018 12:35	WG1076830
4-Bromophenyl-phenylether	U		0.0119	0.333	0.347	1	02/23/2018 12:35	WG1076830
2-Chloronaphthalene	U		0.00666	0.0330	0.0344	1	02/23/2018 12:35	WG1076830



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

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Chlorophenyl-phenylether	U		0.00654	0.333	0.347	1	02/23/2018 12:35	WG1076830
Chrysene	U		0.00579	0.0330	0.0344	1	02/23/2018 12:35	WG1076830
Dibenz(a,h)anthracene	U		0.00856	0.0330	0.0344	1	02/23/2018 12:35	WG1076830
3,3-Dichlorobenzidine	U		0.0828	0.333	0.347	1	02/23/2018 12:35	WG1076830
2,4-Dinitrotoluene	U		0.00633	0.333	0.347	1	02/23/2018 12:35	WG1076830
2,6-Dinitrotoluene	U		0.00769	0.333	0.347	1	02/23/2018 12:35	WG1076830
Fluoranthene	U		0.00517	0.0330	0.0344	1	02/23/2018 12:35	WG1076830
Fluorene	U		0.00711	0.0330	0.0344	1	02/23/2018 12:35	WG1076830
Hexachlorobenzene	U		0.00893	0.333	0.347	1	02/23/2018 12:35	WG1076830
Hexachloro-1,3-butadiene	U		0.0104	0.333	0.347	1	02/23/2018 12:35	WG1076830
Hexachlorocyclopentadiene	U		0.0612	0.333	0.347	1	02/23/2018 12:35	WG1076830
Hexachloroethane	U		0.0140	0.333	0.347	1	02/23/2018 12:35	WG1076830
Indeno(1,2,3-cd)pyrene	U		0.00805	0.0330	0.0344	1	02/23/2018 12:35	WG1076830
Isophorone	U		0.00544	0.333	0.347	1	02/23/2018 12:35	WG1076830
Naphthalene	U		0.00927	0.0330	0.0344	1	02/23/2018 12:35	WG1076830
Nitrobenzene	U		0.00725	0.333	0.347	1	02/23/2018 12:35	WG1076830
n-Nitrosodimethylamine	U		0.0675	0.333	0.347	1	02/23/2018 12:35	WG1076830
n-Nitrosodiphenylamine	U		0.00619	0.333	0.347	1	02/23/2018 12:35	WG1076830
n-Nitrosodi-n-propylamine	U		0.00945	0.333	0.347	1	02/23/2018 12:35	WG1076830
Phenanthrene	U		0.00551	0.0330	0.0344	1	02/23/2018 12:35	WG1076830
Benzylbutyl phthalate	U		0.0107	0.333	0.347	1	02/23/2018 12:35	WG1076830
Bis(2-ethylhexyl)phthalate	U		0.0125	0.333	0.347	1	02/23/2018 12:35	WG1076830
Di-n-butyl phthalate	U		0.0114	0.333	0.347	1	02/23/2018 12:35	WG1076830
Diethyl phthalate	U		0.00721	0.333	0.347	1	02/23/2018 12:35	WG1076830
Dimethyl phthalate	U		0.00563	0.333	0.347	1	02/23/2018 12:35	WG1076830
Di-n-octyl phthalate	U		0.00946	0.333	0.347	1	02/23/2018 12:35	WG1076830
Pyrene	U		0.0128	0.0330	0.0344	1	02/23/2018 12:35	WG1076830
1,2,4-Trichlorobenzene	U		0.00914	0.333	0.347	1	02/23/2018 12:35	WG1076830
4-Chloro-3-methylphenol	U		0.00497	0.333	0.347	1	02/23/2018 12:35	WG1076830
2-Chlorophenol	U		0.00867	0.333	0.347	1	02/23/2018 12:35	WG1076830
2,4-Dichlorophenol	U		0.00778	0.333	0.347	1	02/23/2018 12:35	WG1076830
2,4-Dimethylphenol	U		0.0491	0.333	0.347	1	02/23/2018 12:35	WG1076830
4,6-Dinitro-2-methylphenol	U		0.129	0.333	0.347	1	02/23/2018 12:35	WG1076830
2,4-Dinitrophenol	U		0.102	0.333	0.347	1	02/23/2018 12:35	WG1076830
2-Nitrophenol	U		0.0136	0.333	0.347	1	02/23/2018 12:35	WG1076830
4-Nitrophenol	U		0.0547	0.333	0.347	1	02/23/2018 12:35	WG1076830
Pentachlorophenol	U		0.0501	0.333	0.347	1	02/23/2018 12:35	WG1076830
Phenol	U		0.00725	0.333	0.347	1	02/23/2018 12:35	WG1076830
2,4,6-Trichlorophenol	U		0.00812	0.333	0.347	1	02/23/2018 12:35	WG1076830
(S) 2-Fluorophenol	67.0				20.0-120		02/23/2018 12:35	WG1076830
(S) Phenol-d5	60.4				20.0-120		02/23/2018 12:35	WG1076830
(S) Nitrobenzene-d5	60.1				18.0-125		02/23/2018 12:35	WG1076830
(S) 2-Fluorobiphenyl	68.1				28.0-120		02/23/2018 12:35	WG1076830
(S) 2,4,6-Tribromophenol	73.4				17.0-137		02/23/2018 12:35	WG1076830
(S) p-Terphenyl-d14	55.9				13.0-131		02/23/2018 12:35	WG1076830

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



Collected date/time: 02/19/18 00:00

L971930

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

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acetone	U	J4	0.0100	1.00	1.00	1	02/22/2018 12:59	WG1076486
Acrolein	U	J4	0.00887	0.0500	0.0500	1	02/22/2018 12:59	WG1076486
Acrylonitrile	U		0.00187	0.0100	0.0100	1	02/22/2018 12:59	WG1076486
Benzene	U		0.000331	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
Bromobenzene	U		0.000352	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	02/22/2018 12:59	WG1076486
Bromoform	U		0.000469	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
Bromomethane	U		0.000866	0.00500	0.00500	1	02/22/2018 12:59	WG1076486
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
Chlorobenzene	U		0.000348	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
Chloroethane	U		0.000453	0.00500	0.00500	1	02/22/2018 12:59	WG1076486
Chloroform	U		0.000324	0.00500	0.00500	1	02/22/2018 12:59	WG1076486
Chloromethane	U		0.000276	0.00250	0.00250	1	02/22/2018 12:59	WG1076486
2-Chlorotoluene	U		0.000375	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
4-Chlorotoluene	U		0.000351	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
1,2-Dibromo-3-Chloropropane	U		0.00133	0.00500	0.00500	1	02/22/2018 12:59	WG1076486
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
Dibromomethane	U		0.000346	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
1,2-Dichlorobenzene	U		0.000349	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
1,3-Dichlorobenzene	U		0.000220	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
1,4-Dichlorobenzene	U		0.000274	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
Dichlorodifluoromethane	U		0.000551	0.00500	0.00500	1	02/22/2018 12:59	WG1076486
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
1,1-Dichloropropene	U		0.000352	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
1,3-Dichloropropane	U		0.000366	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
2,2-Dichloropropane	U		0.000321	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
Di-isopropyl ether	U		0.000320	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
Ethylbenzene	U		0.000384	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	02/22/2018 12:59	WG1076486
Methylene Chloride	U		0.00100	0.00500	0.00500	1	02/22/2018 12:59	WG1076486
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	02/22/2018 12:59	WG1076486
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
Naphthalene	U		0.00100	0.00500	0.00500	1	02/22/2018 12:59	WG1076486
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
Styrene	U		0.000307	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
1,1,1,2-Tetrachloroethane	U		0.000385	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
1,1,2-Trichlorotrifluoroethane	U		0.000303	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
Toluene	U		0.000412	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
1,2,3-Trichlorobenzene	U		0.000230	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
1,2,4-Trichlorobenzene	U		0.000355	0.00100	0.00100	1	02/22/2018 12:59	WG1076486

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 02/19/18 00:00

L971930

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

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
Trichloroethene	U		0.000398	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
Trichlorofluoromethane	U		0.00120	0.00500	0.00500	1	02/22/2018 12:59	WG1076486
1,2,3-Trichloropropane	U		0.000807	0.00250	0.00250	1	02/22/2018 12:59	WG1076486
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
1,2,3-Trimethylbenzene	U		0.000321	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
Vinyl chloride	U		0.000259	0.00100	0.00100	1	02/22/2018 12:59	WG1076486
Xylenes, Total	U		0.00106	0.00300	0.00300	1	02/22/2018 12:59	WG1076486
(S) Toluene-d8	105				80.0-120		02/22/2018 12:59	WG1076486
(S) Dibromofluoromethane	96.6				76.0-123		02/22/2018 12:59	WG1076486
(S) 4-Bromofluorobenzene	102				80.0-120		02/22/2018 12:59	WG1076486

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	86.7		1	02/27/2018 07:07	WG1078003

Wet Chemistry by Method 9056A

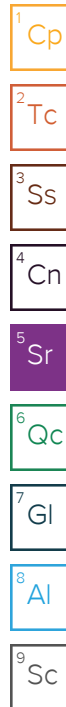
Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis date / time	Batch
Chloride	79.5		0.917	10.0	11.5	1	02/22/2018 21:19	WG1076727

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0832	J	0.0250	0.100	0.115	1	02/22/2018 01:03	WG1076343
(S) a,a,a-Trifluorotoluene(FID)	93.6				77.0-120		02/22/2018 01:03	WG1076343

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis date / time	Batch
Acetone	0.0207	J	0.0115	1.00	1.15	1	02/22/2018 03:45	WG1076315
Acrylonitrile	U		0.00206	0.0100	0.0115	1	02/22/2018 03:45	WG1076315
Benzene	0.00142		0.000311	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
Bromobenzene	U		0.000328	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
Bromodichloromethane	U		0.000293	0.00125	0.00144	1	02/22/2018 03:45	WG1076315
Bromoform	U		0.000489	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
Bromomethane	U		0.00155	0.00500	0.00577	1	02/22/2018 03:45	WG1076315
n-Butylbenzene	U		0.000298	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
sec-Butylbenzene	U		0.000232	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
tert-Butylbenzene	U		0.000238	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
Carbon tetrachloride	U		0.000378	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
Chlorobenzene	U		0.000245	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
Chlorodibromomethane	U		0.000430	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
Chloroethane	U		0.00109	0.00500	0.00577	1	02/22/2018 03:45	WG1076315
Chloroform	U		0.000264	0.00500	0.00577	1	02/22/2018 03:45	WG1076315
Chloromethane	U		0.000432	0.00250	0.00288	1	02/22/2018 03:45	WG1076315
2-Chlorotoluene	U		0.000347	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
4-Chlorotoluene	U		0.000277	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
1,2-Dibromo-3-Chloropropane	U		0.00121	0.00500	0.00577	1	02/22/2018 03:45	WG1076315
1,2-Dibromoethane	U		0.000396	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
Dibromomethane	U		0.000441	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
1,2-Dichlorobenzene	U		0.000352	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
1,3-Dichlorobenzene	U		0.000276	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
1,4-Dichlorobenzene	U		0.000261	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
Dichlorodifluoromethane	U		0.000822	0.00500	0.00577	1	02/22/2018 03:45	WG1076315
1,1-Dichloroethane	U		0.000230	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
1,2-Dichloroethane	U		0.000306	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
1,1-Dichloroethene	U		0.000349	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
cis-1,2-Dichloroethene	U		0.000271	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
trans-1,2-Dichloroethene	U		0.000304	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
1,2-Dichloropropane	U		0.000413	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
1,1-Dichloropropene	U		0.000366	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
1,3-Dichloropropane	U		0.000239	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
cis-1,3-Dichloropropene	U		0.000302	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
trans-1,3-Dichloropropene	U		0.000308	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
2,2-Dichloropropane	U		0.000322	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
Di-isopropyl ether	U		0.000286	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
Ethylbenzene	U		0.000343	0.00100	0.00115	1	02/22/2018 03:45	WG1076315





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

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Hexachloro-1,3-butadiene	U		0.000394	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
Isopropylbenzene	U		0.000280	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
p-Isopropyltoluene	U		0.000235	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
2-Butanone (MEK)	U		0.00540	0.0100	0.0115	1	02/22/2018 03:45	WG1076315
Methylene Chloride	U		0.00115	0.00500	0.00577	1	02/22/2018 03:45	WG1076315
4-Methyl-2-pentanone (MIBK)	U		0.00217	0.0100	0.0115	1	02/22/2018 03:45	WG1076315
Methyl tert-butyl ether	U		0.000245	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
Naphthalene	U		0.00115	0.00500	0.00577	1	02/22/2018 03:45	WG1076315
n-Propylbenzene	U		0.000238	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
Styrene	U		0.000270	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
1,1,1,2-Tetrachloroethane	U		0.000304	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
1,1,2,2-Tetrachloroethane	U		0.000421	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
1,1,2-Trichlorotrifluoroethane	U		0.000421	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
Tetrachloroethene	U		0.000318	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
Toluene	0.00151	J	0.000501	0.00500	0.00577	1	02/22/2018 03:45	WG1076315
1,2,3-Trichlorobenzene	U		0.000353	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
1,2,4-Trichlorobenzene	U		0.000447	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
1,1,1-Trichloroethane	U		0.000330	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
1,1,2-Trichloroethane	U		0.000319	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
Trichloroethene	U		0.000322	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
Trichlorofluoromethane	U		0.000441	0.00500	0.00577	1	02/22/2018 03:45	WG1076315
1,2,3-Trichloropropane	U		0.000855	0.00250	0.00288	1	02/22/2018 03:45	WG1076315
1,2,4-Trimethylbenzene	0.000375	J	0.000243	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
1,2,3-Trimethylbenzene	U		0.000331	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
1,3,5-Trimethylbenzene	U		0.000307	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
Vinyl chloride	U		0.000336	0.00100	0.00115	1	02/22/2018 03:45	WG1076315
Xylenes, Total	0.00115	J	0.000805	0.00300	0.00346	1	02/22/2018 03:45	WG1076315
(S) Toluene-d8	94.2				80.0-120		02/22/2018 03:45	WG1076315
(S) Dibromofluoromethane	108				74.0-131		02/22/2018 03:45	WG1076315
(S) 4-Bromofluorobenzene	95.0				64.0-132		02/22/2018 03:45	WG1076315

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	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.86	4.00	4.61	1	02/22/2018 21:55	WG1076682
C28-C40 Oil Range	U		0.316	4.00	4.61	1	02/22/2018 21:55	WG1076682
(S) o-Terphenyl	83.8				18.0-148		02/22/2018 21:55	WG1076682

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

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00740	0.0330	0.0381	1	02/23/2018 12:58	WG1076830
Acenaphthylene	U		0.00774	0.0330	0.0381	1	02/23/2018 12:58	WG1076830
Anthracene	U		0.00729	0.0330	0.0381	1	02/23/2018 12:58	WG1076830
Benzidine	U	J4	0.0735	0.333	0.384	1	02/23/2018 12:58	WG1076830
Benzo(a)anthracene	U		0.00494	0.0330	0.0381	1	02/23/2018 12:58	WG1076830
Benzo(b)fluoranthene	U		0.00802	0.0330	0.0381	1	02/23/2018 12:58	WG1076830
Benzo(k)fluoranthene	U		0.00671	0.0330	0.0381	1	02/23/2018 12:58	WG1076830
Benzo(g,h,i)perylene	U		0.00832	0.0330	0.0381	1	02/23/2018 12:58	WG1076830
Benzo(a)pyrene	U		0.00632	0.0330	0.0381	1	02/23/2018 12:58	WG1076830
Bis(2-chlorethoxy)methane	U		0.00888	0.333	0.384	1	02/23/2018 12:58	WG1076830
Bis(2-chloroethyl)ether	U		0.0103	0.333	0.384	1	02/23/2018 12:58	WG1076830
Bis(2-chloroisopropyl)ether	U		0.00877	0.333	0.384	1	02/23/2018 12:58	WG1076830
4-Bromophenyl-phenylether	U		0.0131	0.333	0.384	1	02/23/2018 12:58	WG1076830
2-Chloronaphthalene	U		0.00737	0.0330	0.0381	1	02/23/2018 12:58	WG1076830



Collected date/time: 02/20/18 08:52

L971930

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

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Chlorophenyl-phenylether	U		0.00723	0.333	0.384	1	02/23/2018 12:58	WG1076830
Chrysene	U		0.00640	0.0330	0.0381	1	02/23/2018 12:58	WG1076830
Dibenz(a,h)anthracene	U		0.00947	0.0330	0.0381	1	02/23/2018 12:58	WG1076830
3,3-Dichlorobenzidine	U		0.0916	0.333	0.384	1	02/23/2018 12:58	WG1076830
2,4-Dinitrotoluene	U		0.00700	0.333	0.384	1	02/23/2018 12:58	WG1076830
2,6-Dinitrotoluene	U		0.00850	0.333	0.384	1	02/23/2018 12:58	WG1076830
Fluoranthene	U		0.00572	0.0330	0.0381	1	02/23/2018 12:58	WG1076830
Fluorene	U		0.00787	0.0330	0.0381	1	02/23/2018 12:58	WG1076830
Hexachlorobenzene	U		0.00987	0.333	0.384	1	02/23/2018 12:58	WG1076830
Hexachloro-1,3-butadiene	U		0.0115	0.333	0.384	1	02/23/2018 12:58	WG1076830
Hexachlorocyclopentadiene	U		0.0677	0.333	0.384	1	02/23/2018 12:58	WG1076830
Hexachloroethane	U		0.0155	0.333	0.384	1	02/23/2018 12:58	WG1076830
Indeno(1,2,3-cd)pyrene	U		0.00890	0.0330	0.0381	1	02/23/2018 12:58	WG1076830
Isophorone	U		0.00602	0.333	0.384	1	02/23/2018 12:58	WG1076830
Naphthalene	U		0.0103	0.0330	0.0381	1	02/23/2018 12:58	WG1076830
Nitrobenzene	U		0.00802	0.333	0.384	1	02/23/2018 12:58	WG1076830
n-Nitrosodimethylamine	U		0.0746	0.333	0.384	1	02/23/2018 12:58	WG1076830
n-Nitrosodiphenylamine	U		0.00685	0.333	0.384	1	02/23/2018 12:58	WG1076830
n-Nitrosodi-n-propylamine	U		0.0104	0.333	0.384	1	02/23/2018 12:58	WG1076830
Phenanthrene	U		0.00609	0.0330	0.0381	1	02/23/2018 12:58	WG1076830
Benzylbutyl phthalate	U		0.0119	0.333	0.384	1	02/23/2018 12:58	WG1076830
Bis(2-ethylhexyl)phthalate	U		0.0138	0.333	0.384	1	02/23/2018 12:58	WG1076830
Di-n-butyl phthalate	U		0.0126	0.333	0.384	1	02/23/2018 12:58	WG1076830
Diethyl phthalate	U		0.00797	0.333	0.384	1	02/23/2018 12:58	WG1076830
Dimethyl phthalate	U		0.00623	0.333	0.384	1	02/23/2018 12:58	WG1076830
Di-n-octyl phthalate	U		0.0105	0.333	0.384	1	02/23/2018 12:58	WG1076830
Pyrene	U		0.0142	0.0330	0.0381	1	02/23/2018 12:58	WG1076830
1,2,4-Trichlorobenzene	U		0.0101	0.333	0.384	1	02/23/2018 12:58	WG1076830
4-Chloro-3-methylphenol	U		0.00550	0.333	0.384	1	02/23/2018 12:58	WG1076830
2-Chlorophenol	U		0.00958	0.333	0.384	1	02/23/2018 12:58	WG1076830
2,4-Dichlorophenol	U		0.00860	0.333	0.384	1	02/23/2018 12:58	WG1076830
2,4-Dimethylphenol	U		0.0543	0.333	0.384	1	02/23/2018 12:58	WG1076830
4,6-Dinitro-2-methylphenol	U		0.143	0.333	0.384	1	02/23/2018 12:58	WG1076830
2,4-Dinitrophenol	U		0.113	0.333	0.384	1	02/23/2018 12:58	WG1076830
2-Nitrophenol	U		0.0150	0.333	0.384	1	02/23/2018 12:58	WG1076830
4-Nitrophenol	U		0.0605	0.333	0.384	1	02/23/2018 12:58	WG1076830
Pentachlorophenol	U		0.0554	0.333	0.384	1	02/23/2018 12:58	WG1076830
Phenol	U		0.00802	0.333	0.384	1	02/23/2018 12:58	WG1076830
2,4,6-Trichlorophenol	U		0.00898	0.333	0.384	1	02/23/2018 12:58	WG1076830
(S) 2-Fluorophenol	65.7				20.0-120		02/23/2018 12:58	WG1076830
(S) Phenol-d5	54.8				20.0-120		02/23/2018 12:58	WG1076830
(S) Nitrobenzene-d5	55.7				18.0-125		02/23/2018 12:58	WG1076830
(S) 2-Fluorobiphenyl	61.7				28.0-120		02/23/2018 12:58	WG1076830
(S) 2,4,6-Tribromophenol	58.6				17.0-137		02/23/2018 12:58	WG1076830
(S) p-Terphenyl-d14	45.0				13.0-131		02/23/2018 12:58	WG1076830

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



Method Blank (MB)

(MB) R3289405-1 02/27/18 07:07

	MB Result	MB Qualifier	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

L971930-02 Original Sample (OS) • Duplicate (DUP)

(OS) L971930-02 02/27/18 07:07 • (DUP) R3289405-3 02/27/18 07:07

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	95.9	95.9	1	0.00959		5

Laboratory Control Sample (LCS)

(LCS) R3289405-2 02/27/18 07:07

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



Method Blank (MB)

(MB) R3288505-1 02/22/18 19:48

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	1.73	⬇	0.795	10.0

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L971930-02 Original Sample (OS) • Duplicate (DUP)

(OS) L971930-02 02/22/18 21:02 • (DUP) R3288505-4 02/22/18 21:10

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	103	112	1	8.01		15

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

(LCS) R3288505-2 02/22/18 19:56 • (LCSD) R3288505-3 02/22/18 20:05

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 %
Chloride	200	199	196	99.5	98.1	80.0-120			1.41	15

L972014-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L972014-01 02/22/18 21:36 • (MS) R3288505-5 02/22/18 22:01 • (MSD) R3288505-6 02/22/18 22:10

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 %
Chloride	522	107	661	660	106	106	1	80.0-120			0.177	15



Method Blank (MB)

(MB) R3289199-3 02/21/18 22:10

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)	98.8			77.0-120

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

(LCS) R3289199-1 02/21/18 21:03 • (LCSD) R3289199-2 02/21/18 21:25

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 %
TPH (GC/FID) Low Fraction	5.50	5.28	5.67	96.1	103	70.0-136			6.99	20
(S) a,a,a-Trifluorotoluene(FID)				110	112	77.0-120				

L971931-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L971931-03 02/22/18 02:09 • (MS) R3289199-4 02/22/18 02:32 • (MSD) R3289199-5 02/22/18 02:54

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 %
TPH (GC/FID) Low Fraction	5.95	ND	0.351	2.48	5.14	41.0	1	10.0-147	J6	J3	151	30
(S) a,a,a-Trifluorotoluene(FID)					94.4	95.8		77.0-120				

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc



Method Blank (MB)

(MB) R3289056-3 02/21/18 19:49

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0100	1.00
Acrylonitrile	U		0.00179	0.0100
Benzene	U		0.000270	0.00100
Bromobenzene	U		0.000284	0.00100
Bromodichloromethane	U		0.000254	0.00125
Bromoform	U		0.000424	0.00100
Bromomethane	U		0.00134	0.00500
n-Butylbenzene	U		0.000258	0.00100
sec-Butylbenzene	U		0.000201	0.00100
tert-Butylbenzene	U		0.000206	0.00100
Carbon tetrachloride	U		0.000328	0.00100
Chlorobenzene	U		0.000212	0.00100
Chlorodibromomethane	U		0.000373	0.00100
Chloroethane	U		0.000946	0.00500
Chloroform	U		0.000229	0.00500
Chloromethane	U		0.000375	0.00250
2-Chlorotoluene	U		0.000301	0.00100
4-Chlorotoluene	U		0.000240	0.00100
1,2-Dibromo-3-Chloropropane	U		0.00105	0.00500
1,2-Dibromoethane	U		0.000343	0.00100
Dibromomethane	U		0.000382	0.00100
1,2-Dichlorobenzene	U		0.000305	0.00100
1,3-Dichlorobenzene	U		0.000239	0.00100
1,4-Dichlorobenzene	U		0.000226	0.00100
Dichlorodifluoromethane	U		0.000713	0.00500
1,1-Dichloroethane	U		0.000199	0.00100
1,2-Dichloroethane	U		0.000265	0.00100
1,1-Dichloroethene	U		0.000303	0.00100
cis-1,2-Dichloroethene	U		0.000235	0.00100
trans-1,2-Dichloroethene	U		0.000264	0.00100
1,2-Dichloropropane	U		0.000358	0.00100
1,1-Dichloropropene	U		0.000317	0.00100
1,3-Dichloropropane	U		0.000207	0.00100
cis-1,3-Dichloropropene	U		0.000262	0.00100
trans-1,3-Dichloropropene	U		0.000267	0.00100
2,2-Dichloropropane	U		0.000279	0.00100
Di-isopropyl ether	U		0.000248	0.00100
Ethylbenzene	U		0.000297	0.00100
Hexachloro-1,3-butadiene	U		0.000342	0.00100
Isopropylbenzene	U		0.000243	0.00100

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



Method Blank (MB)

(MB) R3289056-3 02/21/18 19:49

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.000204	0.00100
2-Butanone (MEK)	U		0.00468	0.0100
Methylene Chloride	0.00118	U	0.00100	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.00188	0.0100
Methyl tert-butyl ether	U		0.000212	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.000206	0.00100
Styrene	U		0.000234	0.00100
1,1,1,2-Tetrachloroethane	U		0.000264	0.00100
1,1,2,2-Tetrachloroethane	U		0.000365	0.00100
Tetrachloroethene	U		0.000276	0.00100
Toluene	U		0.000434	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000365	0.00100
1,2,3-Trichlorobenzene	U		0.000306	0.00100
1,2,4-Trichlorobenzene	U		0.000388	0.00100
1,1,1-Trichloroethane	U		0.000286	0.00100
1,1,2-Trichloroethane	U		0.000277	0.00100
Trichloroethene	U		0.000279	0.00100
Trichlorofluoromethane	U		0.000382	0.00500
1,2,3-Trichloropropane	U		0.000741	0.00250
1,2,3-Trimethylbenzene	U		0.000287	0.00100
1,2,4-Trimethylbenzene	U		0.000211	0.00100
1,3,5-Trimethylbenzene	U		0.000266	0.00100
Vinyl chloride	U		0.000291	0.00100
Xylenes, Total	U		0.000698	0.00300
(S) Toluene-d8	101			80.0-120
(S) Dibromofluoromethane	100			74.0-131
(S) 4-Bromofluorobenzene	98.7			64.0-132

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

(LCS) R3289056-1 02/21/18 18:51 • (LCSD) R3289056-2 02/21/18 19:10

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	0.125	0.138	0.115	111	91.9	11.0-160			18.6	23
Acrylonitrile	0.125	0.125	0.118	99.8	94.6	61.0-143			5.32	20
Benzene	0.0250	0.0239	0.0244	95.8	97.7	71.0-124			1.99	20
Bromobenzene	0.0250	0.0240	0.0248	96.0	99.3	78.0-120			3.40	20
Bromodichloromethane	0.0250	0.0253	0.0255	101	102	75.0-120			0.859	20



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

(LCS) R3289056-1 02/21/18 18:51 • (LCSD) R3289056-2 02/21/18 19:10

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 %
Bromoform	0.0250	0.0270	0.0268	108	107	65.0-133			0.796	20
Bromomethane	0.0250	0.0267	0.0263	107	105	26.0-160			1.56	20
n-Butylbenzene	0.0250	0.0222	0.0214	88.7	85.7	73.0-126			3.46	20
sec-Butylbenzene	0.0250	0.0220	0.0222	87.9	89.0	75.0-121			1.22	20
tert-Butylbenzene	0.0250	0.0216	0.0220	86.4	88.0	74.0-122			1.88	20
Carbon tetrachloride	0.0250	0.0219	0.0224	87.8	89.5	66.0-123			1.92	20
Chlorobenzene	0.0250	0.0239	0.0238	95.7	95.2	79.0-121			0.579	20
Chlorodibromomethane	0.0250	0.0254	0.0246	102	98.3	74.0-128			3.26	20
Chloroethane	0.0250	0.0234	0.0229	93.4	91.8	51.0-147			1.80	20
Chloroform	0.0250	0.0253	0.0256	101	103	73.0-123			1.50	20
Chloromethane	0.0250	0.0237	0.0243	94.9	97.2	51.0-138			2.47	20
2-Chlorotoluene	0.0250	0.0235	0.0242	94.0	96.9	72.0-124			2.98	20
4-Chlorotoluene	0.0250	0.0236	0.0243	94.3	97.1	78.0-120			3.00	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0255	0.0229	102	91.5	65.0-126			10.7	20
1,2-Dibromoethane	0.0250	0.0259	0.0249	104	99.7	78.0-122			4.05	20
Dibromomethane	0.0250	0.0256	0.0248	102	99.0	79.0-120			3.23	20
1,2-Dichlorobenzene	0.0250	0.0253	0.0251	101	100	80.0-120			0.584	20
1,3-Dichlorobenzene	0.0250	0.0239	0.0245	95.7	98.1	72.0-123			2.41	20
1,4-Dichlorobenzene	0.0250	0.0242	0.0243	96.6	97.3	77.0-120			0.663	20
Dichlorodifluoromethane	0.0250	0.0262	0.0268	105	107	49.0-155			2.36	20
1,1-Dichloroethane	0.0250	0.0238	0.0244	95.1	97.6	70.0-128			2.56	20
1,2-Dichloroethane	0.0250	0.0268	0.0269	107	108	69.0-128			0.352	20
1,1-Dichloroethene	0.0250	0.0233	0.0233	93.1	93.3	63.0-131			0.214	20
cis-1,2-Dichloroethene	0.0250	0.0243	0.0247	97.3	98.8	74.0-123			1.56	20
trans-1,2-Dichloroethene	0.0250	0.0241	0.0247	96.3	98.9	72.0-122			2.65	20
1,2-Dichloropropane	0.0250	0.0257	0.0246	103	98.5	75.0-126			4.13	20
1,1-Dichloropropene	0.0250	0.0229	0.0237	91.7	94.7	72.0-130			3.21	20
1,3-Dichloropropane	0.0250	0.0258	0.0250	103	99.8	80.0-121			3.16	20
cis-1,3-Dichloropropene	0.0250	0.0260	0.0254	104	101	80.0-125			2.42	20
trans-1,3-Dichloropropene	0.0250	0.0264	0.0251	106	100	75.0-129			5.03	20
2,2-Dichloropropane	0.0250	0.0228	0.0240	91.1	96.2	60.0-129			5.41	20
Di-isopropyl ether	0.0250	0.0267	0.0268	107	107	62.0-133			0.295	20
Ethylbenzene	0.0250	0.0225	0.0220	90.0	88.1	77.0-120			2.05	20
Hexachloro-1,3-butadiene	0.0250	0.0241	0.0174	96.5	69.5	68.0-128		J3	32.6	20
Isopropylbenzene	0.0250	0.0213	0.0221	85.4	88.6	75.0-120			3.70	20
p-Isopropyltoluene	0.0250	0.0220	0.0219	88.2	87.7	74.0-125			0.495	20
2-Butanone (MEK)	0.125	0.138	0.126	111	101	37.0-159			9.29	20
Methylene Chloride	0.0250	0.0258	0.0266	103	106	67.0-123			3.12	20
4-Methyl-2-pentanone (MIBK)	0.125	0.129	0.117	103	93.7	60.0-144			9.80	20
Methyl tert-butyl ether	0.0250	0.0284	0.0280	114	112	66.0-125			1.29	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



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

(LCS) R3289056-1 02/21/18 18:51 • (LCSD) R3289056-2 02/21/18 19:10

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 %
Naphthalene	0.0250	0.0265	0.0221	106	88.2	64.0-125			18.2	20
n-Propylbenzene	0.0250	0.0219	0.0226	87.8	90.6	78.0-120			3.19	20
Styrene	0.0250	0.0234	0.0245	93.6	98.1	78.0-124			4.66	20
1,1,1,2-Tetrachloroethane	0.0250	0.0234	0.0228	93.5	91.1	74.0-124			2.54	20
1,1,2,2-Tetrachloroethane	0.0250	0.0256	0.0249	102	99.5	73.0-120			2.91	20
Tetrachloroethene	0.0250	0.0227	0.0221	90.6	88.2	70.0-127			2.67	20
Toluene	0.0250	0.0227	0.0224	91.0	89.7	77.0-120			1.35	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0239	0.0251	95.5	100	64.0-135			5.04	20
1,2,3-Trichlorobenzene	0.0250	0.0257	0.0200	103	80.1	68.0-126		J3	24.8	20
1,2,4-Trichlorobenzene	0.0250	0.0249	0.0206	99.6	82.2	70.0-127			19.2	20
1,1,1-Trichloroethane	0.0250	0.0235	0.0245	94.1	98.0	69.0-125			4.10	20
1,1,2-Trichloroethane	0.0250	0.0252	0.0245	101	97.9	78.0-120			2.80	20
Trichloroethene	0.0250	0.0246	0.0251	98.6	101	79.0-120			1.95	20
Trichlorofluoromethane	0.0250	0.0240	0.0246	95.9	98.2	59.0-136			2.39	20
1,2,3-Trichloropropane	0.0250	0.0252	0.0233	101	93.1	73.0-124			8.03	20
1,2,3-Trimethylbenzene	0.0250	0.0238	0.0238	95.3	95.0	76.0-120			0.263	20
1,2,4-Trimethylbenzene	0.0250	0.0226	0.0228	90.2	91.1	75.0-120			0.981	20
1,3,5-Trimethylbenzene	0.0250	0.0222	0.0227	89.0	90.7	75.0-120			1.88	20
Vinyl chloride	0.0250	0.0244	0.0253	97.7	101	63.0-134			3.54	20
Xylenes, Total	0.0750	0.0691	0.0683	92.1	91.1	77.0-120			1.16	20
(S) Toluene-d8				101	99.1	80.0-120				
(S) Dibromofluoromethane				103	105	74.0-131				
(S) 4-Bromofluorobenzene				98.1	102	64.0-132				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L971930-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L971930-04 02/22/18 03:45 • (MS) R3289056-4 02/22/18 04:05 • (MSD) R3289056-5 02/22/18 04:24

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 %
Acetone	0.144	0.0207	0.0819	0.0853	42.5	44.8	1	10.0-160			4.02	36
Acrylonitrile	0.144	U	0.134	0.132	92.9	91.6	1	14.0-160			1.36	33
Benzene	0.0288	0.00142	0.0258	0.0270	84.6	88.6	1	13.0-146			4.41	27
Bromobenzene	0.0288	U	0.0165	0.0182	57.3	63.2	1	10.0-149			9.82	33
Bromodichloromethane	0.0288	U	0.0231	0.0247	80.3	85.7	1	15.0-142			6.60	28
Bromoform	0.0288	U	0.0203	0.0229	70.3	79.4	1	10.0-147			12.2	31
Bromomethane	0.0288	U	0.0243	0.0270	84.2	93.6	1	10.0-160			10.6	32
n-Butylbenzene	0.0288	U	0.0148	0.0156	51.4	54.1	1	10.0-154			5.22	37
sec-Butylbenzene	0.0288	U	0.0179	0.0193	62.1	66.8	1	10.0-151			7.35	36
tert-Butylbenzene	0.0288	U	0.0192	0.0200	66.4	69.3	1	10.0-152			4.19	35

L971930-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L971930-04 02/22/18 03:45 • (MS) R3289056-4 02/22/18 04:05 • (MSD) R3289056-5 02/22/18 04:24

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 %
Carbon tetrachloride	0.0288	U	0.0247	0.0259	85.5	89.9	1	13.0-140			4.97	30
Chlorobenzene	0.0288	U	0.0188	0.0199	65.3	69.1	1	10.0-149			5.56	31
Chlorodibromomethane	0.0288	U	0.0207	0.0219	71.8	76.0	1	12.0-147			5.59	29
Chloroethane	0.0288	U	0.0270	0.0283	93.5	98.2	1	10.0-159			4.86	33
Chloroform	0.0288	U	0.0258	0.0267	89.4	92.7	1	18.0-148			3.57	28
Chloromethane	0.0288	U	0.0203	0.0221	70.2	76.5	1	10.0-146			8.59	29
2-Chlorotoluene	0.0288	U	0.0165	0.0182	57.3	63.3	1	10.0-151			9.84	35
4-Chlorotoluene	0.0288	U	0.0153	0.0163	53.0	56.5	1	10.0-150			6.29	35
1,2-Dibromo-3-Chloropropane	0.0288	U	0.0217	0.0231	75.4	80.0	1	10.0-149			5.91	34
1,2-Dibromoethane	0.0288	U	0.0221	0.0233	76.8	80.9	1	14.0-145			5.21	28
Dibromomethane	0.0288	U	0.0242	0.0254	84.0	88.0	1	18.0-144			4.58	27
1,2-Dichlorobenzene	0.0288	U	0.0132	0.0141	45.8	49.0	1	10.0-153			6.65	34
1,3-Dichlorobenzene	0.0288	U	0.0129	0.0140	44.9	48.5	1	10.0-150			7.72	35
1,4-Dichlorobenzene	0.0288	U	0.0129	0.0137	44.8	47.6	1	10.0-148			6.10	34
Dichlorodifluoromethane	0.0288	U	0.0302	0.0322	105	112	1	10.0-160			6.31	30
1,1-Dichloroethane	0.0288	U	0.0246	0.0262	85.3	90.9	1	19.0-148			6.36	28
1,2-Dichloroethane	0.0288	U	0.0249	0.0266	86.2	92.3	1	17.0-147			6.75	27
1,1-Dichloroethene	0.0288	U	0.0265	0.0282	91.9	97.9	1	10.0-150			6.29	31
cis-1,2-Dichloroethene	0.0288	U	0.0243	0.0265	84.2	92.0	1	16.0-145			8.87	28
trans-1,2-Dichloroethene	0.0288	U	0.0255	0.0268	88.5	93.0	1	11.0-142			5.02	29
1,2-Dichloropropane	0.0288	U	0.0240	0.0250	83.3	86.7	1	17.0-148			3.88	28
1,1-Dichloropropene	0.0288	U	0.0257	0.0262	89.2	91.0	1	10.0-150			1.99	30
1,3-Dichloropropane	0.0288	U	0.0221	0.0236	76.6	81.9	1	16.0-148			6.66	27
cis-1,3-Dichloropropene	0.0288	U	0.0215	0.0223	74.6	77.3	1	13.0-150			3.58	28
trans-1,3-Dichloropropene	0.0288	U	0.0209	0.0217	72.6	75.4	1	10.0-152			3.78	29
2,2-Dichloropropane	0.0288	U	0.0250	0.0259	86.6	89.9	1	16.0-143			3.80	30
Di-isopropyl ether	0.0288	U	0.0256	0.0268	88.8	92.8	1	16.0-149			4.44	28
Ethylbenzene	0.0288	U	0.0201	0.0210	69.6	72.9	1	10.0-147			4.54	31
Hexachloro-1,3-butadiene	0.0288	U	0.0136	0.0156	47.1	54.3	1	10.0-154			14.1	40
Isopropylbenzene	0.0288	U	0.0188	0.0198	65.1	68.8	1	10.0-147			5.60	33
p-Isopropyltoluene	0.0288	U	0.0165	0.0172	57.2	59.6	1	10.0-156			3.98	37
2-Butanone (MEK)	0.144	U	0.109	0.111	75.3	76.8	1	10.0-160			1.92	33
Methylene Chloride	0.0288	U	0.0250	0.0260	86.7	90.1	1	16.0-139			3.83	29
4-Methyl-2-pentanone (MIBK)	0.144	U	0.134	0.137	92.7	95.1	1	12.0-160			2.57	32
Methyl tert-butyl ether	0.0288	U	0.0269	0.0284	93.4	98.4	1	21.0-145			5.28	29
Naphthalene	0.0288	U	0.00981	0.0106	34.0	36.7	1	10.0-153			7.45	36
n-Propylbenzene	0.0288	U	0.0176	0.0183	60.9	63.3	1	10.0-151			3.83	34
Styrene	0.0288	U	0.00426	0.00315	14.8	10.9	1	10.0-155			30.0	34
1,1,1,2-Tetrachloroethane	0.0288	U	0.0194	0.0206	67.3	71.3	1	10.0-147			5.78	30

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



L971930-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L971930-04 02/22/18 03:45 • (MS) R3289056-4 02/22/18 04:05 • (MSD) R3289056-5 02/22/18 04:24

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 %
1,1,2,2-Tetrachloroethane	0.0288	U	0.0210	0.0226	72.9	78.5	1	10.0-155			7.40	31
Tetrachloroethene	0.0288	U	0.0205	0.0208	71.1	72.1	1	10.0-144			1.28	32
Toluene	0.0288	0.00151	0.0221	0.0227	71.4	73.6	1	10.0-144			2.74	28
1,1,2-Trichlorotrifluoroethane	0.0288	U	0.0303	0.0317	105	110	1	10.0-153			4.49	33
1,2,3-Trichlorobenzene	0.0288	U	0.00706	0.00770	24.5	26.7	1	10.0-153			8.65	40
1,2,4-Trichlorobenzene	0.0288	U	0.00746	0.00820	25.9	28.4	1	10.0-156			9.45	40
1,1,1-Trichloroethane	0.0288	U	0.0262	0.0274	91.0	95.1	1	18.0-145			4.47	29
1,1,2-Trichloroethane	0.0288	U	0.0219	0.0229	75.9	79.3	1	12.0-151			4.40	28
Trichloroethene	0.0288	U	0.0248	0.0261	86.0	90.6	1	11.0-148			5.26	29
Trichlorofluoromethane	0.0288	U	0.0290	0.0313	101	109	1	10.0-157			7.77	34
1,2,3-Trichloropropane	0.0288	U	0.0221	0.0243	76.6	84.3	1	10.0-154			9.56	32
1,2,3-Trimethylbenzene	0.0288	U	0.0169	0.0181	58.5	62.8	1	10.0-150			7.13	33
1,2,4-Trimethylbenzene	0.0288	0.000375	0.0157	0.0166	53.3	56.3	1	10.0-151			5.33	34
1,3,5-Trimethylbenzene	0.0288	U	0.0170	0.0176	58.9	61.0	1	10.0-150			3.51	33
Vinyl chloride	0.0288	U	0.0290	0.0301	100	104	1	10.0-150			3.73	29
Xylenes, Total	0.0865	0.00115	0.0579	0.0597	65.6	67.7	1	10.0-150			3.14	31
(S) Toluene-d8					93.3	94.0		80.0-120				
(S) Dibromofluoromethane					107	107		74.0-131				
(S) 4-Bromofluorobenzene					94.4	95.4		64.0-132				

¹Cp

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Method Blank (MB)

(MB) R3289054-3 02/22/18 10:56

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0100	1.00
Acrolein	U		0.00887	0.0500
Acrylonitrile	U		0.00187	0.0100
Benzene	U		0.000331	0.00100
Bromobenzene	U		0.000352	0.00100
Bromodichloromethane	U		0.000380	0.00125
Bromoform	U		0.000469	0.00100
Bromomethane	U		0.000866	0.00500
n-Butylbenzene	U		0.000361	0.00100
sec-Butylbenzene	U		0.000365	0.00100
tert-Butylbenzene	U		0.000399	0.00100
Carbon tetrachloride	U		0.000379	0.00100
Chlorobenzene	U		0.000348	0.00100
Chlorodibromomethane	U		0.000327	0.00100
Chloroethane	U		0.000453	0.00500
Chloroform	U		0.000324	0.00500
Chloromethane	U		0.000276	0.00250
2-Chlorotoluene	U		0.000375	0.00100
4-Chlorotoluene	U		0.000351	0.00100
1,2-Dibromo-3-Chloropropane	U		0.00133	0.00500
1,2-Dibromoethane	U		0.000381	0.00100
Dibromomethane	U		0.000346	0.00100
1,2-Dichlorobenzene	U		0.000349	0.00100
1,3-Dichlorobenzene	U		0.000220	0.00100
1,4-Dichlorobenzene	U		0.000274	0.00100
Dichlorodifluoromethane	U		0.000551	0.00500
1,1-Dichloroethane	U		0.000259	0.00100
1,2-Dichloroethane	U		0.000361	0.00100
1,1-Dichloroethene	U		0.000398	0.00100
cis-1,2-Dichloroethene	U		0.000260	0.00100
trans-1,2-Dichloroethene	U		0.000396	0.00100
1,2-Dichloropropane	U		0.000306	0.00100
1,1-Dichloropropene	U		0.000352	0.00100
1,3-Dichloropropane	U		0.000366	0.00100
cis-1,3-Dichloropropene	U		0.000418	0.00100
trans-1,3-Dichloropropene	U		0.000419	0.00100
2,2-Dichloropropane	U		0.000321	0.00100
Di-isopropyl ether	U		0.000320	0.00100
Ethylbenzene	U		0.000384	0.00100
Hexachloro-1,3-butadiene	U		0.000256	0.00100

¹Cp

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Method Blank (MB)

(MB) R3289054-3 02/22/18 10:56

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Isopropylbenzene	U		0.000326	0.00100
p-Isopropyltoluene	U		0.000350	0.00100
2-Butanone (MEK)	U		0.00393	0.0100
Methylene Chloride	U		0.00100	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100
Methyl tert-butyl ether	U		0.000367	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.000349	0.00100
Styrene	U		0.000307	0.00100
1,1,1,2-Tetrachloroethane	U		0.000385	0.00100
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100
Tetrachloroethene	U		0.000372	0.00100
1,1,2-Trichlorotrifluoroethane	U		0.000303	0.00100
1,2,3-Trichlorobenzene	U		0.000230	0.00100
Toluene	U		0.000412	0.00100
1,2,4-Trichlorobenzene	U		0.000355	0.00100
1,1,1-Trichloroethane	U		0.000319	0.00100
1,1,2-Trichloroethane	U		0.000383	0.00100
Trichloroethene	U		0.000398	0.00100
Trichlorofluoromethane	U		0.00120	0.00500
1,2,3-Trichloropropane	U		0.000807	0.00250
1,2,3-Trimethylbenzene	U		0.000321	0.00100
1,2,4-Trimethylbenzene	U		0.000373	0.00100
1,3,5-Trimethylbenzene	U		0.000387	0.00100
Vinyl chloride	U		0.000259	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	106			80.0-120
(S) Dibromofluoromethane	99.6			76.0-123
(S) 4-Bromofluorobenzene	99.4			80.0-120

1

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

(LCS) R3289054-1 02/22/18 09:38 • (LCSD) R3289054-2 02/22/18 09:58

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	0.217	0.219	174	176	10.0-160	J4	J4	1.04	23
Acrolein	0.125	0.891	0.850	713	680	10.0-160	J4	J4	4.68	20
Acrylonitrile	0.125	0.130	0.128	104	102	60.0-142			1.80	20
Bromobenzene	0.0250	0.0238	0.0243	95.1	97.4	79.0-120			2.38	20



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

(LCS) R3289054-1 02/22/18 09:38 • (LCSD) R3289054-2 02/22/18 09:58

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Bromodichloromethane	0.0250	0.0251	0.0252	100	101	76.0-120			0.209	20
Bromoform	0.0250	0.0255	0.0264	102	106	67.0-132			3.49	20
Bromomethane	0.0250	0.0256	0.0246	103	98.5	18.0-160			4.03	20
n-Butylbenzene	0.0250	0.0253	0.0255	101	102	72.0-126			0.923	20
sec-Butylbenzene	0.0250	0.0254	0.0256	101	102	74.0-121			0.845	20
tert-Butylbenzene	0.0250	0.0250	0.0253	100	101	75.0-122			1.32	20
Carbon tetrachloride	0.0250	0.0249	0.0246	99.5	98.5	63.0-122			1.05	20
Benzene	0.0250	0.0245	0.0244	98.1	97.6	69.0-123			0.502	20
Chlorobenzene	0.0250	0.0258	0.0255	103	102	79.0-121			1.21	20
Chlorodibromomethane	0.0250	0.0262	0.0257	105	103	75.0-125			1.93	20
Chloroethane	0.0250	0.0252	0.0248	101	99.4	47.0-152			1.56	20
Chloroform	0.0250	0.0252	0.0246	101	98.6	72.0-121			2.15	20
Chloromethane	0.0250	0.0239	0.0237	95.5	94.7	48.0-139			0.847	20
2-Chlorotoluene	0.0250	0.0244	0.0250	97.5	100	74.0-122			2.60	20
4-Chlorotoluene	0.0250	0.0248	0.0254	99.4	101	79.0-120			2.06	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0250	0.0265	100	106	64.0-127			5.54	20
1,2-Dibromoethane	0.0250	0.0257	0.0262	103	105	77.0-123			2.06	20
Dibromomethane	0.0250	0.0257	0.0252	103	101	78.0-120			1.89	20
1,2-Dichlorobenzene	0.0250	0.0252	0.0260	101	104	80.0-120			3.19	20
1,3-Dichlorobenzene	0.0250	0.0254	0.0261	102	105	72.0-123			2.70	20
1,4-Dichlorobenzene	0.0250	0.0249	0.0253	99.5	101	77.0-120			1.72	20
Dichlorodifluoromethane	0.0250	0.0266	0.0262	106	105	49.0-155			1.25	20
1,1-Dichloroethane	0.0250	0.0247	0.0244	98.9	97.6	70.0-126			1.31	20
1,2-Dichloroethane	0.0250	0.0251	0.0246	101	98.3	67.0-126			2.23	20
1,1-Dichloroethene	0.0250	0.0251	0.0248	100	99.1	64.0-129			1.10	20
cis-1,2-Dichloroethene	0.0250	0.0248	0.0246	99.4	98.4	73.0-120			1.03	20
trans-1,2-Dichloroethene	0.0250	0.0257	0.0246	103	98.5	71.0-121			4.30	20
1,2-Dichloropropane	0.0250	0.0249	0.0245	99.7	98.1	75.0-125			1.66	20
1,1-Dichloropropene	0.0250	0.0255	0.0249	102	99.4	71.0-129			2.66	20
1,3-Dichloropropane	0.0250	0.0257	0.0253	103	101	80.0-121			1.82	20
cis-1,3-Dichloropropene	0.0250	0.0260	0.0261	104	104	79.0-123			0.297	20
trans-1,3-Dichloropropene	0.0250	0.0261	0.0258	105	103	74.0-127			1.50	20
2,2-Dichloropropane	0.0250	0.0278	0.0271	111	108	60.0-125			2.57	20
Di-isopropyl ether	0.0250	0.0238	0.0232	95.1	92.9	59.0-133			2.34	20
Hexachloro-1,3-butadiene	0.0250	0.0243	0.0245	97.1	98.0	64.0-131			0.912	20
Isopropylbenzene	0.0250	0.0254	0.0259	102	104	75.0-120			1.97	20
p-Isopropyltoluene	0.0250	0.0258	0.0262	103	105	74.0-126			1.52	20
2-Butanone (MEK)	0.125	0.179	0.178	144	142	37.0-158			0.958	20
Methylene Chloride	0.0250	0.0228	0.0229	91.3	91.6	66.0-121			0.320	20
4-Methyl-2-pentanone (MIBK)	0.125	0.129	0.126	103	101	59.0-143			2.12	20

¹Cp

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

(LCS) R3289054-1 02/22/18 09:38 • (LCSD) R3289054-2 02/22/18 09:58

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Ethylbenzene	0.0250	0.0256	0.0258	102	103	77.0-120			0.819	20
Naphthalene	0.0250	0.0245	0.0253	97.9	101	62.0-128			3.32	20
n-Propylbenzene	0.0250	0.0247	0.0253	99.0	101	79.0-120			2.43	20
Styrene	0.0250	0.0257	0.0262	103	105	78.0-124			1.80	20
1,1,1,2-Tetrachloroethane	0.0250	0.0260	0.0259	104	104	75.0-122			0.420	20
1,1,2,2-Tetrachloroethane	0.0250	0.0244	0.0251	97.4	100	71.0-122			3.04	20
Tetrachloroethene	0.0250	0.0265	0.0258	106	103	70.0-127			2.33	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0250	0.0246	100	98.3	61.0-136			1.80	20
1,2,3-Trichlorobenzene	0.0250	0.0251	0.0251	101	100	61.0-133			0.326	20
1,2,4-Trichlorobenzene	0.0250	0.0252	0.0252	101	101	69.0-129			0.191	20
1,1,1-Trichloroethane	0.0250	0.0252	0.0246	101	98.4	68.0-122			2.29	20
Methyl tert-butyl ether	0.0250	0.0250	0.0244	99.9	97.4	64.0-123			2.55	20
1,1,2-Trichloroethane	0.0250	0.0249	0.0250	99.6	100	78.0-120			0.600	20
Trichloroethene	0.0250	0.0263	0.0261	105	104	78.0-120			0.908	20
Trichlorofluoromethane	0.0250	0.0253	0.0248	101	99.4	56.0-137			1.81	20
1,2,3-Trichloropropane	0.0250	0.0247	0.0251	99.0	101	72.0-124			1.57	20
1,2,3-Trimethylbenzene	0.0250	0.0250	0.0258	99.9	103	75.0-120			3.13	20
1,2,4-Trimethylbenzene	0.0250	0.0250	0.0256	100	102	75.0-120			2.04	20
1,3,5-Trimethylbenzene	0.0250	0.0249	0.0254	99.7	102	75.0-120			2.05	20
Vinyl chloride	0.0250	0.0251	0.0244	100	97.8	64.0-133			2.64	20
Toluene	0.0250	0.0247	0.0245	99.0	97.8	77.0-120			1.19	20
Xylenes, Total	0.0750	0.0767	0.0764	102	102	77.0-120			0.392	20
(S) Toluene-d8				103	102	80.0-120				
(S) Dibromofluoromethane				98.6	97.2	76.0-123				
(S) 4-Bromofluorobenzene				97.4	100	80.0-120				

¹Cp

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Method Blank (MB)

(MB) R3288400-1 02/22/18 20:30

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	U		0.274	4.00
(S) o-Terphenyl	95.0			18.0-148

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

(LCS) R3288400-2 02/22/18 20:44 • (LCSD) R3288400-3 02/22/18 20:58

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 %
C10-C28 Diesel Range	50.0	41.9	49.3	83.7	98.7	50.0-150			16.4	20
(S) o-Terphenyl				93.4	103	18.0-148				

¹Cp

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⁵Sr

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⁹Sc

Method Blank (MB)

(MB) R3288510-3 02/23/18 09:07

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00642	0.0330
Acenaphthylene	U		0.00671	0.0330
Anthracene	U		0.00632	0.0330
Benzidine	U		0.0637	0.333
Benzo(a)anthracene	U		0.00428	0.0330
Benzo(b)fluoranthene	U		0.00695	0.0330
Benzo(k)fluoranthene	U		0.00582	0.0330
Benzo(g,h,i)perylene	U		0.00721	0.0330
Benzo(a)pyrene	U		0.00548	0.0330
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
2-Chloronaphthalene	U		0.00639	0.0330
4-Chlorophenyl-phenylether	U		0.00627	0.333
Chrysene	U		0.00555	0.0330
Dibenz(a,h)anthracene	U		0.00821	0.0330
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	0.0330
Fluorene	U		0.00682	0.0330
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	0.0330
Isophorone	U		0.00522	0.333
Naphthalene	U		0.00889	0.0330
Nitrobenzene	U		0.00695	0.333
n-Nitrosodimethylamine	U		0.0647	0.333
n-Nitrosodiphenylamine	U		0.00594	0.333
n-Nitrosodi-n-propylamine	U		0.00906	0.333
Phenanthrene	U		0.00528	0.0330
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

¹Cp

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Method Blank (MB)

(MB) R3288510-3 02/23/18 09:07

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Pyrene	U		0.0123	0.0330
1,2,4-Trichlorobenzene	U		0.00876	0.333
4-Chloro-3-methylphenol	U		0.00477	0.333
2-Chlorophenol	U		0.00831	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
2,4,6-Trichlorophenol	U		0.00779	0.333
(S) Nitrobenzene-d5	62.3			18.0-125
(S) 2-Fluorobiphenyl	69.3			28.0-120
(S) p-Terphenyl-d14	57.1			13.0-131
(S) Phenol-d5	61.4			20.0-120
(S) 2-Fluorophenol	67.5			20.0-120
(S) 2,4,6-Tribromophenol	74.4			17.0-137

¹Cp

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

(LCS) R3288510-1 02/23/18 08:20 • (LCSD) R3288510-2 02/23/18 08:43

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 %
Acenaphthene	0.667	0.477	0.490	71.6	73.5	47.0-120			2.69	21
Acenaphthylene	0.667	0.494	0.502	74.0	75.3	48.0-120			1.67	21
Anthracene	0.667	0.443	0.452	66.5	67.8	46.0-120			2.03	20
Benzidine	0.667	ND	ND	0.000	0.000	1.00-120	J4	J4	0.000	36
Benzo(a)anthracene	0.667	0.487	0.495	72.9	74.2	46.0-120			1.70	20
Benzo(b)fluoranthene	0.667	0.487	0.504	73.0	75.5	45.0-120			3.34	22
Benzo(k)fluoranthene	0.667	0.507	0.506	75.9	75.8	45.0-120			0.201	23
Benzo(g,h,i)perylene	0.667	0.531	0.555	79.6	83.2	48.0-120			4.40	21
Benzo(a)pyrene	0.667	0.503	0.507	75.4	76.0	46.0-120			0.749	21
Bis(2-chlorethoxy)methane	0.667	0.343	0.346	51.4	51.8	41.0-120			0.773	22
Bis(2-chloroethyl)ether	0.667	0.376	0.384	56.3	57.6	28.0-120			2.23	28
Bis(2-chloroisopropyl)ether	0.667	0.420	0.433	63.0	64.9	40.0-120			3.04	27
4-Bromophenyl-phenylether	0.667	0.520	0.522	78.0	78.3	45.0-120			0.450	20
2-Chloronaphthalene	0.667	0.469	0.471	70.3	70.7	43.0-120			0.556	22

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

(LCS) R3288510-1 02/23/18 08:20 • (LCSD) R3288510-2 02/23/18 08:43

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 %
4-Chlorophenyl-phenylether	0.667	0.496	0.505	74.4	75.7	46.0-120			1.73	21
Chrysene	0.667	0.480	0.488	71.9	73.2	46.0-120			1.73	20
Dibenz(a,h)anthracene	0.667	0.512	0.524	76.8	78.6	47.0-120			2.26	22
3,3-Dichlorobenzidine	0.667	0.419	0.441	62.8	66.2	20.0-130			5.30	24
2,4-Dinitrotoluene	0.667	0.514	0.515	77.1	77.3	48.0-122			0.192	21
2,6-Dinitrotoluene	0.667	0.481	0.485	72.0	72.6	46.0-120			0.839	21
Fluoranthene	0.667	0.497	0.501	74.4	75.1	46.0-120			0.877	20
Fluorene	0.667	0.488	0.493	73.1	74.0	47.0-120			1.15	20
Hexachlorobenzene	0.667	0.547	0.547	82.0	82.0	42.0-120			0.0212	20
Hexachloro-1,3-butadiene	0.667	0.447	0.449	67.0	67.4	36.0-120			0.549	26
Hexachlorocyclopentadiene	0.667	0.470	0.480	70.5	71.9	20.0-124			2.08	26
Hexachloroethane	0.667	0.426	0.431	63.9	64.7	32.0-120			1.20	31
Indeno(1,2,3-cd)pyrene	0.667	0.526	0.543	78.9	81.5	48.0-120			3.16	21
Isophorone	0.667	0.374	0.379	56.1	56.9	42.0-120			1.36	21
Naphthalene	0.667	0.378	0.381	56.7	57.1	41.0-120			0.713	24
Nitrobenzene	0.667	0.359	0.366	53.8	54.9	36.0-120			2.05	24
n-Nitrosodimethylamine	0.667	0.350	0.355	52.5	53.2	20.0-120			1.24	31
n-Nitrosodiphenylamine	0.667	0.482	0.479	72.2	71.9	42.0-120			0.475	20
n-Nitrosodi-n-propylamine	0.667	0.401	0.411	60.0	61.6	39.0-120			2.48	23
Phenanthrene	0.667	0.466	0.476	69.9	71.3	45.0-120			2.03	20
Benzylbutyl phthalate	0.667	0.466	0.483	69.9	72.5	41.0-123			3.54	20
Bis(2-ethylhexyl)phthalate	0.667	0.472	0.492	70.8	73.7	41.0-124			4.04	20
Di-n-butyl phthalate	0.667	0.477	0.482	71.5	72.2	44.0-120			1.01	20
Diethyl phthalate	0.667	0.494	0.485	74.0	72.7	46.0-120			1.86	20
Dimethyl phthalate	0.667	0.482	0.489	72.3	73.4	47.0-120			1.46	21
Di-n-octyl phthalate	0.667	0.473	0.494	70.9	74.1	40.0-123			4.40	21
Pyrene	0.667	0.479	0.493	71.9	74.0	45.0-120			2.84	21
1,2,4-Trichlorobenzene	0.667	0.412	0.420	61.7	63.0	40.0-120			2.10	25
4-Chloro-3-methylphenol	0.667	0.412	0.415	61.7	62.2	46.0-120			0.777	20
2-Chlorophenol	0.667	0.457	0.458	68.6	68.7	37.0-120			0.141	27
2,4-Dichlorophenol	0.667	0.439	0.438	65.8	65.7	45.0-120			0.221	21
2,4-Dimethylphenol	0.667	0.401	0.401	60.1	60.2	40.0-120			0.226	22
4,6-Dinitro-2-methylphenol	0.667	0.557	0.548	83.5	82.2	34.0-120			1.51	23
2,4-Dinitrophenol	0.667	0.432	0.423	64.7	63.5	10.0-120			1.98	30
2-Nitrophenol	0.667	0.424	0.426	63.6	63.9	42.0-120			0.374	24
4-Nitrophenol	0.667	0.427	0.431	64.0	64.7	40.0-120			1.01	21
Pentachlorophenol	0.667	0.502	0.523	75.2	78.5	33.0-122			4.24	22
Phenol	0.667	0.412	0.427	61.8	64.0	38.0-120			3.52	25
2,4,6-Trichlorophenol	0.667	0.500	0.510	74.9	76.5	47.0-120			2.14	22
(S) Nitrobenzene-d5				55.6	53.9	18.0-125				

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

[L971930-01,02,04](#)

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

(LCS) R3288510-1 02/23/18 08:20 • (LCSD) R3288510-2 02/23/18 08:43

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 %
(S) 2-Fluorobiphenyl				72.7	72.4	28.0-120				
(S) p-Terphenyl-d14				60.3	59.1	13.0-131				
(S) Phenol-d5				65.2	65.4	20.0-120				
(S) 2-Fluorophenol				71.5	71.5	20.0-120				
(S) 2,4,6-Tribromophenol				82.6	80.8	17.0-137				

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

L970195-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L970195-03 02/23/18 09:30 • (MS) R3288510-4 02/23/18 09:53 • (MSD) R3288510-5 02/23/18 10:16

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 %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Acenaphthene	0.711	U	0.520	0.479	73.1	67.3	1	37.0-120			8.31	23
Acenaphthylene	0.711	U	0.533	0.499	74.9	70.2	1	41.0-120			6.57	22
Anthracene	0.711	U	0.478	0.444	67.2	62.5	1	30.0-123			7.19	25
Benzidine	0.711	U	0.0954	ND	13.4	0.000	1	1.00-120		J3 J6	200	36
Benzo(a)anthracene	0.711	U	0.529	0.488	74.3	68.6	1	21.0-123			7.96	26
Benzo(b)fluoranthene	0.711	U	0.548	0.486	77.1	68.4	1	20.0-127			12.0	29
Benzo(k)fluoranthene	0.711	U	0.530	0.515	74.5	72.4	1	22.0-123			2.90	28
Benzo(g,h,i)perylene	0.711	U	0.587	0.551	82.5	77.5	1	10.0-120			6.30	32
Benzo(a)pyrene	0.711	U	0.547	0.506	76.9	71.1	1	23.0-120			7.74	27
Bis(2-chlorethoxy)methane	0.711	U	0.365	0.348	51.4	49.0	1	37.0-120			4.75	22
Bis(2-chloroethyl)ether	0.711	U	0.416	0.390	58.5	54.8	1	26.0-120			6.63	27
Bis(2-chloroisopropyl)ether	0.711	U	0.462	0.430	65.0	60.5	1	35.0-120			7.13	25
4-Bromophenyl-phenylether	0.711	U	0.535	0.504	75.2	70.9	1	34.0-120			5.83	23
2-Chloronaphthalene	0.711	U	0.501	0.470	70.4	66.0	1	40.0-120			6.44	22
4-Chlorophenyl-phenylether	0.711	U	0.530	0.493	74.5	69.3	1	37.0-120			7.21	23
Chrysene	0.711	U	0.519	0.491	72.9	69.0	1	19.0-127			5.54	27
Dibenz(a,h)anthracene	0.711	U	0.568	0.527	79.8	74.0	1	10.0-120			7.55	28
3,3-Dichlorobenzidine	0.711	U	0.470	0.434	66.1	61.1	1	10.0-142			7.91	30
2,4-Dinitrotoluene	0.711	U	0.548	0.504	77.1	70.9	1	37.0-129			8.44	24
2,6-Dinitrotoluene	0.711	U	0.524	0.487	73.7	68.5	1	40.0-120			7.27	23
Fluoranthene	0.711	U	0.524	0.491	73.7	69.0	1	20.0-133			6.54	28
Fluorene	0.711	U	0.520	0.487	73.1	68.5	1	35.0-120			6.38	23
Hexachlorobenzene	0.711	U	0.565	0.527	79.5	74.2	1	33.0-120			6.90	24
Hexachloro-1,3-butadiene	0.711	U	0.465	0.445	65.4	62.6	1	33.0-120			4.34	25
Hexachlorocyclopentadiene	0.711	U	0.496	0.465	69.7	65.4	1	10.0-120			6.42	33
Hexachloroethane	0.711	U	0.459	0.433	64.5	60.9	1	21.0-120			5.73	30
Indeno(1,2,3-cd)pyrene	0.711	U	0.585	0.539	82.3	75.8	1	10.0-120			8.22	30
Isophorone	0.711	U	0.398	0.381	55.9	53.6	1	38.0-120			4.28	22

⁶Qc

⁷Gl

⁸Al

⁹Sc

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

L971930-01,02,04

L970195-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L970195-03 02/23/18 09:30 • (MS) R3288510-4 02/23/18 09:53 • (MSD) R3288510-5 02/23/18 10:16

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 %
Naphthalene	0.711	U	0.402	0.384	56.6	54.0	1	37.0-120			4.71	25
Nitrobenzene	0.711	U	0.385	0.367	54.2	51.7	1	32.0-120			4.77	24
n-Nitrosodimethylamine	0.711	U	0.391	0.360	55.0	50.6	1	18.0-120			8.29	27
n-Nitrosodiphenylamine	0.711	U	0.494	0.458	69.4	64.4	1	20.0-125			7.44	25
n-Nitrosodi-n-propylamine	0.711	U	0.442	0.420	62.1	59.0	1	34.0-120			5.21	23
Phenanthrene	0.711	U	0.499	0.472	70.1	66.4	1	24.0-124			5.46	25
Benzylbutyl phthalate	0.711	U	0.515	0.475	72.5	66.7	1	18.0-130			8.26	27
Bis(2-ethylhexyl)phthalate	0.711	U	0.528	0.481	74.2	67.7	1	19.0-127			9.20	28
Di-n-butyl phthalate	0.711	U	0.513	0.475	72.2	66.8	1	29.0-120			7.69	26
Diethyl phthalate	0.711	U	0.523	0.483	73.5	67.8	1	42.0-121			7.97	23
Dimethyl phthalate	0.711	U	0.514	0.483	72.2	67.9	1	42.0-120			6.18	23
Di-n-octyl phthalate	0.711	U	0.529	0.489	74.4	68.7	1	21.0-122			8.01	27
Pyrene	0.711	U	0.523	0.484	73.5	68.0	1	19.0-127			7.72	29
1,2,4-Trichlorobenzene	0.711	U	0.436	0.414	61.3	58.2	1	39.0-120			5.25	25
4-Chloro-3-methylphenol	0.711	U	0.434	0.414	61.0	58.2	1	37.0-121			4.75	23
2-Chlorophenol	0.711	U	0.493	0.465	69.3	65.3	1	34.0-120			5.85	25
2,4-Dichlorophenol	0.711	U	0.459	0.439	64.6	61.7	1	41.0-120			4.55	22
2,4-Dimethylphenol	0.711	U	0.404	0.366	56.8	51.5	1	27.0-120			9.78	25
4,6-Dinitro-2-methylphenol	0.711	U	0.524	0.491	73.7	69.0	1	10.0-131			6.53	29
2,4-Dinitrophenol	0.711	U	0.231	0.279	32.5	39.3	1	10.0-142			18.7	30
2-Nitrophenol	0.711	U	0.453	0.438	63.7	61.6	1	34.0-124			3.33	27
4-Nitrophenol	0.711	U	0.464	0.405	65.2	57.0	1	26.0-133			13.5	25
Pentachlorophenol	0.711	U	0.478	0.469	67.2	65.9	1	15.0-152			1.94	26
Phenol	0.711	U	0.459	0.424	64.5	59.6	1	33.0-120			7.93	24
2,4,6-Trichlorophenol	0.711	U	0.528	0.500	74.2	70.3	1	40.0-125			5.34	24
(S) Nitrobenzene-d5					53.0	58.2		18.0-125				
(S) 2-Fluorobiphenyl					71.8	75.8		28.0-120				
(S) p-Terphenyl-d14					58.5	61.6		13.0-131				
(S) Phenol-d5					64.7	69.0		20.0-120				
(S) 2-Fluorophenol					71.2	75.9		20.0-120				
(S) 2,4,6-Tribromophenol					79.1	81.2		17.0-137				

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.

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.
MQL (dry)	Method Quantitation Limit.
MQL	Method Quantitation Limit.
ND	Not detected at the Sample Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
SDL (dry)	Sample Detection Limit.
(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 Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
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, 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.
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.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



ESC Lab Sciences 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.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey-NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina ¹	DW21704
Florida	E87487	North Carolina ²	41
Georgia	NELAP	North Dakota	R-140
Georgia ¹	923	Ohio-VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky ¹	90010	South Dakota	n/a
Kentucky ²	16	Tennessee ^{1 4}	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

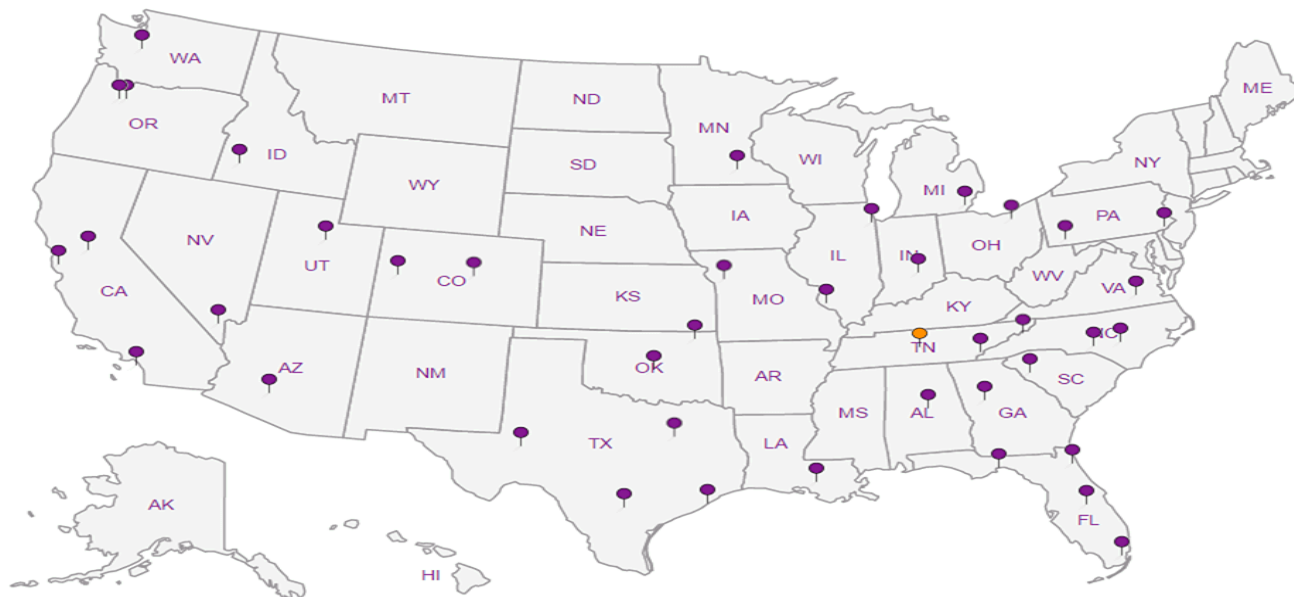
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP, LLC	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA-Crypto	TN00003		

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

Our Locations

ESC Lab Sciences 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. ESC Lab Sciences performs all testing at our central laboratory.



March 05, 2018

Baker Hughes

Sample Delivery Group: L972226
Samples Received: 02/22/2018
Project Number: 292348
Description: Farmington BHGE

Report To: Zarek Boutaghou
501 W. Lake Park Blvd, Ste 28180D
Houston, TX 77079

Entire Report Reviewed By:



Mark W. Beasley
Technical Service Representative

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 ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



FWT-3 33.0-34.0 L972226-01 Solid

Collected by
Collected date/time
Received date/time

02/21/18 08:50

02/22/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1077970	1	02/26/18 16:14	02/26/18 16:23	KDW
Wet Chemistry by Method 9056A	WG1076880	1	02/22/18 23:54	02/23/18 14:03	MAJ
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1076979	1	02/22/18 16:37	02/23/18 12:04	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1076858	1	02/22/18 16:37	02/22/18 23:09	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1076834	1	02/23/18 01:33	03/01/18 17:14	MTJ
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1077341	1	02/24/18 21:46	02/26/18 17:48	CJR

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

FWT-1 14.0-16.0 L972226-02 Solid

Collected by
Collected date/time
Received date/time

02/21/18 14:00

02/22/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1077970	1	02/26/18 16:14	02/26/18 16:23	KDW
Wet Chemistry by Method 9056A	WG1076880	1	02/22/18 23:54	02/23/18 14:12	MAJ
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1076979	1	02/22/18 16:35	02/23/18 12:25	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1076858	1	02/22/18 16:35	02/22/18 23:30	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1076834	1	02/23/18 01:33	03/01/18 17:30	ACM
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1077341	1	02/24/18 21:46	02/26/18 18:46	CJR

FWT-1 34.0-36.0 L972226-03 Solid

Collected by
Collected date/time
Received date/time

02/21/18 15:04

02/22/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1077970	1	02/26/18 16:14	02/26/18 16:23	KDW
Wet Chemistry by Method 9056A	WG1076880	1	02/22/18 23:54	02/23/18 14:38	MAJ
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1076979	25	02/22/18 16:37	02/23/18 12:46	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1076858	25	02/22/18 16:37	02/23/18 04:27	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1076834	20	02/23/18 01:33	03/01/18 18:11	MTJ
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1077341	1	02/24/18 21:46	02/26/18 21:40	CLG
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1077341	20	02/24/18 21:46	03/01/18 12:32	CJR

TRIP BLANK L972226-04 GW

Collected by
Collected date/time
Received date/time

02/21/18 00:00

02/22/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1077112	1	02/23/18 14:05	02/23/18 14:05	ACG



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 radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. 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
Technical Service Representative

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 date / time	Batch
Total Solids	89.7		1	02/26/2018 16:23	WG1077970

Wet Chemistry by Method 9056A

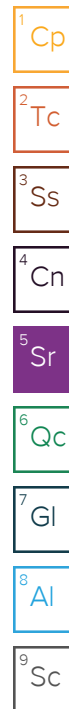
Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis date / time	Batch
Chloride	78.7		0.887	10.0	11.2	1	02/23/2018 14:03	WG1076880

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0242	0.100	0.112	1	02/23/2018 12:04	WG1076979
(S) a,a,a-Trifluorotoluene(FID)	102				77.0-120		02/23/2018 12:04	WG1076979

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis date / time	Batch
Acetone	U		0.0112	1.00	1.12	1	02/22/2018 23:09	WG1076858
Acrylonitrile	U		0.00200	0.0100	0.0112	1	02/22/2018 23:09	WG1076858
Benzene	U		0.000301	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
Bromobenzene	U		0.000317	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
Bromodichloromethane	U		0.000283	0.00125	0.00139	1	02/22/2018 23:09	WG1076858
Bromoform	U		0.000473	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
Bromomethane	U		0.00149	0.00500	0.00558	1	02/22/2018 23:09	WG1076858
n-Butylbenzene	U		0.000288	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
sec-Butylbenzene	U		0.000224	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
tert-Butylbenzene	U		0.000230	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
Carbon tetrachloride	U		0.000366	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
Chlorobenzene	U		0.000236	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
Chlorodibromomethane	U		0.000416	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
Chloroethane	U		0.00106	0.00500	0.00558	1	02/22/2018 23:09	WG1076858
Chloroform	U		0.000255	0.00500	0.00558	1	02/22/2018 23:09	WG1076858
Chloromethane	U		0.000418	0.00250	0.00279	1	02/22/2018 23:09	WG1076858
2-Chlorotoluene	U		0.000336	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
4-Chlorotoluene	U		0.000268	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
1,2-Dibromo-3-Chloropropane	U		0.00117	0.00500	0.00558	1	02/22/2018 23:09	WG1076858
1,2-Dibromoethane	U		0.000383	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
Dibromomethane	U		0.000426	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
1,2-Dichlorobenzene	U		0.000340	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
1,3-Dichlorobenzene	U		0.000267	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
1,4-Dichlorobenzene	U		0.000252	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
Dichlorodifluoromethane	U		0.000795	0.00500	0.00558	1	02/22/2018 23:09	WG1076858
1,1-Dichloroethane	U		0.000222	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
1,2-Dichloroethane	U		0.000296	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
1,1-Dichloroethene	U		0.000338	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
cis-1,2-Dichloroethene	U		0.000262	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
trans-1,2-Dichloroethene	U		0.000294	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
1,2-Dichloropropane	U		0.000399	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
1,1-Dichloropropene	U		0.000354	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
1,3-Dichloropropane	U		0.000231	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
cis-1,3-Dichloropropene	U		0.000292	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
trans-1,3-Dichloropropene	U		0.000298	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
2,2-Dichloropropane	U		0.000311	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
Di-isopropyl ether	U		0.000277	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
Ethylbenzene	U		0.000331	0.00100	0.00112	1	02/22/2018 23:09	WG1076858





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

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Hexachloro-1,3-butadiene	U		0.000381	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
Isopropylbenzene	U		0.000271	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
p-Isopropyltoluene	U		0.000228	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
2-Butanone (MEK)	U		0.00522	0.0100	0.0112	1	02/22/2018 23:09	WG1076858
Methylene Chloride	U		0.00112	0.00500	0.00558	1	02/22/2018 23:09	WG1076858
4-Methyl-2-pentanone (MIBK)	U		0.00210	0.0100	0.0112	1	02/22/2018 23:09	WG1076858
Methyl tert-butyl ether	U		0.000236	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
Naphthalene	U		0.00112	0.00500	0.00558	1	02/22/2018 23:09	WG1076858
n-Propylbenzene	U		0.000230	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
Styrene	U		0.000261	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
1,1,1,2-Tetrachloroethane	U		0.000294	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
1,1,2,2-Tetrachloroethane	U		0.000407	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
1,1,2-Trichlorotrifluoroethane	U		0.000407	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
Tetrachloroethene	U		0.000308	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
Toluene	U		0.000484	0.00500	0.00558	1	02/22/2018 23:09	WG1076858
1,2,3-Trichlorobenzene	U		0.000341	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
1,2,4-Trichlorobenzene	U		0.000433	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
1,1,2-Trichloroethane	U		0.000309	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
Trichloroethene	U		0.000311	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
Trichlorofluoromethane	U		0.000426	0.00500	0.00558	1	02/22/2018 23:09	WG1076858
1,2,3-Trichloropropane	U		0.000826	0.00250	0.00279	1	02/22/2018 23:09	WG1076858
1,2,4-Trimethylbenzene	U		0.000235	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
1,2,3-Trimethylbenzene	U		0.000320	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
1,3,5-Trimethylbenzene	U		0.000297	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
Vinyl chloride	U		0.000325	0.00100	0.00112	1	02/22/2018 23:09	WG1076858
Xylenes, Total	U		0.000778	0.00300	0.00335	1	02/22/2018 23:09	WG1076858
(S) Toluene-d8	102				80.0-120		02/22/2018 23:09	WG1076858
(S) Dibromofluoromethane	90.6				74.0-131		02/22/2018 23:09	WG1076858
(S) 4-Bromofluorobenzene	96.4				64.0-132		02/22/2018 23:09	WG1076858

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	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	16.2		1.80	4.00	4.46	1	03/01/2018 17:14	WG1076834
C28-C40 Oil Range	0.673	J	0.306	4.00	4.46	1	03/01/2018 17:14	WG1076834
(S) o-Terphenyl	71.2				18.0-148		03/01/2018 17:14	WG1076834

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

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00716	0.0330	0.0368	1	02/26/2018 17:48	WG1077341
Acenaphthylene	U		0.00748	0.0330	0.0368	1	02/26/2018 17:48	WG1077341
Anthracene	U		0.00705	0.0330	0.0368	1	02/26/2018 17:48	WG1077341
Benidine	U	J4	0.0710	0.333	0.371	1	02/26/2018 17:48	WG1077341
Benzo(a)anthracene	U		0.00477	0.0330	0.0368	1	02/26/2018 17:48	WG1077341
Benzo(b)fluoranthene	U		0.00775	0.0330	0.0368	1	02/26/2018 17:48	WG1077341
Benzo(k)fluoranthene	U		0.00649	0.0330	0.0368	1	02/26/2018 17:48	WG1077341
Benzo(g,h,i)perylene	U		0.00804	0.0330	0.0368	1	02/26/2018 17:48	WG1077341
Benzo(a)pyrene	U		0.00611	0.0330	0.0368	1	02/26/2018 17:48	WG1077341
Bis(2-chlorethoxy)methane	U		0.00859	0.333	0.371	1	02/26/2018 17:48	WG1077341
Bis(2-chloroethyl)ether	U		0.00999	0.333	0.371	1	02/26/2018 17:48	WG1077341
Bis(2-chloroisopropyl)ether	U		0.00848	0.333	0.371	1	02/26/2018 17:48	WG1077341
4-Bromophenyl-phenylether	U		0.0127	0.333	0.371	1	02/26/2018 17:48	WG1077341
2-Chloronaphthalene	U		0.00713	0.0330	0.0368	1	02/26/2018 17:48	WG1077341



Collected date/time: 02/21/18 08:50

L972226

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

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Chlorophenyl-phenylether	U		0.00699	0.333	0.371	1	02/26/2018 17:48	WG1077341
Chrysene	U		0.00619	0.0330	0.0368	1	02/26/2018 17:48	WG1077341
Dibenz(a,h)anthracene	U		0.00916	0.0330	0.0368	1	02/26/2018 17:48	WG1077341
3,3-Dichlorobenzidine	U		0.0886	0.333	0.371	1	02/26/2018 17:48	WG1077341
2,4-Dinitrotoluene	U		0.00677	0.333	0.371	1	02/26/2018 17:48	WG1077341
2,6-Dinitrotoluene	U		0.00822	0.333	0.371	1	02/26/2018 17:48	WG1077341
Fluoranthene	U		0.00553	0.0330	0.0368	1	02/26/2018 17:48	WG1077341
Fluorene	U		0.00761	0.0330	0.0368	1	02/26/2018 17:48	WG1077341
Hexachlorobenzene	U		0.00955	0.333	0.371	1	02/26/2018 17:48	WG1077341
Hexachloro-1,3-butadiene	U		0.0112	0.333	0.371	1	02/26/2018 17:48	WG1077341
Hexachlorocyclopentadiene	U		0.0655	0.333	0.371	1	02/26/2018 17:48	WG1077341
Hexachloroethane	U		0.0149	0.333	0.371	1	02/26/2018 17:48	WG1077341
Indeno(1,2,3-cd)pyrene	U		0.00861	0.0330	0.0368	1	02/26/2018 17:48	WG1077341
Isophorone	U		0.00582	0.333	0.371	1	02/26/2018 17:48	WG1077341
Naphthalene	U		0.00992	0.0330	0.0368	1	02/26/2018 17:48	WG1077341
Nitrobenzene	U		0.00775	0.333	0.371	1	02/26/2018 17:48	WG1077341
n-Nitrosodimethylamine	U		0.0722	0.333	0.371	1	02/26/2018 17:48	WG1077341
n-Nitrosodiphenylamine	U		0.00662	0.333	0.371	1	02/26/2018 17:48	WG1077341
n-Nitrosodi-n-propylamine	U		0.0101	0.333	0.371	1	02/26/2018 17:48	WG1077341
Phenanthrene	U		0.00589	0.0330	0.0368	1	02/26/2018 17:48	WG1077341
Benzylbutyl phthalate	U		0.0115	0.333	0.371	1	02/26/2018 17:48	WG1077341
Bis(2-ethylhexyl)phthalate	U		0.0134	0.333	0.371	1	02/26/2018 17:48	WG1077341
Di-n-butyl phthalate	U		0.0122	0.333	0.371	1	02/26/2018 17:48	WG1077341
Diethyl phthalate	U		0.00771	0.333	0.371	1	02/26/2018 17:48	WG1077341
Dimethyl phthalate	U		0.00602	0.333	0.371	1	02/26/2018 17:48	WG1077341
Di-n-octyl phthalate	U		0.0101	0.333	0.371	1	02/26/2018 17:48	WG1077341
Pyrene	U		0.0137	0.0330	0.0368	1	02/26/2018 17:48	WG1077341
1,2,4-Trichlorobenzene	U		0.00977	0.333	0.371	1	02/26/2018 17:48	WG1077341
4-Chloro-3-methylphenol	U		0.00532	0.333	0.371	1	02/26/2018 17:48	WG1077341
2-Chlorophenol	U		0.00927	0.333	0.371	1	02/26/2018 17:48	WG1077341
2,4-Dichlorophenol	U		0.00832	0.333	0.371	1	02/26/2018 17:48	WG1077341
2,4-Dimethylphenol	U		0.0525	0.333	0.371	1	02/26/2018 17:48	WG1077341
4,6-Dinitro-2-methylphenol	U		0.138	0.333	0.371	1	02/26/2018 17:48	WG1077341
2,4-Dinitrophenol	U		0.109	0.333	0.371	1	02/26/2018 17:48	WG1077341
2-Nitrophenol	U		0.0145	0.333	0.371	1	02/26/2018 17:48	WG1077341
4-Nitrophenol	U		0.0586	0.333	0.371	1	02/26/2018 17:48	WG1077341
Pentachlorophenol	U		0.0535	0.333	0.371	1	02/26/2018 17:48	WG1077341
Phenol	U		0.00775	0.333	0.371	1	02/26/2018 17:48	WG1077341
2,4,6-Trichlorophenol	U		0.00869	0.333	0.371	1	02/26/2018 17:48	WG1077341
(S) 2-Fluorophenol	68.6				20.0-120		02/26/2018 17:48	WG1077341
(S) Phenol-d5	68.8				20.0-120		02/26/2018 17:48	WG1077341
(S) Nitrobenzene-d5	75.3				18.0-125		02/26/2018 17:48	WG1077341
(S) 2-Fluorobiphenyl	70.4				28.0-120		02/26/2018 17:48	WG1077341
(S) 2,4,6-Tribromophenol	57.1				17.0-137		02/26/2018 17:48	WG1077341
(S) p-Terphenyl-d14	62.2				13.0-131		02/26/2018 17:48	WG1077341

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	91.9		1	02/26/2018 16:23	WG1077970

Wet Chemistry by Method 9056A

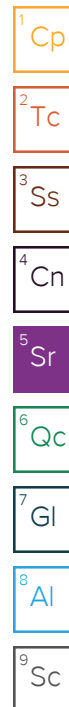
Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	117		0.865	10.0	10.9	1	02/23/2018 14:12	WG1076880

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U	J3 J6	0.0236	0.100	0.109	1	02/23/2018 12:25	WG1076979
(S) a,a,a-Trifluorotoluene(FID)	100				77.0-120		02/23/2018 12:25	WG1076979

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	U		0.0109	1.00	1.09	1	02/22/2018 23:30	WG1076858
Acrylonitrile	U		0.00195	0.0100	0.0109	1	02/22/2018 23:30	WG1076858
Benzene	U		0.000294	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
Bromobenzene	U		0.000309	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
Bromodichloromethane	U		0.000276	0.00125	0.00136	1	02/22/2018 23:30	WG1076858
Bromoform	U		0.000461	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
Bromomethane	U		0.00146	0.00500	0.00544	1	02/22/2018 23:30	WG1076858
n-Butylbenzene	U		0.000281	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
sec-Butylbenzene	U		0.000219	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
tert-Butylbenzene	U		0.000224	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
Carbon tetrachloride	U		0.000357	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
Chlorobenzene	U		0.000231	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
Chlorodibromomethane	U		0.000406	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
Chloroethane	U		0.00103	0.00500	0.00544	1	02/22/2018 23:30	WG1076858
Chloroform	U		0.000249	0.00500	0.00544	1	02/22/2018 23:30	WG1076858
Chloromethane	U		0.000408	0.00250	0.00272	1	02/22/2018 23:30	WG1076858
2-Chlorotoluene	U		0.000328	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
4-Chlorotoluene	U		0.000261	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
1,2-Dibromo-3-Chloropropane	U		0.00114	0.00500	0.00544	1	02/22/2018 23:30	WG1076858
1,2-Dibromoethane	U		0.000373	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
Dibromomethane	U		0.000416	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
1,2-Dichlorobenzene	U		0.000332	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
1,3-Dichlorobenzene	U		0.000260	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
1,4-Dichlorobenzene	U		0.000246	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
Dichlorodifluoromethane	U		0.000776	0.00500	0.00544	1	02/22/2018 23:30	WG1076858
1,1-Dichloroethane	U		0.000217	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
1,2-Dichloroethane	U		0.000288	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
1,1-Dichloroethene	U		0.000330	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
cis-1,2-Dichloroethene	U		0.000256	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
trans-1,2-Dichloroethene	U		0.000287	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
1,2-Dichloropropane	U		0.000390	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
1,1-Dichloropropene	U		0.000345	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
1,3-Dichloropropane	U		0.000225	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
cis-1,3-Dichloropropene	U		0.000285	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
trans-1,3-Dichloropropene	U		0.000291	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
2,2-Dichloropropane	U		0.000304	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
Di-isopropyl ether	U		0.000270	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
Ethylbenzene	U		0.000323	0.00100	0.00109	1	02/22/2018 23:30	WG1076858





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

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Hexachloro-1,3-butadiene	U		0.000372	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
Isopropylbenzene	U		0.000264	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
p-Isopropyltoluene	U		0.000222	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
2-Butanone (MEK)	U		0.00509	0.0100	0.0109	1	02/22/2018 23:30	WG1076858
Methylene Chloride	U		0.00109	0.00500	0.00544	1	02/22/2018 23:30	WG1076858
4-Methyl-2-pentanone (MIBK)	U		0.00205	0.0100	0.0109	1	02/22/2018 23:30	WG1076858
Methyl tert-butyl ether	U		0.000231	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
Naphthalene	U		0.00109	0.00500	0.00544	1	02/22/2018 23:30	WG1076858
n-Propylbenzene	U		0.000224	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
Styrene	U		0.000255	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
1,1,1,2-Tetrachloroethane	U		0.000287	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
1,1,2,2-Tetrachloroethane	U		0.000397	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
1,1,2-Trichlorotrifluoroethane	U		0.000397	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
Tetrachloroethene	U		0.000300	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
Toluene	U		0.000472	0.00500	0.00544	1	02/22/2018 23:30	WG1076858
1,2,3-Trichlorobenzene	U		0.000333	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
1,2,4-Trichlorobenzene	U		0.000422	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
1,1,1-Trichloroethane	U		0.000311	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
1,1,2-Trichloroethane	U		0.000301	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
Trichloroethene	U		0.000304	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
Trichlorofluoromethane	U		0.000416	0.00500	0.00544	1	02/22/2018 23:30	WG1076858
1,2,3-Trichloropropane	U		0.000806	0.00250	0.00272	1	02/22/2018 23:30	WG1076858
1,2,4-Trimethylbenzene	U		0.000230	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
1,2,3-Trimethylbenzene	U		0.000312	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
1,3,5-Trimethylbenzene	U		0.000289	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
Vinyl chloride	U		0.000317	0.00100	0.00109	1	02/22/2018 23:30	WG1076858
Xylenes, Total	U		0.000760	0.00300	0.00326	1	02/22/2018 23:30	WG1076858
(S) Toluene-d8	101				80.0-120		02/22/2018 23:30	WG1076858
(S) Dibromofluoromethane	92.3				74.0-131		02/22/2018 23:30	WG1076858
(S) 4-Bromofluorobenzene	97.2				64.0-132		02/22/2018 23:30	WG1076858

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	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	10.7		1.75	4.00	4.35	1	03/01/2018 17:30	WG1076834
C28-C40 Oil Range	6.36		0.298	4.00	4.35	1	03/01/2018 17:30	WG1076834
(S) o-Terphenyl	70.7				18.0-148		03/01/2018 17:30	WG1076834

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

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00699	0.0330	0.0359	1	02/26/2018 18:46	WG1077341
Acenaphthylene	U		0.00730	0.0330	0.0359	1	02/26/2018 18:46	WG1077341
Anthracene	U		0.00688	0.0330	0.0359	1	02/26/2018 18:46	WG1077341
Benidine	U	J4 J6	0.0693	0.333	0.362	1	02/26/2018 18:46	WG1077341
Benzo(a)anthracene	U		0.00466	0.0330	0.0359	1	02/26/2018 18:46	WG1077341
Benzo(b)fluoranthene	U		0.00756	0.0330	0.0359	1	02/26/2018 18:46	WG1077341
Benzo(k)fluoranthene	U		0.00633	0.0330	0.0359	1	02/26/2018 18:46	WG1077341
Benzo(g,h,i)perylene	U		0.00785	0.0330	0.0359	1	02/26/2018 18:46	WG1077341
Benzo(a)pyrene	U		0.00596	0.0330	0.0359	1	02/26/2018 18:46	WG1077341
Bis(2-chlorethoxy)methane	U		0.00838	0.333	0.362	1	02/26/2018 18:46	WG1077341
Bis(2-chloroethyl)ether	U		0.00975	0.333	0.362	1	02/26/2018 18:46	WG1077341
Bis(2-chloroisopropyl)ether	U		0.00827	0.333	0.362	1	02/26/2018 18:46	WG1077341
4-Bromophenyl-phenylether	U		0.0124	0.333	0.362	1	02/26/2018 18:46	WG1077341
2-Chloronaphthalene	U		0.00695	0.0330	0.0359	1	02/26/2018 18:46	WG1077341



Collected date/time: 02/21/18 14:00

L972226

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

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Chlorophenyl-phenylether	U		0.00682	0.333	0.362	1	02/26/2018 18:46	WG1077341
Chrysene	U		0.00604	0.0330	0.0359	1	02/26/2018 18:46	WG1077341
Dibenz(a,h)anthracene	U		0.00893	0.0330	0.0359	1	02/26/2018 18:46	WG1077341
3,3-Dichlorobenzidine	U	J6	0.0864	0.333	0.362	1	02/26/2018 18:46	WG1077341
2,4-Dinitrotoluene	U		0.00660	0.333	0.362	1	02/26/2018 18:46	WG1077341
2,6-Dinitrotoluene	U		0.00802	0.333	0.362	1	02/26/2018 18:46	WG1077341
Fluoranthene	U		0.00540	0.0330	0.0359	1	02/26/2018 18:46	WG1077341
Fluorene	U		0.00742	0.0330	0.0359	1	02/26/2018 18:46	WG1077341
Hexachlorobenzene	U		0.00931	0.333	0.362	1	02/26/2018 18:46	WG1077341
Hexachloro-1,3-butadiene	U		0.0109	0.333	0.362	1	02/26/2018 18:46	WG1077341
Hexachlorocyclopentadiene	U		0.0639	0.333	0.362	1	02/26/2018 18:46	WG1077341
Hexachloroethane	U		0.0146	0.333	0.362	1	02/26/2018 18:46	WG1077341
Indeno(1,2,3-cd)pyrene	U		0.00840	0.0330	0.0359	1	02/26/2018 18:46	WG1077341
Isophorone	U		0.00568	0.333	0.362	1	02/26/2018 18:46	WG1077341
Naphthalene	U		0.00967	0.0330	0.0359	1	02/26/2018 18:46	WG1077341
Nitrobenzene	U		0.00756	0.333	0.362	1	02/26/2018 18:46	WG1077341
n-Nitrosodimethylamine	U	J3	0.0704	0.333	0.362	1	02/26/2018 18:46	WG1077341
n-Nitrosodiphenylamine	U		0.00646	0.333	0.362	1	02/26/2018 18:46	WG1077341
n-Nitrosodi-n-propylamine	U		0.00986	0.333	0.362	1	02/26/2018 18:46	WG1077341
Phenanthrene	U		0.00575	0.0330	0.0359	1	02/26/2018 18:46	WG1077341
Benzylbutyl phthalate	U		0.0112	0.333	0.362	1	02/26/2018 18:46	WG1077341
Bis(2-ethylhexyl)phthalate	U		0.0131	0.333	0.362	1	02/26/2018 18:46	WG1077341
Di-n-butyl phthalate	U		0.0119	0.333	0.362	1	02/26/2018 18:46	WG1077341
Diethyl phthalate	U		0.00752	0.333	0.362	1	02/26/2018 18:46	WG1077341
Dimethyl phthalate	U		0.00588	0.333	0.362	1	02/26/2018 18:46	WG1077341
Di-n-octyl phthalate	U		0.00987	0.333	0.362	1	02/26/2018 18:46	WG1077341
Pyrene	U		0.0134	0.0330	0.0359	1	02/26/2018 18:46	WG1077341
1,2,4-Trichlorobenzene	U		0.00953	0.333	0.362	1	02/26/2018 18:46	WG1077341
4-Chloro-3-methylphenol	U		0.00519	0.333	0.362	1	02/26/2018 18:46	WG1077341
2-Chlorophenol	U		0.00904	0.333	0.362	1	02/26/2018 18:46	WG1077341
2,4-Dichlorophenol	U		0.00812	0.333	0.362	1	02/26/2018 18:46	WG1077341
2,4-Dimethylphenol	U		0.0513	0.333	0.362	1	02/26/2018 18:46	WG1077341
4,6-Dinitro-2-methylphenol	U		0.135	0.333	0.362	1	02/26/2018 18:46	WG1077341
2,4-Dinitrophenol	U		0.107	0.333	0.362	1	02/26/2018 18:46	WG1077341
2-Nitrophenol	U		0.0141	0.333	0.362	1	02/26/2018 18:46	WG1077341
4-Nitrophenol	U		0.0571	0.333	0.362	1	02/26/2018 18:46	WG1077341
Pentachlorophenol	U		0.0522	0.333	0.362	1	02/26/2018 18:46	WG1077341
Phenol	U		0.00756	0.333	0.362	1	02/26/2018 18:46	WG1077341
2,4,6-Trichlorophenol	U		0.00848	0.333	0.362	1	02/26/2018 18:46	WG1077341
(S) 2-Fluorophenol	61.0				20.0-120		02/26/2018 18:46	WG1077341
(S) Phenol-d5	68.0				20.0-120		02/26/2018 18:46	WG1077341
(S) Nitrobenzene-d5	78.5				18.0-125		02/26/2018 18:46	WG1077341
(S) 2-Fluorobiphenyl	72.1				28.0-120		02/26/2018 18:46	WG1077341
(S) 2,4,6-Tribromophenol	60.3				17.0-137		02/26/2018 18:46	WG1077341
(S) p-Terphenyl-d14	64.8				13.0-131		02/26/2018 18:46	WG1077341

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	94.5		1	02/26/2018 16:23	WG1077970

Wet Chemistry by Method 9056A

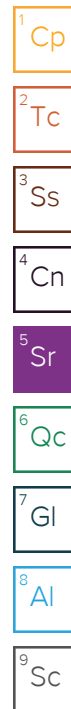
Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	264		0.842	10.0	10.6	1	02/23/2018 14:38	WG1076880

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	75.1		0.574	0.100	2.65	25	02/23/2018 12:46	WG1076979
(S) a,a,a-Trifluorotoluene(FID)	101				77.0-120		02/23/2018 12:46	WG1076979

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

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	U		0.265	1.00	26.5	25	02/23/2018 04:27	WG1076858
Acrylonitrile	U		0.0474	0.0100	0.265	25	02/23/2018 04:27	WG1076858
Benzene	U		0.00714	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
Bromobenzene	U		0.00751	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
Bromodichloromethane	U		0.00672	0.00125	0.0331	25	02/23/2018 04:27	WG1076858
Bromoform	U		0.0112	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
Bromomethane	U		0.0355	0.00500	0.132	25	02/23/2018 04:27	WG1076858
n-Butylbenzene	0.207		0.00683	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
sec-Butylbenzene	0.139		0.00532	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
tert-Butylbenzene	0.00630	J	0.00545	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
Carbon tetrachloride	U		0.00868	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
Chlorobenzene	U		0.00561	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
Chlorodibromomethane	U		0.00987	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
Chloroethane	U		0.0250	0.00500	0.132	25	02/23/2018 04:27	WG1076858
Chloroform	U		0.00606	0.00500	0.132	25	02/23/2018 04:27	WG1076858
Chloromethane	U		0.00992	0.00250	0.0661	25	02/23/2018 04:27	WG1076858
2-Chlorotoluene	U		0.00796	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
4-Chlorotoluene	U		0.00635	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
1,2-Dibromo-3-Chloropropane	U		0.0278	0.00500	0.132	25	02/23/2018 04:27	WG1076858
1,2-Dibromoethane	U		0.00907	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
Dibromomethane	U		0.0101	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
1,2-Dichlorobenzene	U		0.00807	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
1,3-Dichlorobenzene	U		0.00632	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
1,4-Dichlorobenzene	U		0.00598	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
Dichlorodifluoromethane	U		0.0189	0.00500	0.132	25	02/23/2018 04:27	WG1076858
1,1-Dichloroethane	U		0.00526	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
1,2-Dichloroethane	U		0.00701	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
1,1-Dichloroethene	U		0.00802	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
cis-1,2-Dichloroethene	U		0.00622	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
trans-1,2-Dichloroethene	U		0.00698	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
1,2-Dichloropropane	U		0.00947	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
1,1-Dichloropropene	U		0.00839	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
1,3-Dichloropropane	U		0.00548	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
cis-1,3-Dichloropropene	U		0.00693	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
trans-1,3-Dichloropropene	U		0.00706	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
2,2-Dichloropropane	U		0.00738	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
Di-isopropyl ether	U		0.00656	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
Ethylbenzene	0.334		0.00786	0.00100	0.0265	25	02/23/2018 04:27	WG1076858





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

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Hexachloro-1,3-butadiene	U		0.00905	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
Isopropylbenzene	0.139		0.00643	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
p-Isopropyltoluene	0.138		0.00540	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
2-Butanone (MEK)	U		0.124	0.0100	0.265	25	02/23/2018 04:27	WG1076858
Methylene Chloride	U		0.0265	0.00500	0.132	25	02/23/2018 04:27	WG1076858
4-Methyl-2-pentanone (MIBK)	U		0.0497	0.0100	0.265	25	02/23/2018 04:27	WG1076858
Methyl tert-butyl ether	U		0.00561	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
Naphthalene	1.51		0.0265	0.00500	0.132	25	02/23/2018 04:27	WG1076858
n-Propylbenzene	0.336		0.00545	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
Styrene	U		0.00619	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
1,1,1,2-Tetrachloroethane	U		0.00698	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
1,1,2,2-Tetrachloroethane	U		0.00966	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
1,1,2-Trichlorotrifluoroethane	U		0.00966	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
Tetrachloroethene	U		0.00730	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
Toluene	0.0320	J	0.0115	0.00500	0.132	25	02/23/2018 04:27	WG1076858
1,2,3-Trichlorobenzene	U		0.00810	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
1,2,4-Trichlorobenzene	U		0.0103	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
1,1,1-Trichloroethane	U		0.00757	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
1,1,2-Trichloroethane	U		0.00733	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
Trichloroethene	U		0.00738	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
Trichlorofluoromethane	U		0.0101	0.00500	0.132	25	02/23/2018 04:27	WG1076858
1,2,3-Trichloropropane	U		0.0196	0.00250	0.0661	25	02/23/2018 04:27	WG1076858
1,2,4-Trimethylbenzene	2.15		0.00558	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
1,2,3-Trimethylbenzene	0.770		0.00759	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
1,3,5-Trimethylbenzene	0.660		0.00704	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
Vinyl chloride	U		0.00770	0.00100	0.0265	25	02/23/2018 04:27	WG1076858
Xylenes, Total	2.13		0.0185	0.00300	0.0794	25	02/23/2018 04:27	WG1076858
(S) Toluene-d8	105				80.0-120		02/23/2018 04:27	WG1076858
(S) Dibromofluoromethane	89.1				74.0-131		02/23/2018 04:27	WG1076858
(S) 4-Bromofluorobenzene	104				64.0-132		02/23/2018 04:27	WG1076858

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	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	1040		34.1	4.00	84.7	20	03/01/2018 18:11	WG1076834
C28-C40 Oil Range	220		5.80	4.00	84.7	20	03/01/2018 18:11	WG1076834
(S) o-Terphenyl	0.000	J7			18.0-148		03/01/2018 18:11	WG1076834

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

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	0.348		0.00679	0.0330	0.0349	1	02/26/2018 21:40	WG1077341
Acenaphthylene	U		0.00710	0.0330	0.0349	1	02/26/2018 21:40	WG1077341
Anthracene	0.0973		0.00669	0.0330	0.0349	1	02/26/2018 21:40	WG1077341
Benzidine	U	J4	0.0674	0.333	0.352	1	02/26/2018 21:40	WG1077341
Benzo(a)anthracene	U		0.00453	0.0330	0.0349	1	02/26/2018 21:40	WG1077341
Benzo(b)fluoranthene	U		0.00735	0.0330	0.0349	1	02/26/2018 21:40	WG1077341
Benzo(k)fluoranthene	U		0.00616	0.0330	0.0349	1	02/26/2018 21:40	WG1077341
Benzo(g,h,i)perylene	U		0.00763	0.0330	0.0349	1	02/26/2018 21:40	WG1077341
Benzo(a)pyrene	U		0.00580	0.0330	0.0349	1	02/26/2018 21:40	WG1077341
Bis(2-chlorethoxy)methane	U		0.00815	0.333	0.352	1	02/26/2018 21:40	WG1077341
Bis(2-chloroethyl)ether	U		0.00948	0.333	0.352	1	02/26/2018 21:40	WG1077341
Bis(2-chloroisopropyl)ether	U		0.00804	0.333	0.352	1	02/26/2018 21:40	WG1077341
4-Bromophenyl-phenylether	U		0.0121	0.333	0.352	1	02/26/2018 21:40	WG1077341
2-Chloronaphthalene	U		0.00676	0.0330	0.0349	1	02/26/2018 21:40	WG1077341



Collected date/time: 02/21/18 15:04

L972226

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

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Chlorophenyl-phenylether	U		0.00664	0.333	0.352	1	02/26/2018 21:40	WG1077341
Chrysene	U		0.00587	0.0330	0.0349	1	02/26/2018 21:40	WG1077341
Dibenz(a,h)anthracene	U		0.00869	0.0330	0.0349	1	02/26/2018 21:40	WG1077341
3,3-Dichlorobenzidine	U		0.0840	0.333	0.352	1	02/26/2018 21:40	WG1077341
2,4-Dinitrotoluene	U		0.00642	0.333	0.352	1	02/26/2018 21:40	WG1077341
2,6-Dinitrotoluene	U		0.00780	0.333	0.352	1	02/26/2018 21:40	WG1077341
Fluoranthene	0.0735		0.00525	0.0330	0.0349	1	02/26/2018 21:40	WG1077341
Fluorene	0.463		0.00722	0.0330	0.0349	1	02/26/2018 21:40	WG1077341
Hexachlorobenzene	U		0.00906	0.333	0.352	1	02/26/2018 21:40	WG1077341
Hexachloro-1,3-butadiene	U		0.0106	0.333	0.352	1	02/26/2018 21:40	WG1077341
Hexachlorocyclopentadiene	U		0.0621	0.333	0.352	1	02/26/2018 21:40	WG1077341
Hexachloroethane	U		0.0142	0.333	0.352	1	02/26/2018 21:40	WG1077341
Indeno(1,2,3-cd)pyrene	U		0.00817	0.0330	0.0349	1	02/26/2018 21:40	WG1077341
Isophorone	U		0.00552	0.333	0.352	1	02/26/2018 21:40	WG1077341
Naphthalene	3.16		0.188	0.0330	0.698	20	03/01/2018 12:32	WG1077341
Nitrobenzene	U		0.00735	0.333	0.352	1	02/26/2018 21:40	WG1077341
n-Nitrosodimethylamine	U		0.0685	0.333	0.352	1	02/26/2018 21:40	WG1077341
n-Nitrosodiphenylamine	U		0.00629	0.333	0.352	1	02/26/2018 21:40	WG1077341
n-Nitrosodi-n-propylamine	U		0.00959	0.333	0.352	1	02/26/2018 21:40	WG1077341
Phenanthrene	2.00		0.112	0.0330	0.698	20	03/01/2018 12:32	WG1077341
Benzylbutyl phthalate	U		0.0109	0.333	0.352	1	02/26/2018 21:40	WG1077341
Bis(2-ethylhexyl)phthalate	U		0.0127	0.333	0.352	1	02/26/2018 21:40	WG1077341
Di-n-butyl phthalate	U		0.0115	0.333	0.352	1	02/26/2018 21:40	WG1077341
Diethyl phthalate	U		0.00731	0.333	0.352	1	02/26/2018 21:40	WG1077341
Dimethyl phthalate	U		0.00571	0.333	0.352	1	02/26/2018 21:40	WG1077341
Di-n-octyl phthalate	U		0.00960	0.333	0.352	1	02/26/2018 21:40	WG1077341
Pyrene	0.136		0.0130	0.0330	0.0349	1	02/26/2018 21:40	WG1077341
1,2,4-Trichlorobenzene	U		0.00927	0.333	0.352	1	02/26/2018 21:40	WG1077341
4-Chloro-3-methylphenol	U		0.00505	0.333	0.352	1	02/26/2018 21:40	WG1077341
2-Chlorophenol	U		0.00879	0.333	0.352	1	02/26/2018 21:40	WG1077341
2,4-Dichlorophenol	U		0.00789	0.333	0.352	1	02/26/2018 21:40	WG1077341
2,4-Dimethylphenol	U		0.0498	0.333	0.352	1	02/26/2018 21:40	WG1077341
4,6-Dinitro-2-methylphenol	U		0.131	0.333	0.352	1	02/26/2018 21:40	WG1077341
2,4-Dinitrophenol	U		0.104	0.333	0.352	1	02/26/2018 21:40	WG1077341
2-Nitrophenol	U		0.0138	0.333	0.352	1	02/26/2018 21:40	WG1077341
4-Nitrophenol	U		0.0556	0.333	0.352	1	02/26/2018 21:40	WG1077341
Pentachlorophenol	U		0.0508	0.333	0.352	1	02/26/2018 21:40	WG1077341
Phenol	U		0.00735	0.333	0.352	1	02/26/2018 21:40	WG1077341
2,4,6-Trichlorophenol	U		0.00824	0.333	0.352	1	02/26/2018 21:40	WG1077341
(S) 2-Fluorophenol	82.3	J7			20.0-120		03/01/2018 12:32	WG1077341
(S) 2-Fluorophenol	58.6				20.0-120		02/26/2018 21:40	WG1077341
(S) Phenol-d5	88.3	J7			20.0-120		03/01/2018 12:32	WG1077341
(S) Phenol-d5	56.5				20.0-120		02/26/2018 21:40	WG1077341
(S) Nitrobenzene-d5	135	J7			18.0-125		03/01/2018 12:32	WG1077341
(S) Nitrobenzene-d5	69.3				18.0-125		02/26/2018 21:40	WG1077341
(S) 2-Fluorobiphenyl	49.4				28.0-120		02/26/2018 21:40	WG1077341
(S) 2-Fluorobiphenyl	79.0	J7			28.0-120		03/01/2018 12:32	WG1077341
(S) 2,4,6-Tribromophenol	64.7	J7			17.0-137		03/01/2018 12:32	WG1077341
(S) 2,4,6-Tribromophenol	78.6				17.0-137		02/26/2018 21:40	WG1077341
(S) p-Terphenyl-d14	71.7	J7			13.0-131		03/01/2018 12:32	WG1077341
(S) p-Terphenyl-d14	87.8				13.0-131		02/26/2018 21:40	WG1077341

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 02/21/18 00:00

L972226

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

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	02/23/2018 14:05	WG1077112
Acrolein	U		0.00887	0.0500	0.0500	1	02/23/2018 14:05	WG1077112
Acrylonitrile	U		0.00187	0.0100	0.0100	1	02/23/2018 14:05	WG1077112
Benzene	U		0.000331	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
Bromobenzene	U		0.000352	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	02/23/2018 14:05	WG1077112
Bromoform	U		0.000469	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
Bromomethane	U		0.000866	0.00500	0.00500	1	02/23/2018 14:05	WG1077112
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
Chlorobenzene	U		0.000348	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
Chloroethane	U		0.000453	0.00500	0.00500	1	02/23/2018 14:05	WG1077112
Chloroform	U		0.000324	0.00500	0.00500	1	02/23/2018 14:05	WG1077112
Chloromethane	U		0.000276	0.00250	0.00250	1	02/23/2018 14:05	WG1077112
2-Chlorotoluene	U		0.000375	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
4-Chlorotoluene	U		0.000351	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
1,2-Dibromo-3-Chloropropane	U		0.00133	0.00500	0.00500	1	02/23/2018 14:05	WG1077112
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
Dibromomethane	U		0.000346	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
1,2-Dichlorobenzene	U		0.000349	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
1,3-Dichlorobenzene	U		0.000220	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
1,4-Dichlorobenzene	U		0.000274	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
Dichlorodifluoromethane	U		0.000551	0.00500	0.00500	1	02/23/2018 14:05	WG1077112
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
1,1-Dichloropropene	U		0.000352	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
1,3-Dichloropropane	U		0.000366	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
2,2-Dichloropropane	U		0.000321	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
Di-isopropyl ether	U		0.000320	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
Ethylbenzene	U		0.000384	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	02/23/2018 14:05	WG1077112
Methylene Chloride	U		0.00100	0.00500	0.00500	1	02/23/2018 14:05	WG1077112
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	02/23/2018 14:05	WG1077112
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
Naphthalene	U		0.00100	0.00500	0.00500	1	02/23/2018 14:05	WG1077112
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
Styrene	U		0.000307	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
1,1,1,2-Tetrachloroethane	U		0.000385	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
1,1,2-Trichlorotrifluoroethane	U		0.000303	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
Toluene	U		0.000412	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
1,2,3-Trichlorobenzene	U		0.000230	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
1,2,4-Trichlorobenzene	U		0.000355	0.00100	0.00100	1	02/23/2018 14:05	WG1077112

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 mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
Trichloroethene	U		0.000398	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
Trichlorofluoromethane	U		0.00120	0.00500	0.00500	1	02/23/2018 14:05	WG1077112
1,2,3-Trichloropropane	U		0.000807	0.00250	0.00250	1	02/23/2018 14:05	WG1077112
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
1,2,3-Trimethylbenzene	U		0.000321	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
Vinyl chloride	U		0.000259	0.00100	0.00100	1	02/23/2018 14:05	WG1077112
Xylenes, Total	U		0.00106	0.00300	0.00300	1	02/23/2018 14:05	WG1077112
(S) Toluene-d8	105				80.0-120		02/23/2018 14:05	WG1077112
(S) Dibromofluoromethane	99.4				76.0-123		02/23/2018 14:05	WG1077112
(S) 4-Bromofluorobenzene	106				80.0-120		02/23/2018 14:05	WG1077112

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Total Solids by Method 2540 G-2011

L972226-01,02,03

Method Blank (MB)

(MB) R3289106-1 02/26/18 16:23

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

Cp

 ${}^2\text{Tc}$

Ss

 C_n ⁸⁷Sr

Qc

L971943-01 Original Sample (OS) • Duplicate (DUP)

(OS) L971943-01 02/26/18 16:23 • (DUP) R3289106-3 02/26/18 16:23

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	76.1	76.0	1	0.0610		5

G|

Al

Sc

Laboratory Control Sample (LCS)

(LCS) R3289106-2 02/26/18 16:23

	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) R3288712-1 02/23/18 13:21

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Chloride	1.12	J	0.795	10.0

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L972310-07 Original Sample (OS) • Duplicate (DUP)

(OS) L972310-07 02/23/18 15:54 • (DUP) R3288712-6 02/23/18 16:03

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	136	136	1	0.154		15

L972320-03 Original Sample (OS) • Duplicate (DUP)

(OS) L972320-03 02/23/18 17:28 • (DUP) R3288712-7 02/23/18 17:37

	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	10800	6900	20	43.9	J3	15

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

(LCS) R3288712-2 02/23/18 13:29 • (LCSD) R3288712-3 02/23/18 13:38

	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	%	%	%			%	%
Chloride	200	205	206	102	103	80.0-120			0.890	15

L972226-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L972226-02 02/23/18 14:12 • (MS) R3288712-4 02/23/18 14:21 • (MSD) R3288712-5 02/23/18 14:29

	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	%	%		%			%	%
Chloride	544	117	660	668	99.8	101	1	80.0-120			1.16	15



Method Blank (MB)

(MB) R3289522-3 02/23/18 11:12

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)	102			77.0-120

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

(LCS) R3289522-1 02/23/18 10:09 • (LCSD) R3289522-2 02/23/18 10:30

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 %
TPH (GC/FID) Low Fraction	5.50	4.84	5.05	87.9	91.8	70.0-136			4.37	20
(S) a,a,a-Trifluorotoluene(FID)				97.3	97.1	77.0-120				

L972226-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L972226-02 02/23/18 12:25 • (MS) R3289522-4 02/23/18 19:04 • (MSD) R3289522-5 02/23/18 19:25

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	5.98	U	2.88	0.367	48.1	6.14	1	10.0-147		J3 J6	155	30
(S) a,a,a-Trifluorotoluene(FID)					98.9	100		77.0-120				

Method Blank (MB)

(MB) R3289333-3 02/22/18 22:17

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0100	1.00
Acrylonitrile	U		0.00179	0.0100
Benzene	U		0.000270	0.00100
Bromobenzene	U		0.000284	0.00100
Bromodichloromethane	U		0.000254	0.00125
Bromoform	U		0.000424	0.00100
Bromomethane	U		0.00134	0.00500
n-Butylbenzene	U		0.000258	0.00100
sec-Butylbenzene	U		0.000201	0.00100
tert-Butylbenzene	U		0.000206	0.00100
Carbon tetrachloride	U		0.000328	0.00100
Chlorobenzene	U		0.000212	0.00100
Chlorodibromomethane	U		0.000373	0.00100
Chloroethane	U		0.000946	0.00500
Chloroform	U		0.000229	0.00500
Chloromethane	U		0.000375	0.00250
2-Chlorotoluene	U		0.000301	0.00100
4-Chlorotoluene	U		0.000240	0.00100
1,2-Dibromo-3-Chloropropane	U		0.00105	0.00500
1,2-Dibromoethane	U		0.000343	0.00100
Dibromomethane	U		0.000382	0.00100
1,2-Dichlorobenzene	U		0.000305	0.00100
1,3-Dichlorobenzene	U		0.000239	0.00100
1,4-Dichlorobenzene	U		0.000226	0.00100
Dichlorodifluoromethane	U		0.000713	0.00500
1,1-Dichloroethane	U		0.000199	0.00100
1,2-Dichloroethane	U		0.000265	0.00100
1,1-Dichloroethene	U		0.000303	0.00100
cis-1,2-Dichloroethene	U		0.000235	0.00100
trans-1,2-Dichloroethene	U		0.000264	0.00100
1,2-Dichloropropane	U		0.000358	0.00100
1,1-Dichloropropene	U		0.000317	0.00100
1,3-Dichloropropane	U		0.000207	0.00100
cis-1,3-Dichloropropene	U		0.000262	0.00100
trans-1,3-Dichloropropene	U		0.000267	0.00100
2,2-Dichloropropane	U		0.000279	0.00100
Di-isopropyl ether	U		0.000248	0.00100
Ethylbenzene	U		0.000297	0.00100
Hexachloro-1,3-butadiene	U		0.000342	0.00100
Isopropylbenzene	U		0.000243	0.00100

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3289333-3 02/22/18 22:17

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.000204	0.00100
2-Butanone (MEK)	U		0.00468	0.0100
Methylene Chloride	U		0.00100	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.00188	0.0100
Methyl tert-butyl ether	U		0.000212	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.000206	0.00100
Styrene	U		0.000234	0.00100
1,1,1,2-Tetrachloroethane	U		0.000264	0.00100
1,1,2,2-Tetrachloroethane	U		0.000365	0.00100
Tetrachloroethene	U		0.000276	0.00100
Toluene	U		0.000434	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000365	0.00100
1,2,3-Trichlorobenzene	U		0.000306	0.00100
1,2,4-Trichlorobenzene	U		0.000388	0.00100
1,1,1-Trichloroethane	U		0.000286	0.00100
1,1,2-Trichloroethane	U		0.000277	0.00100
Trichloroethene	U		0.000279	0.00100
Trichlorofluoromethane	U		0.000382	0.00500
1,2,3-Trichloropropane	U		0.000741	0.00250
1,2,3-Trimethylbenzene	U		0.000287	0.00100
1,2,4-Trimethylbenzene	U		0.000211	0.00100
1,3,5-Trimethylbenzene	U		0.000266	0.00100
Vinyl chloride	U		0.000291	0.00100
Xylenes, Total	U		0.000698	0.00300
(S) Toluene-d8	104			80.0-120
(S) Dibromofluoromethane	90.4			74.0-131
(S) 4-Bromofluorobenzene	95.4			64.0-132

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

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Gl

8

Al

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Sc

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

(LCS) R3289333-1 02/22/18 20:52 • (LCSD) R3289333-2 02/22/18 21:14

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	0.125	0.126	0.126	100	101	11.0-160			0.112	23
Acrylonitrile	0.125	0.136	0.135	109	108	61.0-143			0.645	20
Benzene	0.0250	0.0234	0.0234	93.4	93.6	71.0-124			0.206	20
Bromobenzene	0.0250	0.0245	0.0249	97.9	99.5	78.0-120			1.64	20
Bromodichloromethane	0.0250	0.0250	0.0251	100	101	75.0-120			0.410	20

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

(LCS) R3289333-1 02/22/18 20:52 • (LCSD) R3289333-2 02/22/18 21:14

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 %
Bromoform	0.0250	0.0275	0.0280	110	112	65.0-133			1.48	20
Bromomethane	0.0250	0.0222	0.0225	88.8	90.1	26.0-160			1.45	20
n-Butylbenzene	0.0250	0.0266	0.0261	106	105	73.0-126			1.59	20
sec-Butylbenzene	0.0250	0.0263	0.0263	105	105	75.0-121			0.112	20
tert-Butylbenzene	0.0250	0.0261	0.0260	104	104	74.0-122			0.510	20
Carbon tetrachloride	0.0250	0.0221	0.0217	88.5	86.7	66.0-123			2.07	20
Chlorobenzene	0.0250	0.0256	0.0257	102	103	79.0-121			0.241	20
Chlorodibromomethane	0.0250	0.0271	0.0272	108	109	74.0-128			0.531	20
Chloroethane	0.0250	0.0236	0.0234	94.6	93.4	51.0-147			1.18	20
Chloroform	0.0250	0.0235	0.0236	93.9	94.5	73.0-123			0.632	20
Chloromethane	0.0250	0.0180	0.0182	71.9	72.7	51.0-138			1.09	20
2-Chlorotoluene	0.0250	0.0253	0.0252	101	101	72.0-124			0.359	20
4-Chlorotoluene	0.0250	0.0255	0.0256	102	102	78.0-120			0.210	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0285	0.0285	114	114	65.0-126			0.246	20
1,2-Dibromoethane	0.0250	0.0276	0.0273	110	109	78.0-122			1.27	20
Dibromomethane	0.0250	0.0265	0.0267	106	107	79.0-120			0.772	20
1,2-Dichlorobenzene	0.0250	0.0261	0.0261	105	105	80.0-120			0.0310	20
1,3-Dichlorobenzene	0.0250	0.0262	0.0260	105	104	72.0-123			0.729	20
1,4-Dichlorobenzene	0.0250	0.0257	0.0253	103	101	77.0-120			1.34	20
Dichlorodifluoromethane	0.0250	0.0201	0.0203	80.4	81.1	49.0-155			0.899	20
1,1-Dichloroethane	0.0250	0.0234	0.0233	93.5	93.2	70.0-128			0.386	20
1,2-Dichloroethane	0.0250	0.0249	0.0247	99.8	98.9	69.0-128			0.908	20
1,1-Dichloroethene	0.0250	0.0236	0.0230	94.5	91.9	63.0-131			2.85	20
cis-1,2-Dichloroethene	0.0250	0.0233	0.0231	93.3	92.2	74.0-123			1.13	20
trans-1,2-Dichloroethene	0.0250	0.0234	0.0228	93.5	91.4	72.0-122			2.34	20
1,2-Dichloropropane	0.0250	0.0247	0.0247	98.7	98.7	75.0-126			0.0241	20
1,1-Dichloropropene	0.0250	0.0234	0.0232	93.7	92.6	72.0-130			1.19	20
1,3-Dichloropropane	0.0250	0.0270	0.0270	108	108	80.0-121			0.196	20
cis-1,3-Dichloropropene	0.0250	0.0271	0.0272	108	109	80.0-125			0.438	20
trans-1,3-Dichloropropene	0.0250	0.0273	0.0274	109	110	75.0-129			0.356	20
2,2-Dichloropropane	0.0250	0.0238	0.0240	95.4	95.9	60.0-129			0.516	20
Di-isopropyl ether	0.0250	0.0223	0.0223	89.0	89.0	62.0-133			0.0123	20
Ethylbenzene	0.0250	0.0259	0.0257	104	103	77.0-120			0.668	20
Hexachloro-1,3-butadiene	0.0250	0.0267	0.0259	107	104	68.0-128			3.04	20
Isopropylbenzene	0.0250	0.0258	0.0260	103	104	75.0-120			0.425	20
p-Isopropyltoluene	0.0250	0.0270	0.0267	108	107	74.0-125			1.35	20
2-Butanone (MEK)	0.125	0.137	0.135	110	108	37.0-159			1.56	20
Methylene Chloride	0.0250	0.0234	0.0233	93.5	93.3	67.0-123			0.225	20
4-Methyl-2-pentanone (MIBK)	0.125	0.139	0.139	111	111	60.0-144			0.121	20
Methyl tert-butyl ether	0.0250	0.0249	0.0250	99.6	99.9	66.0-125			0.263	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

(LCS) R3289333-1 02/22/18 20:52 • (LCSD) R3289333-2 02/22/18 21:14

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 %
Naphthalene	0.0250	0.0280	0.0281	112	113	64.0-125			0.596	20
n-Propylbenzene	0.0250	0.0256	0.0253	102	101	78.0-120			1.03	20
Styrene	0.0250	0.0266	0.0264	106	106	78.0-124			0.592	20
1,1,1,2-Tetrachloroethane	0.0250	0.0267	0.0269	107	108	74.0-124			0.609	20
1,1,2,2-Tetrachloroethane	0.0250	0.0279	0.0273	112	109	73.0-120			2.27	20
Tetrachloroethene	0.0250	0.0258	0.0256	103	102	70.0-127			0.680	20
Toluene	0.0250	0.0244	0.0243	97.6	97.3	77.0-120			0.316	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0246	0.0243	98.3	97.1	64.0-135			1.28	20
1,2,3-Trichlorobenzene	0.0250	0.0271	0.0268	108	107	68.0-126			1.18	20
1,2,4-Trichlorobenzene	0.0250	0.0270	0.0270	108	108	70.0-127			0.247	20
1,1,1-Trichloroethane	0.0250	0.0236	0.0231	94.4	92.5	69.0-125			1.98	20
1,1,2-Trichloroethane	0.0250	0.0266	0.0263	107	105	78.0-120			1.34	20
Trichloroethene	0.0250	0.0248	0.0248	99.0	99.0	79.0-120			0.0198	20
Trichlorofluoromethane	0.0250	0.0219	0.0219	87.7	87.7	59.0-136			0.0370	20
1,2,3-Trichloropropane	0.0250	0.0269	0.0275	108	110	73.0-124			2.32	20
1,2,3-Trimethylbenzene	0.0250	0.0260	0.0259	104	103	76.0-120			0.684	20
1,2,4-Trimethylbenzene	0.0250	0.0266	0.0263	106	105	75.0-120			1.15	20
1,3,5-Trimethylbenzene	0.0250	0.0264	0.0263	105	105	75.0-120			0.141	20
Vinyl chloride	0.0250	0.0204	0.0201	81.6	80.2	63.0-134			1.68	20
Xylenes, Total	0.0750	0.0780	0.0772	104	103	77.0-120			1.03	20
(S) Toluene-d8				100	101	80.0-120				
(S) Dibromofluoromethane				91.2	91.8	74.0-131				
(S) 4-Bromofluorobenzene				94.6	95.1	64.0-132				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L972226-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L972226-02 02/22/18 23:30 • (MS) R3289333-4 02/23/18 05:30 • (MSD) R3289333-5 02/23/18 05:51

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 %
Acetone	0.136	U	0.0537	0.0549	39.5	40.4	1	10.0-160			2.25	36
Acrylonitrile	0.136	U	0.128	0.129	94.1	94.6	1	14.0-160			0.548	33
Benzene	0.0272	U	0.0249	0.0246	91.4	90.6	1	13.0-146			0.874	27
Bromobenzene	0.0272	U	0.0219	0.0221	80.6	81.2	1	10.0-149			0.724	33
Bromodichloromethane	0.0272	U	0.0240	0.0246	88.4	90.3	1	15.0-142			2.15	28
Bromoform	0.0272	U	0.0235	0.0242	86.5	89.1	1	10.0-147			2.88	31
Bromomethane	0.0272	U	0.0257	0.0250	94.4	91.8	1	10.0-160			2.75	32
n-Butylbenzene	0.0272	U	0.0219	0.0218	80.3	80.0	1	10.0-154			0.432	37
sec-Butylbenzene	0.0272	U	0.0247	0.0243	90.9	89.4	1	10.0-151			1.68	36
tert-Butylbenzene	0.0272	U	0.0256	0.0260	94.1	95.5	1	10.0-152			1.50	35



L972226-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L972226-02 02/22/18 23:30 • (MS) R3289333-4 02/23/18 05:30 • (MSD) R3289333-5 02/23/18 05:51

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 %
Carbon tetrachloride	0.0272	U	0.0260	0.0247	95.7	90.7	1	13.0-140			5.27	30
Chlorobenzene	0.0272	U	0.0244	0.0242	89.8	88.9	1	10.0-149			0.995	31
Chlorodibromomethane	0.0272	U	0.0251	0.0244	92.4	89.8	1	12.0-147			2.92	29
Chloroethane	0.0272	U	0.0276	0.0273	102	101	1	10.0-159			1.02	33
Chloroform	0.0272	U	0.0247	0.0247	90.8	90.6	1	18.0-148			0.197	28
Chloromethane	0.0272	U	0.0237	0.0230	87.1	84.4	1	10.0-146			3.18	29
2-Chlorotoluene	0.0272	U	0.0235	0.0236	86.5	86.8	1	10.0-151			0.334	35
4-Chlorotoluene	0.0272	U	0.0217	0.0225	79.9	82.9	1	10.0-150			3.64	35
1,2-Dibromo-3-Chloropropane	0.0272	U	0.0238	0.0242	87.3	88.9	1	10.0-149			1.74	34
1,2-Dibromoethane	0.0272	U	0.0232	0.0232	85.1	85.4	1	14.0-145			0.248	28
Dibromomethane	0.0272	U	0.0247	0.0254	90.9	93.5	1	18.0-144			2.87	27
1,2-Dichlorobenzene	0.0272	U	0.0209	0.0215	76.9	79.1	1	10.0-153			2.78	34
1,3-Dichlorobenzene	0.0272	U	0.0203	0.0207	74.6	76.2	1	10.0-150			2.22	35
1,4-Dichlorobenzene	0.0272	U	0.0195	0.0201	71.8	73.8	1	10.0-148			2.79	34
Dichlorodifluoromethane	0.0272	U	0.0278	0.0278	102	102	1	10.0-160			0.0337	30
1,1-Dichloroethane	0.0272	U	0.0252	0.0250	92.5	91.9	1	19.0-148			0.676	28
1,2-Dichloroethane	0.0272	U	0.0232	0.0238	85.4	87.5	1	17.0-147			2.34	27
1,1-Dichloroethene	0.0272	U	0.0262	0.0258	96.3	95.0	1	10.0-150			1.36	31
cis-1,2-Dichloroethene	0.0272	U	0.0247	0.0242	90.8	89.0	1	16.0-145			2.06	28
trans-1,2-Dichloroethene	0.0272	U	0.0248	0.0252	91.2	92.5	1	11.0-142			1.45	29
1,2-Dichloropropane	0.0272	U	0.0236	0.0237	86.7	87.2	1	17.0-148			0.595	28
1,1-Dichloropropene	0.0272	U	0.0262	0.0256	96.3	94.1	1	10.0-150			2.38	30
1,3-Dichloropropane	0.0272	U	0.0228	0.0228	83.8	83.6	1	16.0-148			0.201	27
cis-1,3-Dichloropropene	0.0272	U	0.0238	0.0240	87.7	88.4	1	13.0-150			0.824	28
trans-1,3-Dichloropropene	0.0272	U	0.0221	0.0222	81.4	81.8	1	10.0-152			0.505	29
2,2-Dichloropropane	0.0272	U	0.0261	0.0270	96.0	99.2	1	16.0-143			3.27	30
Di-isopropyl ether	0.0272	U	0.0195	0.0202	71.8	74.4	1	16.0-149			3.52	28
Ethylbenzene	0.0272	U	0.0260	0.0253	95.6	93.1	1	10.0-147			2.69	31
Hexachloro-1,3-butadiene	0.0272	U	0.0213	0.0227	78.2	83.6	1	10.0-154			6.69	40
Isopropylbenzene	0.0272	U	0.0253	0.0243	92.9	89.5	1	10.0-147			3.72	33
p-Isopropyltoluene	0.0272	U	0.0244	0.0247	89.7	90.9	1	10.0-156			1.31	37
2-Butanone (MEK)	0.136	U	0.0832	0.0830	61.2	61.0	1	10.0-160			0.322	33
Methylene Chloride	0.0272	U	0.0245	0.0249	90.1	91.5	1	16.0-139			1.62	29
4-Methyl-2-pentanone (MIBK)	0.136	U	0.106	0.105	77.7	77.2	1	12.0-160			0.623	32
Methyl tert-butyl ether	0.0272	U	0.0230	0.0239	84.4	88.0	1	21.0-145			4.12	29
Naphthalene	0.0272	U	0.0190	0.0198	69.8	72.8	1	10.0-153			4.30	36
n-Propylbenzene	0.0272	U	0.0240	0.0230	88.1	84.5	1	10.0-151			4.14	34
Styrene	0.0272	U	0.0239	0.0231	87.7	84.8	1	10.0-155			3.31	34
1,1,1,2-Tetrachloroethane	0.0272	U	0.0261	0.0262	95.8	96.5	1	10.0-147			0.735	30

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



L972226-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L972226-02 02/22/18 23:30 • (MS) R3289333-4 02/23/18 05:30 • (MSD) R3289333-5 02/23/18 05:51

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 %
1,1,2,2-Tetrachloroethane	0.0272	U	0.0238	0.0242	87.6	89.1	1	10.0-155			1.69	31
Tetrachloroethene	0.0272	U	0.0258	0.0253	94.9	93.1	1	10.0-144			1.92	32
Toluene	0.0272	U	0.0250	0.0238	91.9	87.4	1	10.0-144			4.97	28
1,1,2-Trichlorotrifluoroethane	0.0272	U	0.0291	0.0287	107	106	1	10.0-153			1.27	33
1,2,3-Trichlorobenzene	0.0272	U	0.0162	0.0178	59.6	65.5	1	10.0-153			9.44	40
1,2,4-Trichlorobenzene	0.0272	U	0.0166	0.0176	60.9	64.8	1	10.0-156			6.10	40
1,1,1-Trichloroethane	0.0272	U	0.0260	0.0263	95.7	96.7	1	18.0-145			1.02	29
1,1,2-Trichloroethane	0.0272	U	0.0243	0.0236	89.4	86.9	1	12.0-151			2.89	28
Trichloroethene	0.0272	U	0.0252	0.0253	92.6	93.0	1	11.0-148			0.428	29
Trichlorofluoromethane	0.0272	U	0.0277	0.0271	102	99.7	1	10.0-157			2.05	34
1,2,3-Trichloropropane	0.0272	U	0.0231	0.0238	84.9	87.3	1	10.0-154			2.81	32
1,2,3-Trimethylbenzene	0.0272	U	0.0251	0.0257	92.1	94.6	1	10.0-150			2.64	33
1,2,4-Trimethylbenzene	0.0272	U	0.0240	0.0237	88.4	87.2	1	10.0-151			1.32	34
1,3,5-Trimethylbenzene	0.0272	U	0.0244	0.0239	89.7	87.7	1	10.0-150			2.34	33
Vinyl chloride	0.0272	U	0.0257	0.0255	94.6	93.7	1	10.0-150			0.990	29
Xylenes, Total	0.0816	U	0.0760	0.0762	93.1	93.3	1	10.0-150			0.286	31
(S) Toluene-d8					102	97.0		80.0-120				
(S) Dibromofluoromethane					94.9	94.1		74.0-131				
(S) 4-Bromofluorobenzene					96.5	94.0		64.0-132				

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3289540-3 02/23/18 12:49

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0100	1.00
Acrolein	U		0.00887	0.0500
Acrylonitrile	U		0.00187	0.0100
Benzene	U		0.000331	0.00100
Bromobenzene	U		0.000352	0.00100
Bromodichloromethane	U		0.000380	0.00125
Bromoform	U		0.000469	0.00100
Bromomethane	U		0.000866	0.00500
n-Butylbenzene	U		0.000361	0.00100
sec-Butylbenzene	U		0.000365	0.00100
tert-Butylbenzene	U		0.000399	0.00100
Carbon tetrachloride	U		0.000379	0.00100
Chlorobenzene	U		0.000348	0.00100
Chlorodibromomethane	U		0.000327	0.00100
Chloroethane	U		0.000453	0.00500
Chloroform	U		0.000324	0.00500
Chloromethane	U		0.000276	0.00250
2-Chlorotoluene	U		0.000375	0.00100
4-Chlorotoluene	U		0.000351	0.00100
1,2-Dibromo-3-Chloropropane	U		0.00133	0.00500
1,2-Dibromoethane	U		0.000381	0.00100
Dibromomethane	U		0.000346	0.00100
1,2-Dichlorobenzene	U		0.000349	0.00100
1,3-Dichlorobenzene	U		0.000220	0.00100
1,4-Dichlorobenzene	U		0.000274	0.00100
Dichlorodifluoromethane	U		0.000551	0.00500
1,1-Dichloroethane	U		0.000259	0.00100
1,2-Dichloroethane	U		0.000361	0.00100
1,1-Dichloroethene	U		0.000398	0.00100
cis-1,2-Dichloroethene	U		0.000260	0.00100
trans-1,2-Dichloroethene	U		0.000396	0.00100
1,2-Dichloropropane	U		0.000306	0.00100
1,1-Dichloropropene	U		0.000352	0.00100
1,3-Dichloropropane	U		0.000366	0.00100
cis-1,3-Dichloropropene	U		0.000418	0.00100
trans-1,3-Dichloropropene	U		0.000419	0.00100
2,2-Dichloropropane	U		0.000321	0.00100
Di-isopropyl ether	U		0.000320	0.00100
Ethylbenzene	U		0.000384	0.00100
Hexachloro-1,3-butadiene	U		0.000256	0.00100

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3289540-3 02/23/18 12:49

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Isopropylbenzene	U		0.000326	0.00100
p-Isopropyltoluene	U		0.000350	0.00100
2-Butanone (MEK)	U		0.00393	0.0100
Methylene Chloride	U		0.00100	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100
Methyl tert-butyl ether	U		0.000367	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.000349	0.00100
Styrene	U		0.000307	0.00100
1,1,1,2-Tetrachloroethane	U		0.000385	0.00100
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100
Tetrachloroethene	U		0.000372	0.00100
1,1,2-Trichlorotrifluoroethane	U		0.000303	0.00100
1,2,3-Trichlorobenzene	U		0.000230	0.00100
Toluene	U		0.000412	0.00100
1,2,4-Trichlorobenzene	U		0.000355	0.00100
1,1,1-Trichloroethane	U		0.000319	0.00100
1,1,2-Trichloroethane	U		0.000383	0.00100
Trichloroethene	U		0.000398	0.00100
Trichlorofluoromethane	U		0.00120	0.00500
1,2,3-Trichloropropane	U		0.000807	0.00250
1,2,3-Trimethylbenzene	U		0.000321	0.00100
1,2,4-Trimethylbenzene	U		0.000373	0.00100
1,3,5-Trimethylbenzene	U		0.000387	0.00100
Vinyl chloride	U		0.000259	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	106			80.0-120
(S) Dibromofluoromethane	99.0			76.0-123
(S) 4-Bromofluorobenzene	105			80.0-120

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

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Sc

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

(LCS) R3289540-1 02/23/18 11:31 • (LCSD) R3289540-2 02/23/18 11:50

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	0.0865	0.100	69.2	80.1	10.0-160			14.6	23
Acrolein	0.125	0.110	0.128	88.0	102	10.0-160			15.0	20
Acrylonitrile	0.125	0.153	0.152	122	122	60.0-142			0.194	20
Bromobenzene	0.0250	0.0281	0.0284	112	113	79.0-120			0.984	20



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

(LCS) R3289540-1 02/23/18 11:31 • (LCSD) R3289540-2 02/23/18 11:50

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Bromodichloromethane	0.0250	0.0264	0.0262	106	105	76.0-120			0.727	20
Bromoform	0.0250	0.0227	0.0235	90.9	94.0	67.0-132			3.32	20
Bromomethane	0.0250	0.0269	0.0261	108	104	18.0-160			3.23	20
n-Butylbenzene	0.0250	0.0268	0.0274	107	110	72.0-126			2.26	20
sec-Butylbenzene	0.0250	0.0275	0.0279	110	112	74.0-121			1.39	20
tert-Butylbenzene	0.0250	0.0268	0.0276	107	110	75.0-122			2.68	20
Carbon tetrachloride	0.0250	0.0254	0.0252	102	101	63.0-122			0.595	20
Benzene	0.0250	0.0267	0.0264	107	106	69.0-123			0.970	20
Chlorobenzene	0.0250	0.0269	0.0273	107	109	79.0-121			1.65	20
Chlorodibromomethane	0.0250	0.0249	0.0251	99.6	100	75.0-125			0.916	20
Chloroethane	0.0250	0.0320	0.0317	128	127	47.0-152			0.846	20
Chloroform	0.0250	0.0268	0.0268	107	107	72.0-121			0.116	20
Chloromethane	0.0250	0.0234	0.0239	93.6	95.4	48.0-139			1.88	20
2-Chlorotoluene	0.0250	0.0300	0.0302	120	121	74.0-122			0.558	20
4-Chlorotoluene	0.0250	0.0290	0.0299	116	120	79.0-120			2.96	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0245	0.0259	98.0	104	64.0-127			5.42	20
1,2-Dibromoethane	0.0250	0.0276	0.0275	110	110	77.0-123			0.286	20
Dibromomethane	0.0250	0.0258	0.0263	103	105	78.0-120			1.95	20
1,2-Dichlorobenzene	0.0250	0.0272	0.0279	109	111	80.0-120			2.41	20
1,3-Dichlorobenzene	0.0250	0.0255	0.0259	102	104	72.0-123			1.78	20
1,4-Dichlorobenzene	0.0250	0.0236	0.0244	94.5	97.5	77.0-120			3.18	20
Dichlorodifluoromethane	0.0250	0.0254	0.0265	102	106	49.0-155			3.96	20
1,1-Dichloroethane	0.0250	0.0277	0.0274	111	109	70.0-126			1.11	20
1,2-Dichloroethane	0.0250	0.0295	0.0300	118	120	67.0-126			1.39	20
1,1-Dichloroethene	0.0250	0.0246	0.0247	98.3	98.9	64.0-129			0.678	20
cis-1,2-Dichloroethene	0.0250	0.0250	0.0244	100	97.6	73.0-120			2.52	20
trans-1,2-Dichloroethene	0.0250	0.0237	0.0236	94.6	94.3	71.0-121			0.361	20
1,2-Dichloropropane	0.0250	0.0295	0.0290	118	116	75.0-125			1.57	20
1,1-Dichloropropene	0.0250	0.0288	0.0285	115	114	71.0-129			0.937	20
1,3-Dichloropropane	0.0250	0.0278	0.0283	111	113	80.0-121			1.49	20
cis-1,3-Dichloropropene	0.0250	0.0288	0.0293	115	117	79.0-123			1.64	20
trans-1,3-Dichloropropene	0.0250	0.0276	0.0278	111	111	74.0-127			0.516	20
2,2-Dichloropropane	0.0250	0.0255	0.0250	102	100	60.0-125			1.90	20
Di-isopropyl ether	0.0250	0.0280	0.0281	112	112	59.0-133			0.0624	20
Hexachloro-1,3-butadiene	0.0250	0.0184	0.0191	73.7	76.3	64.0-131			3.52	20
Isopropylbenzene	0.0250	0.0282	0.0289	113	116	75.0-120			2.57	20
p-Isopropyltoluene	0.0250	0.0265	0.0272	106	109	74.0-126			2.45	20
2-Butanone (MEK)	0.125	0.124	0.131	98.9	105	37.0-158			5.92	20
Methylene Chloride	0.0250	0.0251	0.0255	100	102	66.0-121			1.73	20
4-Methyl-2-pentanone (MIBK)	0.125	0.159	0.164	128	131	59.0-143			2.60	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



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

(LCS) R3289540-1 02/23/18 11:31 • (LCSD) R3289540-2 02/23/18 11:50

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Ethylbenzene	0.0250	0.0263	0.0268	105	107	77.0-120			1.88	20
Naphthalene	0.0250	0.0256	0.0264	102	106	62.0-128			3.13	20
n-Propylbenzene	0.0250	0.0285	0.0287	114	115	79.0-120			0.547	20
Styrene	0.0250	0.0279	0.0283	112	113	78.0-124			1.62	20
1,1,1,2-Tetrachloroethane	0.0250	0.0257	0.0252	103	101	75.0-122			1.88	20
1,1,2,2-Tetrachloroethane	0.0250	0.0294	0.0294	118	118	71.0-122			0.135	20
Tetrachloroethene	0.0250	0.0241	0.0248	96.5	99.1	70.0-127			2.64	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0279	0.0277	112	111	61.0-136			0.688	20
1,2,3-Trichlorobenzene	0.0250	0.0212	0.0224	84.8	89.5	61.0-133			5.43	20
1,2,4-Trichlorobenzene	0.0250	0.0234	0.0246	93.4	98.2	69.0-129			4.98	20
1,1,1-Trichloroethane	0.0250	0.0272	0.0277	109	111	68.0-122			1.88	20
Methyl tert-butyl ether	0.0250	0.0268	0.0269	107	108	64.0-123			0.424	20
1,1,2-Trichloroethane	0.0250	0.0265	0.0271	106	108	78.0-120			2.22	20
Trichloroethene	0.0250	0.0260	0.0254	104	102	78.0-120			2.16	20
Trichlorofluoromethane	0.0250	0.0272	0.0259	109	104	56.0-137			5.01	20
1,2,3-Trichloropropane	0.0250	0.0283	0.0296	113	118	72.0-124			4.30	20
1,2,3-Trimethylbenzene	0.0250	0.0275	0.0278	110	111	75.0-120			1.09	20
1,2,4-Trimethylbenzene	0.0250	0.0276	0.0278	110	111	75.0-120			0.556	20
1,3,5-Trimethylbenzene	0.0250	0.0275	0.0277	110	111	75.0-120			0.520	20
Vinyl chloride	0.0250	0.0281	0.0281	112	112	64.0-133			0.0102	20
Toluene	0.0250	0.0271	0.0272	108	109	77.0-120			0.274	20
Xylenes, Total	0.0750	0.0804	0.0824	107	110	77.0-120			2.46	20
(S) Toluene-d8				100	101	80.0-120				
(S) Dibromofluoromethane				98.0	99.6	76.0-123				
(S) 4-Bromofluorobenzene				103	104	80.0-120				

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



Method Blank (MB)

(MB) R3288569-1 02/23/18 12:00

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	U		0.274	4.00
(S) o-Terphenyl	94.7			18.0-148

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

(LCS) R3288569-2 02/23/18 12:15 • (LCSD) R3288569-3 02/23/18 12:29

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 %
C10-C28 Diesel Range	50.0	37.5	35.2	74.9	70.4	50.0-150			6.16	20
(S) o-Terphenyl				91.1	93.7	18.0-148				

L972226-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L972226-02 03/01/18 17:30 • (MS) R3289973-1 03/01/18 17:44 • (MSD) R3289973-2 03/01/18 17:57

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	54.4	10.7	45.8	44.2	64.7	61.7	1	50.0-150			3.60	20
(S) o-Terphenyl					52.4	54.5		18.0-148				

Method Blank (MB)

(MB) R3289133-3 02/26/18 13:28

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00642	0.0330
Acenaphthylene	U		0.00671	0.0330
Anthracene	U		0.00632	0.0330
Benzidine	U		0.0637	0.333
Benzo(a)anthracene	U		0.00428	0.0330
Benzo(b)fluoranthene	U		0.00695	0.0330
Benzo(k)fluoranthene	U		0.00582	0.0330
Benzo(g,h,i)perylene	U		0.00721	0.0330
Benzo(a)pyrene	U		0.00548	0.0330
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
2-Chloronaphthalene	U		0.00639	0.0330
4-Chlorophenyl-phenylether	U		0.00627	0.333
Chrysene	U		0.00555	0.0330
Dibenz(a,h)anthracene	U		0.00821	0.0330
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	0.0330
Fluorene	U		0.00682	0.0330
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	0.0330
Isophorone	U		0.00522	0.333
Naphthalene	U		0.00889	0.0330
Nitrobenzene	U		0.00695	0.333
n-Nitrosodimethylamine	U		0.0647	0.333
n-Nitrosodiphenylamine	U		0.00594	0.333
n-Nitrosodi-n-propylamine	U		0.00906	0.333
Phenanthrene	U		0.00528	0.0330
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

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3289133-3 02/26/18 13:28

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Pyrene	U		0.0123	0.0330
1,2,4-Trichlorobenzene	U		0.00876	0.333
4-Chloro-3-methylphenol	U		0.00477	0.333
2-Chlorophenol	U		0.00831	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
2,4,6-Trichlorophenol	U		0.00779	0.333
(S) Nitrobenzene-d5	73.6			18.0-125
(S) 2-Fluorobiphenyl	66.8			28.0-120
(S) p-Terphenyl-d14	61.2			13.0-131
(S) Phenol-d5	65.1			20.0-120
(S) 2-Fluorophenol	81.3			20.0-120
(S) 2,4,6-Tribromophenol	56.7			17.0-137

1

Cp

2

Tc

3

Ss

4

Cn

5

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) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3289133-1 02/26/18 12:31 • (LCSD) R3289133-2 02/26/18 12:59

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 %
Acenaphthene	0.667	0.456	0.505	68.4	75.7	47.0-120			10.1	21
Acenaphthylene	0.667	0.456	0.500	68.3	75.0	48.0-120			9.28	21
Anthracene	0.667	0.445	0.447	66.7	67.0	46.0-120			0.459	20
Benzidine	0.667	ND	ND	0.000	0.000	1.00-120	J4	J4	0.000	36
Benzo(a)anthracene	0.667	0.500	0.590	75.0	88.5	46.0-120			16.5	20
Benzo(b)fluoranthene	0.667	0.545	0.487	81.8	73.0	45.0-120			11.3	22
Benzo(k)fluoranthene	0.667	0.552	0.543	82.7	81.4	45.0-120			1.65	23
Benzo(g,h,i)perylene	0.667	0.510	0.557	76.4	83.5	48.0-120			8.94	21
Benzo(a)pyrene	0.667	0.516	0.537	77.4	80.6	46.0-120			4.06	21
Bis(2-chlorethoxy)methane	0.667	0.342	0.371	51.2	55.6	41.0-120			8.16	22
Bis(2-chloroethyl)ether	0.667	0.424	0.457	63.6	68.4	28.0-120			7.30	28
Bis(2-chloroisopropyl)ether	0.667	0.357	0.425	53.5	63.7	40.0-120			17.4	27
4-Bromophenyl-phenylether	0.667	0.473	0.523	70.9	78.5	45.0-120			10.2	20
2-Chloronaphthalene	0.667	0.432	0.483	64.7	72.5	43.0-120			11.3	22

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

(LCS) R3289133-1 02/26/18 12:31 • (LCSD) R3289133-2 02/26/18 12:59

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 %
4-Chlorophenyl-phenylether	0.667	0.456	0.499	68.4	74.8	46.0-120			8.88	21
Chrysene	0.667	0.482	0.557	72.3	83.4	46.0-120			14.3	20
Dibenz(a,h)anthracene	0.667	0.543	0.537	81.4	80.5	47.0-120			1.12	22
3,3-Dichlorobenzidine	0.667	0.367	0.431	55.1	64.6	20.0-130			15.9	24
2,4-Dinitrotoluene	0.667	0.509	0.551	76.3	82.6	48.0-122			7.92	21
2,6-Dinitrotoluene	0.667	0.496	0.503	74.3	75.4	46.0-120			1.38	21
Fluoranthene	0.667	0.445	0.485	66.7	72.7	46.0-120			8.60	20
Fluorene	0.667	0.465	0.513	69.7	76.9	47.0-120			9.80	20
Hexachlorobenzene	0.667	0.452	0.504	67.8	75.6	42.0-120			10.8	20
Hexachloro-1,3-butadiene	0.667	0.409	0.427	61.3	64.0	36.0-120			4.38	26
Hexachlorocyclopentadiene	0.667	0.496	0.547	74.4	82.1	20.0-124			9.88	26
Hexachloroethane	0.667	0.454	0.447	68.0	67.0	32.0-120			1.50	31
Indeno(1,2,3-cd)pyrene	0.667	0.551	0.570	82.6	85.5	48.0-120			3.41	21
Isophorone	0.667	0.426	0.418	63.8	62.7	42.0-120			1.79	21
Naphthalene	0.667	0.359	0.378	53.8	56.7	41.0-120			5.18	24
Nitrobenzene	0.667	0.442	0.445	66.2	66.8	36.0-120			0.857	24
n-Nitrosodimethylamine	0.667	0.476	0.550	71.4	82.5	20.0-120			14.4	31
n-Nitrosodiphenylamine	0.667	0.462	0.523	69.3	78.4	42.0-120			12.4	20
n-Nitrosodi-n-propylamine	0.667	0.488	0.507	73.2	76.0	39.0-120			3.79	23
Phenanthrene	0.667	0.452	0.469	67.7	70.3	45.0-120			3.67	20
Benzylbutyl phthalate	0.667	0.497	0.591	74.5	88.6	41.0-123			17.3	20
Bis(2-ethylhexyl)phthalate	0.667	0.511	0.617	76.7	92.5	41.0-124			18.7	20
Di-n-butyl phthalate	0.667	0.512	0.520	76.8	77.9	44.0-120			1.49	20
Diethyl phthalate	0.667	0.470	0.559	70.5	83.8	46.0-120			17.3	20
Dimethyl phthalate	0.667	0.482	0.510	72.2	76.5	47.0-120			5.80	21
Di-n-octyl phthalate	0.667	0.545	0.607	81.7	91.0	40.0-123			10.7	21
Pyrene	0.667	0.502	0.567	75.3	85.0	45.0-120			12.2	21
1,2,4-Trichlorobenzene	0.667	0.396	0.411	59.4	61.7	40.0-120			3.86	25
4-Chloro-3-methylphenol	0.667	0.403	0.407	60.4	61.0	46.0-120			0.987	20
2-Chlorophenol	0.667	0.452	0.475	67.8	71.2	37.0-120			4.83	27
2,4-Dichlorophenol	0.667	0.380	0.415	56.9	62.2	45.0-120			8.83	21
2,4-Dimethylphenol	0.667	0.399	0.393	59.9	58.9	40.0-120			1.71	22
4,6-Dinitro-2-methylphenol	0.667	0.424	0.467	63.5	70.0	34.0-120			9.78	23
2,4-Dinitrophenol	0.667	0.246	0.249	36.8	37.3	10.0-120			1.40	30
2-Nitrophenol	0.667	0.424	0.410	63.6	61.5	42.0-120			3.27	24
4-Nitrophenol	0.667	0.396	0.427	59.4	64.0	40.0-120			7.56	21
Pentachlorophenol	0.667	0.413	0.477	61.9	71.6	33.0-122			14.4	22
Phenol	0.667	0.453	0.475	67.9	71.1	38.0-120			4.61	25
2,4,6-Trichlorophenol	0.667	0.473	0.501	70.9	75.0	47.0-120			5.72	22
(S) Nitrobenzene-d5				63.9	61.5	18.0-125				

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

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

(LCS) R3289133-1 02/26/18 12:31 • (LCSD) R3289133-2 02/26/18 12:59

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 %
(S) 2-Fluorobiphenyl				68.2	66.7	28.0-120				
(S) p-Terphenyl-d14				59.3	61.7	13.0-131				
(S) Phenol-d5				69.7	65.2	20.0-120				
(S) 2-Fluorophenol				79.2	72.7	20.0-120				
(S) 2,4,6-Tribromophenol				60.9	63.9	17.0-137				

L972226-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L972226-02 02/26/18 18:46 • (MS) R3289133-4 02/26/18 19:15 • (MSD) R3289133-5 02/26/18 19:44

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	0.726	U	0.539	0.453	74.3	62.4	1	37.0-120			17.3	23
Acenaphthylene	0.726	U	0.533	0.462	73.4	63.6	1	41.0-120			14.3	22
Anthracene	0.726	U	0.486	0.420	66.9	57.9	1	30.0-123			14.5	25
Benzidine	0.726	U	ND	ND	0.000	0.000	1	1.00-120	J6	J6	0.000	36
Benzo(a)anthracene	0.726	U	0.593	0.495	81.7	68.1	1	21.0-123			18.1	26
Benzo(b)fluoranthene	0.726	U	0.623	0.552	85.8	76.1	1	20.0-127			12.0	29
Benzo(k)fluoranthene	0.726	U	0.661	0.561	91.1	77.3	1	22.0-123			16.3	28
Benzo(g,h,i)perylene	0.726	U	0.391	0.334	53.8	46.1	1	10.0-120			15.6	32
Benzo(a)pyrene	0.726	U	0.592	0.501	81.6	69.0	1	23.0-120			16.8	27
Bis(2-chlorethoxy)methane	0.726	U	0.386	0.322	53.1	44.3	1	37.0-120			18.1	22
Bis(2-chloroethyl)ether	0.726	U	0.511	0.423	70.5	58.2	1	26.0-120			19.0	27
Bis(2-chloroisopropyl)ether	0.726	U	0.420	0.374	57.8	51.5	1	35.0-120			11.6	25
4-Bromophenyl-phenylether	0.726	U	0.501	0.458	69.1	63.0	1	34.0-120			9.17	23
2-Chloronaphthalene	0.726	U	0.507	0.463	69.9	63.7	1	40.0-120			9.25	22
4-Chlorophenyl-phenylether	0.726	U	0.525	0.461	72.4	63.5	1	37.0-120			13.2	23
Chrysene	0.726	U	0.579	0.500	79.8	68.8	1	19.0-127			14.7	27
Dibenz(a,h)anthracene	0.726	U	0.458	0.391	63.1	53.9	1	10.0-120			15.7	28
3,3-Dichlorobenzidine	0.726	U	ND	ND	0.000	0.000	1	10.0-142	J6	J6	0.000	30
2,4-Dinitrotoluene	0.726	U	0.611	0.546	84.2	75.2	1	37.0-129			11.3	24
2,6-Dinitrotoluene	0.726	U	0.552	0.483	76.1	66.5	1	40.0-120			13.4	23
Fluoranthene	0.726	U	0.496	0.456	68.3	62.9	1	20.0-133			8.33	28
Fluorene	0.726	U	0.535	0.464	73.7	63.9	1	35.0-120			14.2	23
Hexachlorobenzene	0.726	U	0.490	0.430	67.5	59.2	1	33.0-120			13.1	24
Hexachloro-1,3-butadiene	0.726	U	0.417	0.368	57.5	50.7	1	33.0-120			12.5	25
Hexachlorocyclopentadiene	0.726	U	0.561	0.461	77.3	63.5	1	10.0-120			19.6	33
Hexachloroethane	0.726	U	0.503	0.429	69.3	59.0	1	21.0-120			16.0	30
Indeno(1,2,3-cd)pyrene	0.726	U	0.461	0.386	63.5	53.2	1	10.0-120			17.6	30
Isophorone	0.726	U	0.460	0.410	63.4	56.5	1	38.0-120			11.6	22

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Cp

2

Tc

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Ss

4

Cn

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Sr

6

Qc

7

Gl

8

Al

9

Sc

L972226-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L972226-02 02/26/18 18:46 • (MS) R3289133-4 02/26/18 19:15 • (MSD) R3289133-5 02/26/18 19:44

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 %
Naphthalene	0.726	U	0.397	0.336	54.7	46.2	1	37.0-120			16.7	25
Nitrobenzene	0.726	U	0.497	0.447	68.4	61.6	1	32.0-120			10.6	24
n-Nitrosodimethylamine	0.726	U	0.559	0.421	77.0	57.9	1	18.0-120		J3	28.2	27
n-Nitrosodiphenylamine	0.726	U	0.541	0.468	74.6	64.5	1	20.0-125			14.5	25
n-Nitrosodi-n-propylamine	0.726	U	0.551	0.478	76.0	65.8	1	34.0-120			14.3	23
Phenanthrene	0.726	U	0.529	0.462	72.9	63.6	1	24.0-124			13.5	25
Benzylbutyl phthalate	0.726	U	0.628	0.536	86.5	73.8	1	18.0-130			15.8	27
Bis(2-ethylhexyl)phthalate	0.726	U	0.627	0.553	86.4	76.2	1	19.0-127			12.5	28
Di-n-butyl phthalate	0.726	U	0.563	0.492	77.6	67.8	1	29.0-120			13.4	26
Diethyl phthalate	0.726	U	0.607	0.534	83.7	73.6	1	42.0-121			12.8	23
Dimethyl phthalate	0.726	U	0.569	0.503	78.4	69.4	1	42.0-120			12.2	23
Di-n-octyl phthalate	0.726	U	0.648	0.542	89.3	74.7	1	21.0-122			17.8	27
Pyrene	0.726	U	0.588	0.497	80.9	68.4	1	19.0-127			16.7	29
1,2,4-Trichlorobenzene	0.726	U	0.419	0.373	57.7	51.4	1	39.0-120			11.6	25
4-Chloro-3-methylphenol	0.726	U	0.458	0.387	63.1	53.4	1	37.0-121			16.7	23
2-Chlorophenol	0.726	U	0.507	0.409	69.8	56.4	1	34.0-120			21.3	25
2,4-Dichlorophenol	0.726	U	0.457	0.400	62.9	55.1	1	41.0-120			13.3	22
2,4-Dimethylphenol	0.726	U	0.421	0.409	58.0	56.3	1	27.0-120			2.93	25
4,6-Dinitro-2-methylphenol	0.726	U	0.607	0.536	83.6	73.9	1	10.0-131			12.3	29
2,4-Dinitrophenol	0.726	U	0.483	0.427	66.6	58.8	1	10.0-142			12.3	30
2-Nitrophenol	0.726	U	0.443	0.391	61.1	53.9	1	34.0-124			12.4	27
4-Nitrophenol	0.726	U	0.503	0.460	69.4	63.4	1	26.0-133			8.97	25
Pentachlorophenol	0.726	U	0.532	0.467	73.2	64.3	1	15.0-152			13.0	26
Phenol	0.726	U	0.515	0.452	70.9	62.3	1	33.0-120			12.9	24
2,4,6-Trichlorophenol	0.726	U	0.539	0.449	74.2	61.8	1	40.0-125			18.3	24
(S) Nitrobenzene-d5					67.9	55.8		18.0-125				
(S) 2-Fluorobiphenyl					71.0	62.4		28.0-120				
(S) p-Terphenyl-d14					65.7	56.3		13.0-131				
(S) Phenol-d5					67.0	58.8		20.0-120				
(S) 2-Fluorophenol					63.8	61.7		20.0-120				
(S) 2,4,6-Tribromophenol					65.8	55.1		17.0-137				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Guide to Reading and Understanding Your Laboratory Report

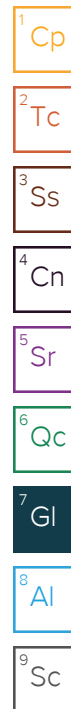
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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.
MQL (dry)	Method Quantitation Limit.
MQL	Method Quantitation Limit.
ND	Not detected at the Sample Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
SDL (dry)	Sample Detection Limit.
(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 Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
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, 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.
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

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.





ESC Lab Sciences 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.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey-NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina ¹	DW21704
Florida	E87487	North Carolina ²	41
Georgia	NELAP	North Dakota	R-140
Georgia ¹	923	Ohio-VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky ¹	90010	South Dakota	n/a
Kentucky ²	16	Tennessee ^{1 4}	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

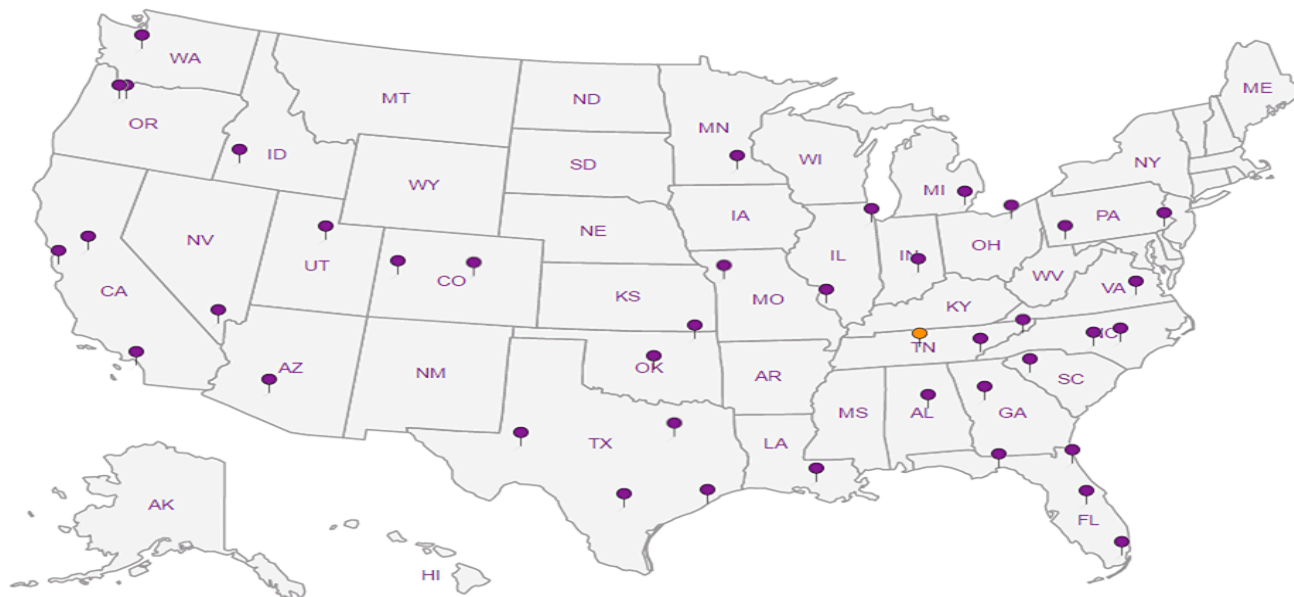
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP, LLC	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA-Crypto	TN00003		

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

Our Locations

ESC Lab Sciences 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. ESC Lab Sciences performs all testing at our central laboratory.



Andy Vann

From: Mark Beasley
Sent: Friday, February 23, 2018 5:13 PM
To: Login
Subject: L972226 *BAKHUGHTX*

Remove TPHTX from all samples. Change DRO to DRORLA. Client changed analysis after bottle order.

✉ **Mark Beasley**
National Account Manager

ESC Lab Sciences-a subsidiary of Pace Analytical
12065 Lebanon Road | Mt. Juliet, TN 37122
615.773.9672 | Cell 615.330.1602
mbeasley@esclabsciences.com | www.esclabsciences.com

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Baker Hughes

Sample Delivery Group: L972534
Samples Received: 02/23/2018
Project Number: 292348
Description: Farmington BHGE

Report To: Zarek Boutaghou
501 W. Lake Park Blvd, Ste 28180D
Houston, TX 77079

Entire Report Reviewed By:



Mark W. Beasley
Technical Service Representative

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 ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



FWT-4 L972534-01 GW

Collected by
Z. Boutaghou

Collected date/time
02/22/18 13:10

Received date/time
02/23/18 08:45

¹ Cp

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1077658	1	02/26/18 14:30	02/26/18 15:24	BS
Wet Chemistry by Method 9056A	WG1077235	5	02/24/18 15:54	02/24/18 15:54	DR
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1077999	1	02/28/18 03:59	02/28/18 03:59	LRL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1077298	1	02/23/18 23:50	02/23/18 23:50	DWR
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1077705	1	02/26/18 18:26	02/27/18 14:34	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1078430	1	02/28/18 23:26	03/03/18 22:28	JF

² Tc

³ Ss

⁴ Cn

⁵ Sr

FWT-2 L972534-02 GW

Collected by
Z. Boutaghou

Collected date/time
02/22/18 15:09

Received date/time
02/23/18 08:45

⁶ Qc

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1077658	1	02/26/18 14:30	02/26/18 15:24	BS
Wet Chemistry by Method 9056A	WG1077235	5	02/24/18 16:26	02/24/18 16:26	DR
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1077999	1	02/27/18 03:48	02/27/18 03:48	LRL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1077298	1	02/24/18 00:10	02/24/18 00:10	DWR
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1077705	1	02/26/18 18:26	02/27/18 15:23	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1078430	1	02/28/18 23:26	03/03/18 23:38	JF

⁷ Gl

⁸ Al

⁹ Sc

EB FOOT L972534-03 GW

Collected by
Z. Boutaghou

Collected date/time
02/22/18 11:05

Received date/time
02/23/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 9056A	WG1077235	1	02/24/18 16:37	02/24/18 16:37	DR
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1077999	1	02/27/18 04:10	02/27/18 04:10	LRL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1077298	1	02/24/18 00:29	02/24/18 00:29	DWR
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1077705	1	02/26/18 18:26	02/27/18 15:40	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1078430	1	02/28/18 23:26	03/04/18 00:02	JF

EB PUMP L972534-04 GW

Collected by
Z. Boutaghou

Collected date/time
02/22/18 15:40

Received date/time
02/23/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1077910	1	02/27/18 15:04	02/27/18 15:37	MMF
Wet Chemistry by Method 9056A	WG1077235	1	02/24/18 16:47	02/24/18 16:47	DR
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1077999	1	02/27/18 04:32	02/27/18 04:32	LRL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1077298	1	02/24/18 00:49	02/24/18 00:49	DWR
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1077705	1	02/26/18 18:26	02/27/18 16:14	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1078430	1	02/28/18 23:26	03/04/18 00:26	JF

FWT-2 DUP L972534-05 GW

Collected by
Z. Boutaghou

Collected date/time
02/22/18 15:09

Received date/time
02/23/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1077658	1	02/26/18 14:30	02/26/18 15:24	BS
Wet Chemistry by Method 9056A	WG1077235	5	02/24/18 17:08	02/24/18 17:08	DR
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1077999	1	02/27/18 04:54	02/27/18 04:54	LRL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1077298	1	02/24/18 01:08	02/24/18 01:08	DWR
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1077705	1	02/26/18 18:26	02/27/18 16:31	TH
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1078430	1	02/28/18 23:26	03/04/18 00:49	JF

TRIP BLANK L972534-06 GW

Collected by
Z. Boutaghou

Collected date/time
02/22/18 00:00

Received date/time
02/23/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1078191	1	02/27/18 13:40	02/27/18 13:40	LRL

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



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 radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. 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
Technical Service Representative

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
Dissolved Solids	2760		2.82	10.0	10.0	1	02/26/2018 15:24	WG1077658

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
Chloride	242		0.260	1.00	5.00	5	02/24/2018 15:54	WG1077235

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

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	0.100	1	02/28/2018 03:59	WG1077999
(S) a,a,a-Trifluorotoluene(FID)	91.5				77.0-122		02/28/2018 03:59	WG1077999

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

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
Acetone	0.0165	J	0.0100	1.00	1.00	1	02/23/2018 23:50	WG1077298
Acrolein	U		0.00887	0.0500	0.0500	1	02/23/2018 23:50	WG1077298
Acrylonitrile	U		0.00187	0.0100	0.0100	1	02/23/2018 23:50	WG1077298
Benzene	U		0.000331	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
Bromobenzene	U		0.000352	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	02/23/2018 23:50	WG1077298
Bromoform	U		0.000469	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
Bromomethane	U		0.000866	0.00500	0.00500	1	02/23/2018 23:50	WG1077298
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
Chlorobenzene	U		0.000348	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
Chloroethane	U	J5	0.000453	0.00500	0.00500	1	02/23/2018 23:50	WG1077298
Chloroform	U		0.000324	0.00500	0.00500	1	02/23/2018 23:50	WG1077298
Chloromethane	U		0.000276	0.00250	0.00250	1	02/23/2018 23:50	WG1077298
2-Chlorotoluene	U		0.000375	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
4-Chlorotoluene	U		0.000351	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
1,2-Dibromo-3-Chloropropane	U		0.00133	0.00500	0.00500	1	02/23/2018 23:50	WG1077298
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
Dibromomethane	U		0.000346	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
1,2-Dichlorobenzene	U		0.000349	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
1,3-Dichlorobenzene	U		0.000220	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
1,4-Dichlorobenzene	U		0.000274	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
Dichlorodifluoromethane	U		0.000551	0.00500	0.00500	1	02/23/2018 23:50	WG1077298
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
1,1-Dichloropropene	U		0.000352	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
1,3-Dichloropropane	U		0.000366	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
2,2-Dichloropropane	U		0.000321	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
Di-isopropyl ether	U		0.000320	0.00100	0.00100	1	02/23/2018 23:50	WG1077298

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 mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Ethylbenzene	U		0.000384	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
Hexachloro-1,3-butadiene	U	<u>J4</u>	0.000256	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	02/23/2018 23:50	WG1077298
Methylene Chloride	U		0.00100	0.00500	0.00500	1	02/23/2018 23:50	WG1077298
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	02/23/2018 23:50	WG1077298
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
Naphthalene	U		0.00100	0.00500	0.00500	1	02/23/2018 23:50	WG1077298
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
Styrene	U		0.000307	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
1,1,1,2-Tetrachloroethane	U		0.000385	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
1,1,2-Trichlorotrifluoroethane	U		0.000303	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
Toluene	0.000424	<u>J</u>	0.000412	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
1,2,3-Trichlorobenzene	U		0.000230	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
1,2,4-Trichlorobenzene	U		0.000355	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
Trichloroethene	U		0.000398	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
Trichlorofluoromethane	U		0.00120	0.00500	0.00500	1	02/23/2018 23:50	WG1077298
1,2,3-Trichloropropane	U		0.000807	0.00250	0.00250	1	02/23/2018 23:50	WG1077298
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
1,2,3-Trimethylbenzene	U		0.000321	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
Vinyl chloride	U		0.000259	0.00100	0.00100	1	02/23/2018 23:50	WG1077298
Xylenes, Total	U		0.00106	0.00300	0.00300	1	02/23/2018 23:50	WG1077298
(S) Toluene-d8	104				80.0-120		02/23/2018 23:50	WG1077298
(S) Dibromofluoromethane	99.6				76.0-123		02/23/2018 23:50	WG1077298
(S) 4-Bromofluorobenzene	105				80.0-120		02/23/2018 23:50	WG1077298

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 mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	0.543		0.0222	0.100	0.100	1	02/27/2018 14:34	WG1077705
C28-C40 Oil Range	0.103		0.0118	0.100	0.100	1	02/27/2018 14:34	WG1077705
(S) o-Terphenyl	89.4				52.0-156		02/27/2018 14:34	WG1077705

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

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.000316	0.00100	0.00100	1	03/03/2018 22:28	WG1078430
Acenaphthylene	U		0.000309	0.00100	0.00100	1	03/03/2018 22:28	WG1078430
Anthracene	U		0.000291	0.00100	0.00100	1	03/03/2018 22:28	WG1078430
Benzidine	U	<u>J6</u>	0.00432	0.0100	0.0100	1	03/03/2018 22:28	WG1078430
Benzo(a)anthracene	U		0.0000975	0.00100	0.00100	1	03/03/2018 22:28	WG1078430
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	03/03/2018 22:28	WG1078430
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	03/03/2018 22:28	WG1078430
Benzo(g,h,i)perylene	U		0.000161	0.00100	0.00100	1	03/03/2018 22:28	WG1078430
Benzo(a)pyrene	U		0.000340	0.00100	0.00100	1	03/03/2018 22:28	WG1078430
Bis(2-chloroethoxy)methane	U		0.000329	0.0100	0.0100	1	03/03/2018 22:28	WG1078430
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	03/03/2018 22:28	WG1078430
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	03/03/2018 22:28	WG1078430
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	03/03/2018 22:28	WG1078430

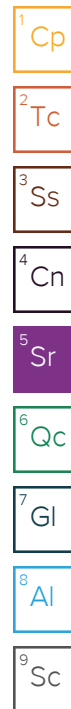


Collected date/time: 02/22/18 13:10

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

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	03/03/2018 22:28	WG1078430
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	03/03/2018 22:28	WG1078430
Chrysene	U		0.000332	0.00100	0.00100	1	03/03/2018 22:28	WG1078430
Dibenz(a,h)anthracene	U		0.000279	0.00100	0.00100	1	03/03/2018 22:28	WG1078430
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	03/03/2018 22:28	WG1078430
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	03/03/2018 22:28	WG1078430
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	03/03/2018 22:28	WG1078430
Fluoranthene	U		0.000310	0.00100	0.00100	1	03/03/2018 22:28	WG1078430
Fluorene	U		0.000323	0.00100	0.00100	1	03/03/2018 22:28	WG1078430
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	03/03/2018 22:28	WG1078430
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	03/03/2018 22:28	WG1078430
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	03/03/2018 22:28	WG1078430
Hexachloroethane	U		0.000365	0.0100	0.0100	1	03/03/2018 22:28	WG1078430
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	03/03/2018 22:28	WG1078430
Isophorone	U		0.000272	0.0100	0.0100	1	03/03/2018 22:28	WG1078430
Naphthalene	U		0.000372	0.00100	0.00100	1	03/03/2018 22:28	WG1078430
Nitrobenzene	U		0.000367	0.0100	0.0100	1	03/03/2018 22:28	WG1078430
n-Nitrosodimethylamine	U		0.00126	0.0100	0.0100	1	03/03/2018 22:28	WG1078430
n-Nitrosodiphenylamine	U		0.000304	0.0100	0.0100	1	03/03/2018 22:28	WG1078430
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	03/03/2018 22:28	WG1078430
Phenanthrene	U		0.000366	0.00100	0.00100	1	03/03/2018 22:28	WG1078430
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	03/03/2018 22:28	WG1078430
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	03/03/2018 22:28	WG1078430
Di-n-butyl phthalate	0.000823	U	0.000266	0.00300	0.00300	1	03/03/2018 22:28	WG1078430
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	03/03/2018 22:28	WG1078430
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	03/03/2018 22:28	WG1078430
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	03/03/2018 22:28	WG1078430
Pyrene	U		0.000330	0.00100	0.00100	1	03/03/2018 22:28	WG1078430
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	03/03/2018 22:28	WG1078430
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	03/03/2018 22:28	WG1078430
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	03/03/2018 22:28	WG1078430
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	03/03/2018 22:28	WG1078430
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	03/03/2018 22:28	WG1078430
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	03/03/2018 22:28	WG1078430
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	03/03/2018 22:28	WG1078430
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	03/03/2018 22:28	WG1078430
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	03/03/2018 22:28	WG1078430
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	03/03/2018 22:28	WG1078430
Phenol	U		0.000334	0.0100	0.0100	1	03/03/2018 22:28	WG1078430
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	03/03/2018 22:28	WG1078430
1-Methylnaphthalene	0.000137	U	0.0000470	0.0100	0.0100	1	03/03/2018 22:28	WG1078430
2-Methylnaphthalene	U		0.000311	0.0100	0.0100	1	03/03/2018 22:28	WG1078430
(S) 2-Fluorophenol	56.6				10.0-120		03/03/2018 22:28	WG1078430
(S) Phenol-d5	38.7				10.0-120		03/03/2018 22:28	WG1078430
(S) Nitrobenzene-d5	66.2				10.0-126		03/03/2018 22:28	WG1078430
(S) 2-Fluorobiphenyl	76.0				22.0-127		03/03/2018 22:28	WG1078430
(S) 2,4,6-Tribromophenol	83.4				10.0-153		03/03/2018 22:28	WG1078430
(S) p-Terphenyl-d14	68.4				29.0-141		03/03/2018 22:28	WG1078430





Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
Dissolved Solids	2260		2.82	10.0	10.0	1	02/26/2018 15:24	WG1077658

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
Chloride	138		0.260	1.00	5.00	5	02/24/2018 16:26	WG1077235

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

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	0.100	1	02/27/2018 03:48	WG1077999
(S) a,a,a-Trifluorotoluene(FID)	102				77.0-122		02/27/2018 03:48	WG1077999

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

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
Acetone	U	J3	0.0100	1.00	1.00	1	02/24/2018 00:10	WG1077298
Acrolein	U		0.00887	0.0500	0.0500	1	02/24/2018 00:10	WG1077298
Acrylonitrile	U		0.00187	0.0100	0.0100	1	02/24/2018 00:10	WG1077298
Benzene	U		0.000331	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
Bromobenzene	U		0.000352	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	02/24/2018 00:10	WG1077298
Bromoform	U		0.000469	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
Bromomethane	U		0.000866	0.00500	0.00500	1	02/24/2018 00:10	WG1077298
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
Chlorobenzene	U		0.000348	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
Chloroethane	U		0.000453	0.00500	0.00500	1	02/24/2018 00:10	WG1077298
Chloroform	U		0.000324	0.00500	0.00500	1	02/24/2018 00:10	WG1077298
Chloromethane	U		0.000276	0.00250	0.00250	1	02/24/2018 00:10	WG1077298
2-Chlorotoluene	U		0.000375	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
4-Chlorotoluene	U		0.000351	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
1,2-Dibromo-3-Chloropropane	U		0.00133	0.00500	0.00500	1	02/24/2018 00:10	WG1077298
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
Dibromomethane	U		0.000346	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
1,2-Dichlorobenzene	U		0.000349	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
1,3-Dichlorobenzene	U		0.000220	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
1,4-Dichlorobenzene	U		0.000274	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
Dichlorodifluoromethane	U		0.000551	0.00500	0.00500	1	02/24/2018 00:10	WG1077298
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
1,1-Dichloropropene	U		0.000352	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
1,3-Dichloropropane	U		0.000366	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
2,2-Dichloropropane	U		0.000321	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
Di-isopropyl ether	0.000668	J	0.000320	0.00100	0.00100	1	02/24/2018 00:10	WG1077298

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 mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Ethylbenzene	U		0.000384	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
Hexachloro-1,3-butadiene	U	J4	0.000256	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	02/24/2018 00:10	WG1077298
Methylene Chloride	U		0.00100	0.00500	0.00500	1	02/24/2018 00:10	WG1077298
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	02/24/2018 00:10	WG1077298
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
Naphthalene	U		0.00100	0.00500	0.00500	1	02/24/2018 00:10	WG1077298
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
Styrene	U		0.000307	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
1,1,1,2-Tetrachloroethane	U		0.000385	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
1,1,2-Trichlorotrifluoroethane	U		0.000303	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
Toluene	U		0.000412	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
1,2,3-Trichlorobenzene	U		0.000230	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
1,2,4-Trichlorobenzene	U		0.000355	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
Trichloroethene	U		0.000398	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
Trichlorofluoromethane	U		0.00120	0.00500	0.00500	1	02/24/2018 00:10	WG1077298
1,2,3-Trichloropropane	U		0.000807	0.00250	0.00250	1	02/24/2018 00:10	WG1077298
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
1,2,3-Trimethylbenzene	U		0.000321	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
Vinyl chloride	U		0.000259	0.00100	0.00100	1	02/24/2018 00:10	WG1077298
Xylenes, Total	U		0.00106	0.00300	0.00300	1	02/24/2018 00:10	WG1077298
(S) Toluene-d8	103				80.0-120		02/24/2018 00:10	WG1077298
(S) Dibromofluoromethane	97.7				76.0-123		02/24/2018 00:10	WG1077298
(S) 4-Bromofluorobenzene	105				80.0-120		02/24/2018 00:10	WG1077298

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 mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	0.152		0.0222	0.100	0.100	1	02/27/2018 15:23	WG1077705
C28-C40 Oil Range	0.0177	J	0.0118	0.100	0.100	1	02/27/2018 15:23	WG1077705
(S) o-Terphenyl	92.8				52.0-156		02/27/2018 15:23	WG1077705

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

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.000316	0.00100	0.00100	1	03/03/2018 23:38	WG1078430
Acenaphthylene	U		0.000309	0.00100	0.00100	1	03/03/2018 23:38	WG1078430
Anthracene	U		0.000291	0.00100	0.00100	1	03/03/2018 23:38	WG1078430
Benzidine	U		0.00432	0.0100	0.0100	1	03/03/2018 23:38	WG1078430
Benzo(a)anthracene	U		0.0000975	0.00100	0.00100	1	03/03/2018 23:38	WG1078430
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	03/03/2018 23:38	WG1078430
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	03/03/2018 23:38	WG1078430
Benzo(g,h,i)perylene	U		0.000161	0.00100	0.00100	1	03/03/2018 23:38	WG1078430
Benzo(a)pyrene	U		0.000340	0.00100	0.00100	1	03/03/2018 23:38	WG1078430
Bis(2-chloroethoxy)methane	U		0.000329	0.0100	0.0100	1	03/03/2018 23:38	WG1078430
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	03/03/2018 23:38	WG1078430
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	03/03/2018 23:38	WG1078430
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	03/03/2018 23:38	WG1078430



Collected date/time: 02/22/18 15:09

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

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	03/03/2018 23:38	WG1078430
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	03/03/2018 23:38	WG1078430
Chrysene	U		0.000332	0.00100	0.00100	1	03/03/2018 23:38	WG1078430
Dibenz(a,h)anthracene	U		0.000279	0.00100	0.00100	1	03/03/2018 23:38	WG1078430
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	03/03/2018 23:38	WG1078430
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	03/03/2018 23:38	WG1078430
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	03/03/2018 23:38	WG1078430
Fluoranthene	U		0.000310	0.00100	0.00100	1	03/03/2018 23:38	WG1078430
Fluorene	U		0.000323	0.00100	0.00100	1	03/03/2018 23:38	WG1078430
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	03/03/2018 23:38	WG1078430
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	03/03/2018 23:38	WG1078430
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	03/03/2018 23:38	WG1078430
Hexachloroethane	U		0.000365	0.0100	0.0100	1	03/03/2018 23:38	WG1078430
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	03/03/2018 23:38	WG1078430
Isophorone	U		0.000272	0.0100	0.0100	1	03/03/2018 23:38	WG1078430
Naphthalene	U		0.000372	0.00100	0.00100	1	03/03/2018 23:38	WG1078430
Nitrobenzene	U		0.000367	0.0100	0.0100	1	03/03/2018 23:38	WG1078430
n-Nitrosodimethylamine	U		0.00126	0.0100	0.0100	1	03/03/2018 23:38	WG1078430
n-Nitrosodiphenylamine	U		0.000304	0.0100	0.0100	1	03/03/2018 23:38	WG1078430
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	03/03/2018 23:38	WG1078430
Phenanthrene	U		0.000366	0.00100	0.00100	1	03/03/2018 23:38	WG1078430
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	03/03/2018 23:38	WG1078430
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	03/03/2018 23:38	WG1078430
Di-n-butyl phthalate	0.000686	U	0.000266	0.00300	0.00300	1	03/03/2018 23:38	WG1078430
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	03/03/2018 23:38	WG1078430
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	03/03/2018 23:38	WG1078430
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	03/03/2018 23:38	WG1078430
Pyrene	U		0.000330	0.00100	0.00100	1	03/03/2018 23:38	WG1078430
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	03/03/2018 23:38	WG1078430
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	03/03/2018 23:38	WG1078430
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	03/03/2018 23:38	WG1078430
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	03/03/2018 23:38	WG1078430
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	03/03/2018 23:38	WG1078430
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	03/03/2018 23:38	WG1078430
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	03/03/2018 23:38	WG1078430
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	03/03/2018 23:38	WG1078430
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	03/03/2018 23:38	WG1078430
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	03/03/2018 23:38	WG1078430
Phenol	U		0.000334	0.0100	0.0100	1	03/03/2018 23:38	WG1078430
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	03/03/2018 23:38	WG1078430
1-Methylnaphthalene	U		0.0000470	0.0100	0.0100	1	03/03/2018 23:38	WG1078430
2-Methylnaphthalene	U		0.000311	0.0100	0.0100	1	03/03/2018 23:38	WG1078430
(S) 2-Fluorophenol	56.1				10.0-120		03/03/2018 23:38	WG1078430
(S) Phenol-d5	41.0				10.0-120		03/03/2018 23:38	WG1078430
(S) Nitrobenzene-d5	65.5				10.0-126		03/03/2018 23:38	WG1078430
(S) 2-Fluorobiphenyl	74.7				22.0-127		03/03/2018 23:38	WG1078430
(S) 2,4,6-Tribromophenol	83.0				10.0-153		03/03/2018 23:38	WG1078430
(S) p-Terphenyl-d14	68.5				29.0-141		03/03/2018 23:38	WG1078430

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	0.0565	J	0.0519	1.00	1.00	1	02/24/2018 16:37	WG1077235

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

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
TPH (GC/FID) Low Fraction	U		0.0314	0.100	0.100	1	02/27/2018 04:10	WG1077999
(S) a,a,a-Trifluorotoluene(FID)	102				77.0-122		02/27/2018 04:10	WG1077999

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

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U	J3	0.0100	1.00	1.00	1	02/24/2018 00:29	WG1077298
Acrolein	U		0.00887	0.0500	0.0500	1	02/24/2018 00:29	WG1077298
Acrylonitrile	U		0.00187	0.0100	0.0100	1	02/24/2018 00:29	WG1077298
Benzene	U		0.000331	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
Bromobenzene	U		0.000352	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	02/24/2018 00:29	WG1077298
Bromoform	U		0.000469	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
Bromomethane	U		0.000866	0.00500	0.00500	1	02/24/2018 00:29	WG1077298
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
Chlorobenzene	U		0.000348	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
Chloroethane	U		0.000453	0.00500	0.00500	1	02/24/2018 00:29	WG1077298
Chloroform	U		0.000324	0.00500	0.00500	1	02/24/2018 00:29	WG1077298
Chloromethane	U		0.000276	0.00250	0.00250	1	02/24/2018 00:29	WG1077298
2-Chlorotoluene	U		0.000375	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
4-Chlorotoluene	U		0.000351	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
1,2-Dibromo-3-Chloropropane	U		0.00133	0.00500	0.00500	1	02/24/2018 00:29	WG1077298
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
Dibromomethane	U		0.000346	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
1,2-Dichlorobenzene	U		0.000349	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
1,3-Dichlorobenzene	U		0.000220	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
1,4-Dichlorobenzene	U		0.000274	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
Dichlorodifluoromethane	U		0.000551	0.00500	0.00500	1	02/24/2018 00:29	WG1077298
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
1,1-Dichloropropene	U		0.000352	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
1,3-Dichloropropane	U		0.000366	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
2,2-Dichloropropane	U		0.000321	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
Di-isopropyl ether	U		0.000320	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
Ethylbenzene	U		0.000384	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
Hexachloro-1,3-butadiene	U	J4	0.000256	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	02/24/2018 00:29	WG1077298
Methylene Chloride	U		0.00100	0.00500	0.00500	1	02/24/2018 00:29	WG1077298

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 mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	02/24/2018 00:29	WG1077298
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
Naphthalene	U		0.00100	0.00500	0.00500	1	02/24/2018 00:29	WG1077298
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
Styrene	U		0.000307	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
1,1,1,2-Tetrachloroethane	U		0.000385	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
1,1,2-Trichlorotrifluoroethane	U		0.000303	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
Toluene	U		0.000412	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
1,2,3-Trichlorobenzene	U		0.000230	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
1,2,4-Trichlorobenzene	U		0.000355	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
Trichloroethene	U		0.000398	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
Trichlorofluoromethane	U		0.00120	0.00500	0.00500	1	02/24/2018 00:29	WG1077298
1,2,3-Trichloropropane	U		0.000807	0.00250	0.00250	1	02/24/2018 00:29	WG1077298
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
1,2,3-Trimethylbenzene	U		0.000321	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
Vinyl chloride	U		0.000259	0.00100	0.00100	1	02/24/2018 00:29	WG1077298
Xylenes, Total	U		0.00106	0.00300	0.00300	1	02/24/2018 00:29	WG1077298
(S) Toluene-d8	105				80.0-120		02/24/2018 00:29	WG1077298
(S) Dibromofluoromethane	98.5				76.0-123		02/24/2018 00:29	WG1077298
(S) 4-Bromofluorobenzene	105				80.0-120		02/24/2018 00:29	WG1077298

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 mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	0.0892	U	0.0222	0.100	0.100	1	02/27/2018 15:40	WG1077705
C28-C40 Oil Range	U		0.0118	0.100	0.100	1	02/27/2018 15:40	WG1077705
(S) o-Terphenyl	92.6				52.0-156		02/27/2018 15:40	WG1077705

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

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.000316	0.00100	0.00100	1	03/04/2018 00:02	WG1078430
Acenaphthylene	U		0.000309	0.00100	0.00100	1	03/04/2018 00:02	WG1078430
Anthracene	U		0.000291	0.00100	0.00100	1	03/04/2018 00:02	WG1078430
Benzidine	U		0.00432	0.0100	0.0100	1	03/04/2018 00:02	WG1078430
Benzo(a)anthracene	U		0.0000975	0.00100	0.00100	1	03/04/2018 00:02	WG1078430
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	03/04/2018 00:02	WG1078430
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	03/04/2018 00:02	WG1078430
Benzo(g,h,i)perylene	U		0.000161	0.00100	0.00100	1	03/04/2018 00:02	WG1078430
Benzo(a)pyrene	U		0.000340	0.00100	0.00100	1	03/04/2018 00:02	WG1078430
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	03/04/2018 00:02	WG1078430
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	03/04/2018 00:02	WG1078430
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	03/04/2018 00:02	WG1078430
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	03/04/2018 00:02	WG1078430
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	03/04/2018 00:02	WG1078430
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	03/04/2018 00:02	WG1078430
Chrysene	U		0.000332	0.00100	0.00100	1	03/04/2018 00:02	WG1078430
Dibenz(a,h)anthracene	U		0.000279	0.00100	0.00100	1	03/04/2018 00:02	WG1078430
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	03/04/2018 00:02	WG1078430
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	03/04/2018 00:02	WG1078430



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

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	03/04/2018 00:02	WG1078430
Fluoranthene	U		0.000310	0.00100	0.00100	1	03/04/2018 00:02	WG1078430
Fluorene	U		0.000323	0.00100	0.00100	1	03/04/2018 00:02	WG1078430
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	03/04/2018 00:02	WG1078430
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	03/04/2018 00:02	WG1078430
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	03/04/2018 00:02	WG1078430
Hexachloroethane	U		0.000365	0.0100	0.0100	1	03/04/2018 00:02	WG1078430
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	03/04/2018 00:02	WG1078430
Isophorone	U		0.000272	0.0100	0.0100	1	03/04/2018 00:02	WG1078430
Naphthalene	U		0.000372	0.00100	0.00100	1	03/04/2018 00:02	WG1078430
Nitrobenzene	U		0.000367	0.0100	0.0100	1	03/04/2018 00:02	WG1078430
n-Nitrosodimethylamine	U		0.00126	0.0100	0.0100	1	03/04/2018 00:02	WG1078430
n-Nitrosodiphenylamine	U		0.000304	0.0100	0.0100	1	03/04/2018 00:02	WG1078430
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	03/04/2018 00:02	WG1078430
Phenanthrene	U		0.000366	0.00100	0.00100	1	03/04/2018 00:02	WG1078430
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	03/04/2018 00:02	WG1078430
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	03/04/2018 00:02	WG1078430
Di-n-butyl phthalate	0.000638	U	0.000266	0.00300	0.00300	1	03/04/2018 00:02	WG1078430
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	03/04/2018 00:02	WG1078430
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	03/04/2018 00:02	WG1078430
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	03/04/2018 00:02	WG1078430
Pyrene	U		0.000330	0.00100	0.00100	1	03/04/2018 00:02	WG1078430
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	03/04/2018 00:02	WG1078430
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	03/04/2018 00:02	WG1078430
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	03/04/2018 00:02	WG1078430
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	03/04/2018 00:02	WG1078430
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	03/04/2018 00:02	WG1078430
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	03/04/2018 00:02	WG1078430
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	03/04/2018 00:02	WG1078430
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	03/04/2018 00:02	WG1078430
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	03/04/2018 00:02	WG1078430
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	03/04/2018 00:02	WG1078430
Phenol	U		0.000334	0.0100	0.0100	1	03/04/2018 00:02	WG1078430
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	03/04/2018 00:02	WG1078430
1-Methylnaphthalene	U		0.0000470	0.0100	0.0100	1	03/04/2018 00:02	WG1078430
2-Methylnaphthalene	U		0.000311	0.0100	0.0100	1	03/04/2018 00:02	WG1078430
(S) 2-Fluorophenol	56.4				10.0-120		03/04/2018 00:02	WG1078430
(S) Phenol-d5	41.5				10.0-120		03/04/2018 00:02	WG1078430
(S) Nitrobenzene-d5	70.3				10.0-126		03/04/2018 00:02	WG1078430
(S) 2-Fluorobiphenyl	76.8				22.0-127		03/04/2018 00:02	WG1078430
(S) 2,4,6-Tribromophenol	72.9				10.0-153		03/04/2018 00:02	WG1078430
(S) p-Terphenyl-d14	65.1				29.0-141		03/04/2018 00:02	WG1078430

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
Dissolved Solids	3.00	J	2.82	10.0	10.0	1	02/27/2018 15:37	WG1077910

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
Chloride	U	P1	0.0519	1.00	1.00	1	02/24/2018 16:47	WG1077235

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

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	0.100	1	02/27/2018 04:32	WG1077999
(S) a,a,a-Trifluorotoluene(FID)	102				77.0-122		02/27/2018 04:32	WG1077999

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

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
Acetone	U	J3	0.0100	1.00	1.00	1	02/24/2018 00:49	WG1077298
Acrolein	U		0.00887	0.0500	0.0500	1	02/24/2018 00:49	WG1077298
Acrylonitrile	U		0.00187	0.0100	0.0100	1	02/24/2018 00:49	WG1077298
Benzene	U		0.000331	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
Bromobenzene	U		0.000352	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	02/24/2018 00:49	WG1077298
Bromoform	U		0.000469	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
Bromomethane	U		0.000866	0.00500	0.00500	1	02/24/2018 00:49	WG1077298
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
Chlorobenzene	U		0.000348	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
Chloroethane	U		0.000453	0.00500	0.00500	1	02/24/2018 00:49	WG1077298
Chloroform	U		0.000324	0.00500	0.00500	1	02/24/2018 00:49	WG1077298
Chloromethane	U		0.000276	0.00250	0.00250	1	02/24/2018 00:49	WG1077298
2-Chlorotoluene	U		0.000375	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
4-Chlorotoluene	U		0.000351	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
1,2-Dibromo-3-Chloropropane	U		0.00133	0.00500	0.00500	1	02/24/2018 00:49	WG1077298
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
Dibromomethane	U		0.000346	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
1,2-Dichlorobenzene	U		0.000349	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
1,3-Dichlorobenzene	U		0.000220	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
1,4-Dichlorobenzene	U		0.000274	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
Dichlorodifluoromethane	U		0.000551	0.00500	0.00500	1	02/24/2018 00:49	WG1077298
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
1,1-Dichloropropene	U		0.000352	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
1,3-Dichloropropane	U		0.000366	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
2,2-Dichloropropane	U		0.000321	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
Di-isopropyl ether	U		0.000320	0.00100	0.00100	1	02/24/2018 00:49	WG1077298

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 mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Ethylbenzene	U		0.000384	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
Hexachloro-1,3-butadiene	U	J4	0.000256	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	02/24/2018 00:49	WG1077298
Methylene Chloride	U		0.00100	0.00500	0.00500	1	02/24/2018 00:49	WG1077298
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	02/24/2018 00:49	WG1077298
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
Naphthalene	U		0.00100	0.00500	0.00500	1	02/24/2018 00:49	WG1077298
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
Styrene	U		0.000307	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
1,1,1,2-Tetrachloroethane	U		0.000385	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
1,1,2-Trichlorotrifluoroethane	U		0.000303	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
Toluene	U		0.000412	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
1,2,3-Trichlorobenzene	U		0.000230	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
1,2,4-Trichlorobenzene	U		0.000355	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
Trichloroethene	U		0.000398	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
Trichlorofluoromethane	U		0.00120	0.00500	0.00500	1	02/24/2018 00:49	WG1077298
1,2,3-Trichloropropane	U		0.000807	0.00250	0.00250	1	02/24/2018 00:49	WG1077298
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
1,2,3-Trimethylbenzene	U		0.000321	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
Vinyl chloride	U		0.000259	0.00100	0.00100	1	02/24/2018 00:49	WG1077298
Xylenes, Total	U		0.00106	0.00300	0.00300	1	02/24/2018 00:49	WG1077298
(S) Toluene-d8	106				80.0-120		02/24/2018 00:49	WG1077298
(S) Dibromofluoromethane	98.7				76.0-123		02/24/2018 00:49	WG1077298
(S) 4-Bromofluorobenzene	109				80.0-120		02/24/2018 00:49	WG1077298

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 mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	0.0536	J	0.0222	0.100	0.100	1	02/27/2018 16:14	WG1077705
C28-C40 Oil Range	U		0.0118	0.100	0.100	1	02/27/2018 16:14	WG1077705
(S) o-Terphenyl	93.5				52.0-156		02/27/2018 16:14	WG1077705

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

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.000316	0.00100	0.00100	1	03/04/2018 00:26	WG1078430
Acenaphthylene	U		0.000309	0.00100	0.00100	1	03/04/2018 00:26	WG1078430
Anthracene	U		0.000291	0.00100	0.00100	1	03/04/2018 00:26	WG1078430
Benzidine	U		0.00432	0.0100	0.0100	1	03/04/2018 00:26	WG1078430
Benzo(a)anthracene	U		0.0000975	0.00100	0.00100	1	03/04/2018 00:26	WG1078430
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	03/04/2018 00:26	WG1078430
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	03/04/2018 00:26	WG1078430
Benzo(g,h,i)perylene	U		0.000161	0.00100	0.00100	1	03/04/2018 00:26	WG1078430
Benzo(a)pyrene	U		0.000340	0.00100	0.00100	1	03/04/2018 00:26	WG1078430
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	03/04/2018 00:26	WG1078430
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	03/04/2018 00:26	WG1078430
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	03/04/2018 00:26	WG1078430
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	03/04/2018 00:26	WG1078430



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

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	03/04/2018 00:26	WG1078430
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	03/04/2018 00:26	WG1078430
Chrysene	U		0.000332	0.00100	0.00100	1	03/04/2018 00:26	WG1078430
Dibenz(a,h)anthracene	U		0.000279	0.00100	0.00100	1	03/04/2018 00:26	WG1078430
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	03/04/2018 00:26	WG1078430
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	03/04/2018 00:26	WG1078430
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	03/04/2018 00:26	WG1078430
Fluoranthene	U		0.000310	0.00100	0.00100	1	03/04/2018 00:26	WG1078430
Fluorene	U		0.000323	0.00100	0.00100	1	03/04/2018 00:26	WG1078430
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	03/04/2018 00:26	WG1078430
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	03/04/2018 00:26	WG1078430
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	03/04/2018 00:26	WG1078430
Hexachloroethane	U		0.000365	0.0100	0.0100	1	03/04/2018 00:26	WG1078430
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	03/04/2018 00:26	WG1078430
Isophorone	U		0.000272	0.0100	0.0100	1	03/04/2018 00:26	WG1078430
Naphthalene	U		0.000372	0.00100	0.00100	1	03/04/2018 00:26	WG1078430
Nitrobenzene	U		0.000367	0.0100	0.0100	1	03/04/2018 00:26	WG1078430
n-Nitrosodimethylamine	U		0.00126	0.0100	0.0100	1	03/04/2018 00:26	WG1078430
n-Nitrosodiphenylamine	U		0.000304	0.0100	0.0100	1	03/04/2018 00:26	WG1078430
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	03/04/2018 00:26	WG1078430
Phenanthrene	U		0.000366	0.00100	0.00100	1	03/04/2018 00:26	WG1078430
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	03/04/2018 00:26	WG1078430
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	03/04/2018 00:26	WG1078430
Di-n-butyl phthalate	0.000700	U	0.000266	0.00300	0.00300	1	03/04/2018 00:26	WG1078430
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	03/04/2018 00:26	WG1078430
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	03/04/2018 00:26	WG1078430
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	03/04/2018 00:26	WG1078430
Pyrene	U		0.000330	0.00100	0.00100	1	03/04/2018 00:26	WG1078430
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	03/04/2018 00:26	WG1078430
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	03/04/2018 00:26	WG1078430
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	03/04/2018 00:26	WG1078430
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	03/04/2018 00:26	WG1078430
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	03/04/2018 00:26	WG1078430
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	03/04/2018 00:26	WG1078430
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	03/04/2018 00:26	WG1078430
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	03/04/2018 00:26	WG1078430
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	03/04/2018 00:26	WG1078430
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	03/04/2018 00:26	WG1078430
Phenol	U		0.000334	0.0100	0.0100	1	03/04/2018 00:26	WG1078430
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	03/04/2018 00:26	WG1078430
1-Methylnaphthalene	U		0.0000470	0.0100	0.0100	1	03/04/2018 00:26	WG1078430
2-Methylnaphthalene	U		0.000311	0.0100	0.0100	1	03/04/2018 00:26	WG1078430
(S) 2-Fluorophenol	51.6				10.0-120		03/04/2018 00:26	WG1078430
(S) Phenol-d5	36.2				10.0-120		03/04/2018 00:26	WG1078430
(S) Nitrobenzene-d5	60.3				10.0-126		03/04/2018 00:26	WG1078430
(S) 2-Fluorobiphenyl	69.0				22.0-127		03/04/2018 00:26	WG1078430
(S) 2,4,6-Tribromophenol	72.2				10.0-153		03/04/2018 00:26	WG1078430
(S) p-Terphenyl-d14	68.3				29.0-141		03/04/2018 00:26	WG1078430

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
Dissolved Solids	2440		2.82	10.0	10.0	1	02/26/2018 15:24	WG1077658

Wet Chemistry by Method 9056A

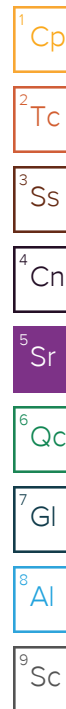
Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
Chloride	139		0.260	1.00	5.00	5	02/24/2018 17:08	WG1077235

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

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	0.100	1	02/27/2018 04:54	WG1077999
(S) a,a,a-Trifluorotoluene(FID)	101				77.0-122		02/27/2018 04:54	WG1077999

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

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
Acetone	U	J3	0.0100	1.00	1.00	1	02/24/2018 01:08	WG1077298
Acrolein	U		0.00887	0.0500	0.0500	1	02/24/2018 01:08	WG1077298
Acrylonitrile	U		0.00187	0.0100	0.0100	1	02/24/2018 01:08	WG1077298
Benzene	U		0.000331	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
Bromobenzene	U		0.000352	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	02/24/2018 01:08	WG1077298
Bromoform	U		0.000469	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
Bromomethane	U		0.000866	0.00500	0.00500	1	02/24/2018 01:08	WG1077298
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
Chlorobenzene	U		0.000348	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
Chloroethane	U		0.000453	0.00500	0.00500	1	02/24/2018 01:08	WG1077298
Chloroform	U		0.000324	0.00500	0.00500	1	02/24/2018 01:08	WG1077298
Chloromethane	U		0.000276	0.00250	0.00250	1	02/24/2018 01:08	WG1077298
2-Chlorotoluene	U		0.000375	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
4-Chlorotoluene	U		0.000351	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
1,2-Dibromo-3-Chloropropane	U		0.00133	0.00500	0.00500	1	02/24/2018 01:08	WG1077298
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
Dibromomethane	U		0.000346	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
1,2-Dichlorobenzene	U		0.000349	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
1,3-Dichlorobenzene	U		0.000220	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
1,4-Dichlorobenzene	U		0.000274	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
Dichlorodifluoromethane	U		0.000551	0.00500	0.00500	1	02/24/2018 01:08	WG1077298
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
1,1-Dichloropropene	U		0.000352	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
1,3-Dichloropropane	U		0.000366	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
2,2-Dichloropropane	U		0.000321	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
Di-isopropyl ether	0.000663	J	0.000320	0.00100	0.00100	1	02/24/2018 01:08	WG1077298





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

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Ethylbenzene	U		0.000384	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
Hexachloro-1,3-butadiene	U	J4	0.000256	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	02/24/2018 01:08	WG1077298
Methylene Chloride	U		0.00100	0.00500	0.00500	1	02/24/2018 01:08	WG1077298
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	02/24/2018 01:08	WG1077298
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
Naphthalene	U		0.00100	0.00500	0.00500	1	02/24/2018 01:08	WG1077298
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
Styrene	U		0.000307	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
1,1,1,2-Tetrachloroethane	U		0.000385	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
1,1,2-Trichlorotrifluoroethane	U		0.000303	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
Toluene	U		0.000412	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
1,2,3-Trichlorobenzene	U		0.000230	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
1,2,4-Trichlorobenzene	U		0.000355	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
Trichloroethene	U		0.000398	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
Trichlorofluoromethane	U		0.00120	0.00500	0.00500	1	02/24/2018 01:08	WG1077298
1,2,3-Trichloropropane	U		0.000807	0.00250	0.00250	1	02/24/2018 01:08	WG1077298
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
1,2,3-Trimethylbenzene	U		0.000321	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
Vinyl chloride	U		0.000259	0.00100	0.00100	1	02/24/2018 01:08	WG1077298
Xylenes, Total	U		0.00106	0.00300	0.00300	1	02/24/2018 01:08	WG1077298
(S) Toluene-d8	106				80.0-120		02/24/2018 01:08	WG1077298
(S) Dibromofluoromethane	98.9				76.0-123		02/24/2018 01:08	WG1077298
(S) 4-Bromofluorobenzene	106				80.0-120		02/24/2018 01:08	WG1077298

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 mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	0.161		0.0222	0.100	0.100	1	02/27/2018 16:31	WG1077705
C28-C40 Oil Range	U		0.0118	0.100	0.100	1	02/27/2018 16:31	WG1077705
(S) o-Terphenyl	96.7				52.0-156		02/27/2018 16:31	WG1077705

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

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.000316	0.00100	0.00100	1	03/04/2018 00:49	WG1078430
Acenaphthylene	U		0.000309	0.00100	0.00100	1	03/04/2018 00:49	WG1078430
Anthracene	U		0.000291	0.00100	0.00100	1	03/04/2018 00:49	WG1078430
Benzidine	U		0.00432	0.0100	0.0100	1	03/04/2018 00:49	WG1078430
Benzo(a)anthracene	U		0.0000975	0.00100	0.00100	1	03/04/2018 00:49	WG1078430
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	03/04/2018 00:49	WG1078430
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	03/04/2018 00:49	WG1078430
Benzo(g,h,i)perylene	U		0.000161	0.00100	0.00100	1	03/04/2018 00:49	WG1078430
Benzo(a)pyrene	U		0.000340	0.00100	0.00100	1	03/04/2018 00:49	WG1078430
Bis(2-chloroethoxy)methane	U		0.000329	0.0100	0.0100	1	03/04/2018 00:49	WG1078430
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	03/04/2018 00:49	WG1078430
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	03/04/2018 00:49	WG1078430
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	03/04/2018 00:49	WG1078430



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

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	03/04/2018 00:49	WG1078430
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	03/04/2018 00:49	WG1078430
Chrysene	U		0.000332	0.00100	0.00100	1	03/04/2018 00:49	WG1078430
Dibenz(a,h)anthracene	U		0.000279	0.00100	0.00100	1	03/04/2018 00:49	WG1078430
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	03/04/2018 00:49	WG1078430
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	03/04/2018 00:49	WG1078430
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	03/04/2018 00:49	WG1078430
Fluoranthene	U		0.000310	0.00100	0.00100	1	03/04/2018 00:49	WG1078430
Fluorene	U		0.000323	0.00100	0.00100	1	03/04/2018 00:49	WG1078430
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	03/04/2018 00:49	WG1078430
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	03/04/2018 00:49	WG1078430
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	03/04/2018 00:49	WG1078430
Hexachloroethane	U		0.000365	0.0100	0.0100	1	03/04/2018 00:49	WG1078430
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	03/04/2018 00:49	WG1078430
Isophorone	U		0.000272	0.0100	0.0100	1	03/04/2018 00:49	WG1078430
Naphthalene	U		0.000372	0.00100	0.00100	1	03/04/2018 00:49	WG1078430
Nitrobenzene	U		0.000367	0.0100	0.0100	1	03/04/2018 00:49	WG1078430
n-Nitrosodimethylamine	U		0.00126	0.0100	0.0100	1	03/04/2018 00:49	WG1078430
n-Nitrosodiphenylamine	U		0.000304	0.0100	0.0100	1	03/04/2018 00:49	WG1078430
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	03/04/2018 00:49	WG1078430
Phenanthrene	U		0.000366	0.00100	0.00100	1	03/04/2018 00:49	WG1078430
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	03/04/2018 00:49	WG1078430
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	03/04/2018 00:49	WG1078430
Di-n-butyl phthalate	0.000703	U	0.000266	0.00300	0.00300	1	03/04/2018 00:49	WG1078430
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	03/04/2018 00:49	WG1078430
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	03/04/2018 00:49	WG1078430
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	03/04/2018 00:49	WG1078430
Pyrene	U		0.000330	0.00100	0.00100	1	03/04/2018 00:49	WG1078430
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	03/04/2018 00:49	WG1078430
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	03/04/2018 00:49	WG1078430
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	03/04/2018 00:49	WG1078430
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	03/04/2018 00:49	WG1078430
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	03/04/2018 00:49	WG1078430
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	03/04/2018 00:49	WG1078430
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	03/04/2018 00:49	WG1078430
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	03/04/2018 00:49	WG1078430
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	03/04/2018 00:49	WG1078430
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	03/04/2018 00:49	WG1078430
Phenol	U		0.000334	0.0100	0.0100	1	03/04/2018 00:49	WG1078430
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	03/04/2018 00:49	WG1078430
1-Methylnaphthalene	U		0.0000470	0.0100	0.0100	1	03/04/2018 00:49	WG1078430
2-Methylnaphthalene	U		0.000311	0.0100	0.0100	1	03/04/2018 00:49	WG1078430
(S) 2-Fluorophenol	57.4				10.0-120		03/04/2018 00:49	WG1078430
(S) Phenol-d5	42.0				10.0-120		03/04/2018 00:49	WG1078430
(S) Nitrobenzene-d5	66.7				10.0-126		03/04/2018 00:49	WG1078430
(S) 2-Fluorobiphenyl	74.7				22.0-127		03/04/2018 00:49	WG1078430
(S) 2,4,6-Tribromophenol	75.2				10.0-153		03/04/2018 00:49	WG1078430
(S) p-Terphenyl-d14	66.5				29.0-141		03/04/2018 00:49	WG1078430

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



Collected date/time: 02/22/18 00:00

L972534

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

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	02/27/2018 13:40	WG1078191
Acrolein	U		0.00887	0.0500	0.0500	1	02/27/2018 13:40	WG1078191
Acrylonitrile	U		0.00187	0.0100	0.0100	1	02/27/2018 13:40	WG1078191
Benzene	U		0.000331	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
Bromobenzene	U		0.000352	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	02/27/2018 13:40	WG1078191
Bromoform	U		0.000469	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
Bromomethane	U		0.000866	0.00500	0.00500	1	02/27/2018 13:40	WG1078191
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
Chlorobenzene	U		0.000348	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
Chloroethane	U		0.000453	0.00500	0.00500	1	02/27/2018 13:40	WG1078191
Chloroform	U		0.000324	0.00500	0.00500	1	02/27/2018 13:40	WG1078191
Chloromethane	U		0.000276	0.00250	0.00250	1	02/27/2018 13:40	WG1078191
2-Chlorotoluene	U		0.000375	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
4-Chlorotoluene	U		0.000351	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
1,2-Dibromo-3-Chloropropane	U		0.00133	0.00500	0.00500	1	02/27/2018 13:40	WG1078191
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
Dibromomethane	U		0.000346	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
1,2-Dichlorobenzene	U		0.000349	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
1,3-Dichlorobenzene	U		0.000220	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
1,4-Dichlorobenzene	U		0.000274	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
Dichlorodifluoromethane	U		0.000551	0.00500	0.00500	1	02/27/2018 13:40	WG1078191
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
1,1-Dichloropropene	U		0.000352	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
1,3-Dichloropropane	U		0.000366	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
2,2-Dichloropropane	U		0.000321	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
Di-isopropyl ether	U		0.000320	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
Ethylbenzene	U		0.000384	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	02/27/2018 13:40	WG1078191
Methylene Chloride	U		0.00100	0.00500	0.00500	1	02/27/2018 13:40	WG1078191
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	02/27/2018 13:40	WG1078191
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
Naphthalene	0.00110	J	0.00100	0.00500	0.00500	1	02/27/2018 13:40	WG1078191
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
Styrene	U		0.000307	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
1,1,1,2-Tetrachloroethane	U		0.000385	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
1,1,2-Trichlorotrifluoroethane	U		0.000303	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
Toluene	U		0.000412	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
1,2,3-Trichlorobenzene	U		0.000230	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
1,2,4-Trichlorobenzene	U		0.000355	0.00100	0.00100	1	02/27/2018 13:40	WG1078191

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 02/22/18 00:00

L972534

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

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
Trichloroethene	U		0.000398	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
Trichlorofluoromethane	U		0.00120	0.00500	0.00500	1	02/27/2018 13:40	WG1078191
1,2,3-Trichloropropane	U		0.000807	0.00250	0.00250	1	02/27/2018 13:40	WG1078191
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
1,2,3-Trimethylbenzene	U		0.000321	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
Vinyl chloride	U		0.000259	0.00100	0.00100	1	02/27/2018 13:40	WG1078191
Xylenes, Total	U		0.00106	0.00300	0.00300	1	02/27/2018 13:40	WG1078191
(S) Toluene-d8	106				80.0-120		02/27/2018 13:40	WG1078191
(S) Dibromofluoromethane	103				76.0-123		02/27/2018 13:40	WG1078191
(S) 4-Bromofluorobenzene	103				80.0-120		02/27/2018 13:40	WG1078191

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Method Blank (MB)

(MB) R3289316-1 02/26/18 15:24

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Dissolved Solids	U		2.82	10.0

L972534-05 Original Sample (OS) • Duplicate (DUP)

(OS) L972534-05 02/26/18 15:24 • (DUP) R3289316-4 02/26/18 15:24

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	2440	2380	1	2.28		5

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

(LCS) R3289316-2 02/26/18 15:24 • (LCSD) R3289316-3 02/26/18 15:24

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%
Dissolved Solids	8800	8810	8700	100	98.9	85.0-115			1.26	5

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3289618-1 02/27/18 15:37

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Dissolved Solids	U		2.82	10.0

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

L972920-04 Original Sample (OS) • Duplicate (DUP)

(OS) L972920-04 02/27/18 15:37 • (DUP) R3289618-4 02/27/18 15:37

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	1270	1320	1	3.71		5

⁷ Gl

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

(LCS) R3289618-2 02/27/18 15:37 • (LCSD) R3289618-3 02/27/18 15:37

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%
Dissolved Solids	8800	8610	8490	97.8	96.5	85.0-115			1.40	5

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3288747-1 02/24/18 11:49

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Chloride	U		0.0519	1.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L972523-09 Original Sample (OS) • Duplicate (DUP)

(OS) L972523-09 02/24/18 13:36 • (DUP) R3288747-4 02/24/18 13:46

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Chloride	U	0.0691	1	200	J P1	15

L972534-04 Original Sample (OS) • Duplicate (DUP)

(OS) L972534-04 02/24/18 16:47 • (DUP) R3288747-8 02/24/18 16:58

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Chloride	U	0.0796	1	200	J P1	15

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

(LCS) R3288747-2 02/24/18 12:00 • (LCSD) R3288747-3 02/24/18 12:10

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%
Chloride	40.0	39.9	39.7	99.7	99.2	80.0-120			0.513	15

L972523-09 Original Sample (OS) • Matrix Spike (MS)

(OS) L972523-09 02/24/18 13:36 • (MS) R3288747-5 02/24/18 14:18

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/l	mg/l	mg/l	%		%	
Chloride	50.0	U	50.2	100	1	80.0-120	



Method Blank (MB)

(MB) R3289103-3 02/26/18 20:52

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TPH (GC/FID) Low Fraction	U		0.0314	0.100
(S) a,a,a-Trifluorotoluene(FID)	101			77.0-122

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) R3289103-1 02/26/18 19:46 • (LCSD) R3289103-2 02/26/18 20:08

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	4.86	4.85	88.3	88.1	71.0-136			0.203	20
(S) a,a,a-Trifluorotoluene(FID)				103	102	77.0-122				

L972534-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L972534-05 02/27/18 04:54 • (MS) R3289103-4 02/27/18 05:15 • (MSD) R3289103-5 02/27/18 05:37

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	U	2.99	3.49	54.4	63.4	1	18.0-160			15.2	20
(S) a,a,a-Trifluorotoluene(FID)					99.7	103		77.0-122				

L972534-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L972534-01 02/28/18 03:59 • (MS) R3289387-1 02/28/18 04:22 • (MSD) R3289387-2 02/28/18 04:44

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	U	3.42	3.47	62.1	63.1	1	18.0-160			1.49	20
(S) a,a,a-Trifluorotoluene(FID)					95.9	97.9		77.0-122				



Method Blank (MB)

(MB) R3289614-3 02/23/18 22:13

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0100	1.00
Acrolein	U		0.00887	0.0500
Acrylonitrile	U		0.00187	0.0100
Benzene	U		0.000331	0.00100
Bromobenzene	U		0.000352	0.00100
Bromodichloromethane	U		0.000380	0.00125
Bromoform	U		0.000469	0.00100
Bromomethane	U		0.000866	0.00500
n-Butylbenzene	U		0.000361	0.00100
sec-Butylbenzene	U		0.000365	0.00100
tert-Butylbenzene	U		0.000399	0.00100
Carbon tetrachloride	U		0.000379	0.00100
Chlorobenzene	U		0.000348	0.00100
Chlorodibromomethane	U		0.000327	0.00100
Chloroethane	U		0.000453	0.00500
Chloroform	U		0.000324	0.00500
Chloromethane	U		0.000276	0.00250
2-Chlorotoluene	U		0.000375	0.00100
4-Chlorotoluene	U		0.000351	0.00100
1,2-Dibromo-3-Chloropropane	U		0.00133	0.00500
1,2-Dibromoethane	U		0.000381	0.00100
Dibromomethane	U		0.000346	0.00100
1,2-Dichlorobenzene	U		0.000349	0.00100
1,3-Dichlorobenzene	U		0.000220	0.00100
1,4-Dichlorobenzene	U		0.000274	0.00100
Dichlorodifluoromethane	U		0.000551	0.00500
1,1-Dichloroethane	U		0.000259	0.00100
1,2-Dichloroethane	U		0.000361	0.00100
1,1-Dichloroethene	U		0.000398	0.00100
cis-1,2-Dichloroethene	U		0.000260	0.00100
trans-1,2-Dichloroethene	U		0.000396	0.00100
1,2-Dichloropropane	U		0.000306	0.00100
1,1-Dichloropropene	U		0.000352	0.00100
1,3-Dichloropropane	U		0.000366	0.00100
cis-1,3-Dichloropropene	U		0.000418	0.00100
trans-1,3-Dichloropropene	U		0.000419	0.00100
2,2-Dichloropropane	U		0.000321	0.00100
Di-isopropyl ether	U		0.000320	0.00100
Ethylbenzene	U		0.000384	0.00100
Hexachloro-1,3-butadiene	U		0.000256	0.00100

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



Method Blank (MB)

(MB) R3289614-3 02/23/18 22:13

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Isopropylbenzene	U		0.000326	0.00100
p-Isopropyltoluene	U		0.000350	0.00100
2-Butanone (MEK)	U		0.00393	0.0100
Methylene Chloride	U		0.00100	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100
Methyl tert-butyl ether	U		0.000367	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.000349	0.00100
Styrene	U		0.000307	0.00100
1,1,1,2-Tetrachloroethane	U		0.000385	0.00100
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100
Tetrachloroethene	U		0.000372	0.00100
1,1,2-Trichlorotrifluoroethane	U		0.000303	0.00100
1,2,3-Trichlorobenzene	U		0.000230	0.00100
Toluene	U		0.000412	0.00100
1,2,4-Trichlorobenzene	U		0.000355	0.00100
1,1,1-Trichloroethane	U		0.000319	0.00100
1,1,2-Trichloroethane	U		0.000383	0.00100
Trichloroethene	U		0.000398	0.00100
Trichlorofluoromethane	U		0.00120	0.00500
1,2,3-Trichloropropane	U		0.000807	0.00250
1,2,3-Trimethylbenzene	U		0.000321	0.00100
1,2,4-Trimethylbenzene	U		0.000373	0.00100
1,3,5-Trimethylbenzene	U		0.000387	0.00100
Vinyl chloride	U		0.000259	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	107			80.0-120
(S) Dibromofluoromethane	98.1			76.0-123
(S) 4-Bromofluorobenzene	105			80.0-120

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) R3289614-1 02/23/18 20:55 • (LCSD) R3289614-2 02/23/18 21:15

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	0.0905	0.126	72.4	101	10.0-160		J3	32.6	23
Acrolein	0.125	0.112	0.115	89.7	91.7	10.0-160			2.17	20
Acrylonitrile	0.125	0.137	0.132	110	106	60.0-142			3.69	20
Bromobenzene	0.0250	0.0263	0.0259	105	104	79.0-120			1.67	20



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

(LCS) R3289614-1 02/23/18 20:55 • (LCSD) R3289614-2 02/23/18 21:15

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Bromodichloromethane	0.0250	0.0245	0.0235	97.9	93.9	76.0-120			4.21	20
Bromoform	0.0250	0.0206	0.0203	82.4	81.1	67.0-132			1.47	20
Bromomethane	0.0250	0.0329	0.0290	132	116	18.0-160			12.7	20
n-Butylbenzene	0.0250	0.0238	0.0235	95.2	93.9	72.0-126			1.34	20
sec-Butylbenzene	0.0250	0.0251	0.0249	100	99.7	74.0-121			0.755	20
tert-Butylbenzene	0.0250	0.0251	0.0249	100	99.7	75.0-122			0.504	20
Carbon tetrachloride	0.0250	0.0235	0.0232	93.9	92.9	63.0-122			1.13	20
Benzene	0.0250	0.0246	0.0243	98.5	97.1	69.0-123			1.40	20
Chlorobenzene	0.0250	0.0255	0.0250	102	99.9	79.0-121			2.00	20
Chlorodibromomethane	0.0250	0.0230	0.0228	92.1	91.1	75.0-125			1.04	20
Chloroethane	0.0250	0.0292	0.0280	117	112	47.0-152			4.27	20
Chloroform	0.0250	0.0244	0.0244	97.7	97.6	72.0-121			0.177	20
Chloromethane	0.0250	0.0249	0.0246	99.7	98.3	48.0-139			1.39	20
2-Chlorotoluene	0.0250	0.0282	0.0278	113	111	74.0-122			1.44	20
4-Chlorotoluene	0.0250	0.0273	0.0270	109	108	79.0-120			1.22	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0200	0.0204	79.9	81.4	64.0-127			1.83	20
1,2-Dibromoethane	0.0250	0.0250	0.0246	100	98.3	77.0-123			1.68	20
Dibromomethane	0.0250	0.0245	0.0235	98.2	93.9	78.0-120			4.50	20
1,2-Dichlorobenzene	0.0250	0.0251	0.0253	100	101	80.0-120			0.817	20
1,3-Dichlorobenzene	0.0250	0.0241	0.0238	96.3	95.3	72.0-123			1.03	20
1,4-Dichlorobenzene	0.0250	0.0221	0.0223	88.4	89.2	77.0-120			0.870	20
Dichlorodifluoromethane	0.0250	0.0250	0.0245	99.9	98.2	49.0-155			1.77	20
1,1-Dichloroethane	0.0250	0.0255	0.0254	102	101	70.0-126			0.703	20
1,2-Dichloroethane	0.0250	0.0274	0.0265	110	106	67.0-126			3.23	20
1,1-Dichloroethene	0.0250	0.0226	0.0226	90.4	90.5	64.0-129			0.111	20
cis-1,2-Dichloroethene	0.0250	0.0230	0.0228	91.8	91.0	73.0-120			0.890	20
trans-1,2-Dichloroethene	0.0250	0.0220	0.0225	88.1	89.9	71.0-121			2.05	20
1,2-Dichloropropane	0.0250	0.0281	0.0268	112	107	75.0-125			4.91	20
1,1-Dichloropropene	0.0250	0.0261	0.0257	104	103	71.0-129			1.62	20
1,3-Dichloropropane	0.0250	0.0259	0.0256	104	103	80.0-121			1.07	20
cis-1,3-Dichloropropene	0.0250	0.0269	0.0261	108	104	79.0-123			3.18	20
trans-1,3-Dichloropropene	0.0250	0.0255	0.0252	102	101	74.0-127			1.27	20
2,2-Dichloropropane	0.0250	0.0217	0.0214	86.9	85.5	60.0-125			1.59	20
Di-isopropyl ether	0.0250	0.0263	0.0262	105	105	59.0-133			0.611	20
Hexachloro-1,3-butadiene	0.0250	0.0149	0.0149	59.7	59.7	64.0-131	J4	J4	0.0366	20
Isopropylbenzene	0.0250	0.0267	0.0261	107	105	75.0-120			2.02	20
p-Isopropyltoluene	0.0250	0.0242	0.0241	96.8	96.6	74.0-126			0.256	20
2-Butanone (MEK)	0.125	0.113	0.132	90.6	106	37.0-158			15.3	20
Methylene Chloride	0.0250	0.0236	0.0234	94.3	93.6	66.0-121			0.789	20
4-Methyl-2-pentanone (MIBK)	0.125	0.141	0.141	113	113	59.0-143			0.202	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

(LCS) R3289614-1 02/23/18 20:55 • (LCSD) R3289614-2 02/23/18 21:15

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Ethylbenzene	0.0250	0.0252	0.0250	101	100	77.0-120			0.926	20
Naphthalene	0.0250	0.0208	0.0221	83.0	88.2	62.0-128			6.05	20
n-Propylbenzene	0.0250	0.0267	0.0262	107	105	79.0-120			1.73	20
Styrene	0.0250	0.0263	0.0262	105	105	78.0-124			0.461	20
1,1,1,2-Tetrachloroethane	0.0250	0.0239	0.0233	95.5	93.2	75.0-122			2.33	20
1,1,2,2-Tetrachloroethane	0.0250	0.0255	0.0254	102	102	71.0-122			0.325	20
Tetrachloroethene	0.0250	0.0224	0.0227	89.6	90.7	70.0-127			1.24	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0252	0.0247	101	99.0	61.0-136			1.78	20
1,2,3-Trichlorobenzene	0.0250	0.0172	0.0179	68.6	71.5	61.0-133			4.11	20
1,2,4-Trichlorobenzene	0.0250	0.0198	0.0206	79.2	82.4	69.0-129			3.90	20
1,1,1-Trichloroethane	0.0250	0.0255	0.0254	102	102	68.0-122			0.348	20
Methyl tert-butyl ether	0.0250	0.0239	0.0246	95.7	98.3	64.0-123			2.72	20
1,1,2-Trichloroethane	0.0250	0.0241	0.0246	96.3	98.4	78.0-120			2.11	20
Trichloroethene	0.0250	0.0251	0.0246	100	98.2	78.0-120			2.00	20
Trichlorofluoromethane	0.0250	0.0238	0.0235	95.2	94.1	56.0-137			1.21	20
1,2,3-Trichloropropane	0.0250	0.0260	0.0256	104	102	72.0-124			1.60	20
1,2,3-Trimethylbenzene	0.0250	0.0258	0.0254	103	102	75.0-120			1.46	20
1,2,4-Trimethylbenzene	0.0250	0.0263	0.0261	105	104	75.0-120			0.761	20
1,3,5-Trimethylbenzene	0.0250	0.0255	0.0253	102	101	75.0-120			0.993	20
Vinyl chloride	0.0250	0.0256	0.0250	103	100	64.0-133			2.40	20
Toluene	0.0250	0.0252	0.0248	101	99.3	77.0-120			1.27	20
Xylenes, Total	0.0750	0.0770	0.0755	103	101	77.0-120			1.97	20
(S) Toluene-d8				102	102	80.0-120				
(S) Dibromofluoromethane				97.9	98.7	76.0-123				
(S) 4-Bromofluorobenzene				102	105	80.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L972534-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L972534-01 02/23/18 23:50 • (MS) R3289614-4 02/24/18 05:01 • (MSD) R3289614-5 02/24/18 05:21

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Acetone	0.125	0.0165	0.0809	0.0818	51.5	52.2	1	10.0-139			1.11	25
Acrolein	0.125	U	0.0800	0.0818	64.0	65.4	1	10.0-160			2.20	25
Acrylonitrile	0.125	U	0.132	0.139	105	111	1	46.0-159			5.42	23
Bromobenzene	0.0250	U	0.0265	0.0265	106	106	1	51.0-137			0.288	20
Bromodichloromethane	0.0250	U	0.0253	0.0246	101	98.3	1	52.0-135			2.84	20
Bromoform	0.0250	U	0.0201	0.0203	80.3	81.4	1	50.0-146			1.29	20
Bromomethane	0.0250	U	0.0164	0.0170	65.7	67.8	1	10.0-160			3.19	23
n-Butylbenzene	0.0250	U	0.0248	0.0254	99.1	101	1	50.0-144			2.30	20

L972534-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L972534-01 02/23/18 23:50 • (MS) R3289614-4 02/24/18 05:01 • (MSD) R3289614-5 02/24/18 05:21

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
sec-Butylbenzene	0.0250	U	0.0265	0.0273	106	109	1	48.0-143			3.14	20
tert-Butylbenzene	0.0250	U	0.0257	0.0262	103	105	1	50.0-142			2.03	20
Carbon tetrachloride	0.0250	U	0.0263	0.0256	105	102	1	41.0-138			2.79	20
Chlorobenzene	0.0250	U	0.0256	0.0262	102	105	1	52.0-141			2.47	20
Chlorodibromomethane	0.0250	U	0.0225	0.0235	90.1	94.1	1	54.0-142			4.27	20
Chloroethane	0.0250	U	0.0532	0.0477	213	191	1	23.0-160	J5	J5	10.9	20
Chloroform	0.0250	U	0.0262	0.0257	105	103	1	50.0-139			2.18	20
Benzene	0.0250	U	0.0263	0.0259	105	104	1	34.0-147			1.41	20
Chloromethane	0.0250	U	0.0243	0.0234	97.0	93.6	1	14.0-151			3.67	20
2-Chlorotoluene	0.0250	U	0.0284	0.0291	114	117	1	48.0-142			2.43	20
4-Chlorotoluene	0.0250	U	0.0277	0.0282	111	113	1	52.0-139			1.74	20
1,2-Dibromo-3-Chloropropane	0.0250	U	0.0196	0.0211	78.4	84.4	1	49.0-144			7.35	24
1,2-Dibromoethane	0.0250	U	0.0244	0.0252	97.6	101	1	54.0-140			3.33	20
Dibromomethane	0.0250	U	0.0247	0.0237	98.6	94.9	1	53.0-138			3.89	20
1,2-Dichlorobenzene	0.0250	U	0.0256	0.0258	102	103	1	56.0-139			0.670	20
1,3-Dichlorobenzene	0.0250	U	0.0244	0.0248	97.7	99.1	1	50.0-141			1.46	20
1,4-Dichlorobenzene	0.0250	U	0.0223	0.0232	89.0	92.8	1	53.0-136			4.18	20
Dichlorodifluoromethane	0.0250	U	0.0278	0.0275	111	110	1	20.0-160			1.03	21
1,1-Dichloroethane	0.0250	U	0.0274	0.0270	110	108	1	47.0-143			1.62	20
1,2-Dichloroethane	0.0250	U	0.0282	0.0274	113	110	1	47.0-141			2.63	20
1,1-Dichloroethene	0.0250	U	0.0246	0.0243	98.3	97.4	1	31.0-148			0.984	20
cis-1,2-Dichloroethene	0.0250	U	0.0242	0.0229	96.9	91.8	1	43.0-142			5.46	20
trans-1,2-Dichloroethene	0.0250	U	0.0237	0.0234	94.7	93.6	1	36.0-141			1.22	20
1,2-Dichloropropane	0.0250	U	0.0279	0.0283	112	113	1	51.0-141			1.14	20
1,1-Dichloropropene	0.0250	U	0.0284	0.0276	113	110	1	42.0-146			2.71	20
1,3-Dichloropropane	0.0250	U	0.0257	0.0264	103	106	1	58.0-139			2.50	20
cis-1,3-Dichloropropene	0.0250	U	0.0263	0.0264	105	106	1	53.0-139			0.354	20
trans-1,3-Dichloropropene	0.0250	U	0.0249	0.0254	99.5	101	1	51.0-143			1.85	20
2,2-Dichloropropane	0.0250	U	0.0240	0.0239	95.9	95.7	1	43.0-139			0.227	20
Di-isopropyl ether	0.0250	U	0.0270	0.0272	108	109	1	44.0-144			0.709	20
Hexachloro-1,3-butadiene	0.0250	U	0.0160	0.0175	64.1	70.1	1	44.0-146			8.89	21
Isopropylbenzene	0.0250	U	0.0270	0.0280	108	112	1	48.0-141			3.67	20
p-Isopropyltoluene	0.0250	U	0.0253	0.0259	101	104	1	49.0-146			2.46	20
2-Butanone (MEK)	0.125	U	0.103	0.105	82.2	83.7	1	12.0-149			1.79	24
Methylene Chloride	0.0250	U	0.0241	0.0237	96.3	94.7	1	42.0-135			1.69	20
4-Methyl-2-pentanone (MIBK)	0.125	U	0.137	0.142	109	114	1	44.0-160			4.05	22
Naphthalene	0.0250	U	0.0205	0.0221	82.0	88.5	1	42.0-146			7.66	24
n-Propylbenzene	0.0250	U	0.0276	0.0279	110	111	1	47.0-144			0.985	20
Ethylbenzene	0.0250	U	0.0258	0.0262	103	105	1	42.0-147			1.50	20
Styrene	0.0250	U	0.0263	0.0269	105	108	1	47.0-147			2.49	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L972534-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L972534-01 02/23/18 23:50 • (MS) R3289614-4 02/24/18 05:01 • (MSD) R3289614-5 02/24/18 05:21

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,1,1,2-Tetrachloroethane	0.0250	U	0.0245	0.0243	97.9	97.2	1	52.0-140			0.749	20
1,1,2,2-Tetrachloroethane	0.0250	U	0.0261	0.0270	104	108	1	46.0-149			3.53	20
Tetrachloroethene	0.0250	U	0.0238	0.0241	95.3	96.5	1	38.0-147			1.28	20
1,1,2-Trichlorotrifluoroethane	0.0250	U	0.0281	0.0280	112	112	1	40.0-151			0.366	21
1,2,3-Trichlorobenzene	0.0250	U	0.0171	0.0184	68.4	73.8	1	45.0-145			7.55	22
1,2,4-Trichlorobenzene	0.0250	U	0.0197	0.0216	78.9	86.2	1	49.0-147			8.85	21
1,1,1-Trichloroethane	0.0250	U	0.0281	0.0274	112	110	1	46.0-140			2.62	20
1,1,2-Trichloroethane	0.0250	U	0.0244	0.0252	97.5	101	1	54.0-139			3.54	20
Trichloroethene	0.0250	U	0.0256	0.0254	102	101	1	32.0-156			0.920	20
Trichlorofluoromethane	0.0250	U	0.0278	0.0266	111	106	1	32.0-152			4.50	20
1,2,3-Trichloropropane	0.0250	U	0.0254	0.0255	102	102	1	54.0-143			0.333	21
1,2,3-Trimethylbenzene	0.0250	U	0.0257	0.0267	103	107	1	48.0-138			3.84	20
Methyl tert-butyl ether	0.0250	U	0.0245	0.0244	98.1	97.7	1	42.0-142			0.388	20
1,2,4-Trimethylbenzene	0.0250	U	0.0261	0.0270	104	108	1	41.0-146			3.56	20
1,3,5-Trimethylbenzene	0.0250	U	0.0262	0.0267	105	107	1	44.0-143			1.91	20
Vinyl chloride	0.0250	U	0.0284	0.0283	113	113	1	24.0-153			0.169	20
Toluene	0.0250	0.000424	0.0266	0.0267	105	105	1	42.0-141			0.675	20
Xylenes, Total	0.0750	U	0.0774	0.0780	103	104	1	41.0-148			0.772	20
(S) Toluene-d8					101	103	80.0-120					
(S) Dibromofluoromethane					99.1	98.8	76.0-123					
(S) 4-Bromofluorobenzene					101	104	80.0-120					

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3289272-4 02/27/18 11:04

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0100	1.00
Acrolein	U		0.00887	0.0500
Acrylonitrile	U		0.00187	0.0100
Benzene	U		0.000331	0.00100
Bromobenzene	U		0.000352	0.00100
Bromodichloromethane	U		0.000380	0.00125
Bromoform	U		0.000469	0.00100
Bromomethane	U		0.000866	0.00500
n-Butylbenzene	U		0.000361	0.00100
sec-Butylbenzene	U		0.000365	0.00100
tert-Butylbenzene	U		0.000399	0.00100
Carbon tetrachloride	U		0.000379	0.00100
Chlorobenzene	U		0.000348	0.00100
Chlorodibromomethane	U		0.000327	0.00100
Chloroethane	U		0.000453	0.00500
Chloroform	U		0.000324	0.00500
Chloromethane	U		0.000276	0.00250
2-Chlorotoluene	U		0.000375	0.00100
4-Chlorotoluene	U		0.000351	0.00100
1,2-Dibromo-3-Chloropropane	U		0.00133	0.00500
1,2-Dibromoethane	U		0.000381	0.00100
Dibromomethane	U		0.000346	0.00100
1,2-Dichlorobenzene	U		0.000349	0.00100
1,3-Dichlorobenzene	U		0.000220	0.00100
1,4-Dichlorobenzene	U		0.000274	0.00100
Dichlorodifluoromethane	U		0.000551	0.00500
1,1-Dichloroethane	U		0.000259	0.00100
1,2-Dichloroethane	U		0.000361	0.00100
1,1-Dichloroethene	U		0.000398	0.00100
cis-1,2-Dichloroethene	U		0.000260	0.00100
trans-1,2-Dichloroethene	U		0.000396	0.00100
1,2-Dichloropropane	U		0.000306	0.00100
1,1-Dichloropropene	U		0.000352	0.00100
1,3-Dichloropropane	U		0.000366	0.00100
cis-1,3-Dichloropropene	U		0.000418	0.00100
trans-1,3-Dichloropropene	U		0.000419	0.00100
2,2-Dichloropropane	U		0.000321	0.00100
Di-isopropyl ether	U		0.000320	0.00100
Ethylbenzene	U		0.000384	0.00100
Hexachloro-1,3-butadiene	U		0.000256	0.00100

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



Method Blank (MB)

(MB) R3289272-4 02/27/18 11:04

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Isopropylbenzene	U		0.000326	0.00100
p-Isopropyltoluene	U		0.000350	0.00100
2-Butanone (MEK)	U		0.00393	0.0100
Methylene Chloride	U		0.00100	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100
Methyl tert-butyl ether	U		0.000367	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.000349	0.00100
Styrene	U		0.000307	0.00100
1,1,1,2-Tetrachloroethane	U		0.000385	0.00100
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100
Tetrachloroethene	U		0.000372	0.00100
1,1,2-Trichlorotrifluoroethane	U		0.000303	0.00100
1,2,3-Trichlorobenzene	U		0.000230	0.00100
Toluene	U		0.000412	0.00100
1,2,4-Trichlorobenzene	U		0.000355	0.00100
1,1,1-Trichloroethane	U		0.000319	0.00100
1,1,2-Trichloroethane	U		0.000383	0.00100
Trichloroethene	U		0.000398	0.00100
Trichlorofluoromethane	U		0.00120	0.00500
1,2,3-Trichloropropane	U		0.000807	0.00250
1,2,3-Trimethylbenzene	U		0.000321	0.00100
1,2,4-Trimethylbenzene	U		0.000373	0.00100
1,3,5-Trimethylbenzene	U		0.000387	0.00100
Vinyl chloride	U		0.000259	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	106			80.0-120
(S) Dibromofluoromethane	104			76.0-123
(S) 4-Bromofluorobenzene	108			80.0-120

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) R3289272-1 02/27/18 09:46 • (LCSD) R3289272-2 02/27/18 10:05

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	0.178	0.175	143	140	10.0-160			2.02	23
Acrolein	0.125	0.183	0.169	147	135	10.0-160			8.35	20
Acrylonitrile	0.125	0.126	0.127	101	101	60.0-142			0.747	20
Bromobenzene	0.0250	0.0271	0.0276	108	110	79.0-120			1.87	20



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

(LCS) R3289272-1 02/27/18 09:46 • (LCSD) R3289272-2 02/27/18 10:05

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromodichloromethane	0.0250	0.0260	0.0257	104	103	76.0-120			1.03	20
Bromoform	0.0250	0.0286	0.0298	114	119	67.0-132			4.14	20
Bromomethane	0.0250	0.0242	0.0233	96.9	93.1	18.0-160			3.96	20
n-Butylbenzene	0.0250	0.0266	0.0275	106	110	72.0-126			3.30	20
sec-Butylbenzene	0.0250	0.0271	0.0276	109	111	74.0-121			1.80	20
tert-Butylbenzene	0.0250	0.0270	0.0278	108	111	75.0-122			2.80	20
Carbon tetrachloride	0.0250	0.0261	0.0255	104	102	63.0-122			2.16	20
Benzene	0.0250	0.0260	0.0265	104	106	69.0-123			1.75	20
Chlorobenzene	0.0250	0.0266	0.0269	106	108	79.0-121			1.14	20
Chlorodibromomethane	0.0250	0.0276	0.0280	110	112	75.0-125			1.51	20
Chloroethane	0.0250	0.0225	0.0231	90.0	92.3	47.0-152			2.48	20
Chloroform	0.0250	0.0269	0.0263	108	105	72.0-121			2.48	20
Chloromethane	0.0250	0.0249	0.0229	99.4	91.4	48.0-139			8.37	20
2-Chlorotoluene	0.0250	0.0268	0.0278	107	111	74.0-122			3.66	20
4-Chlorotoluene	0.0250	0.0274	0.0282	110	113	79.0-120			2.79	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0270	0.0272	108	109	64.0-127			0.778	20
1,2-Dibromoethane	0.0250	0.0276	0.0282	110	113	77.0-123			2.08	20
Dibromomethane	0.0250	0.0268	0.0265	107	106	78.0-120			1.21	20
1,2-Dichlorobenzene	0.0250	0.0265	0.0267	106	107	80.0-120			0.687	20
1,3-Dichlorobenzene	0.0250	0.0266	0.0271	106	109	72.0-123			2.05	20
1,4-Dichlorobenzene	0.0250	0.0255	0.0264	102	106	77.0-120			3.24	20
Dichlorodifluoromethane	0.0250	0.0267	0.0241	107	96.3	49.0-155			10.4	20
1,1-Dichloroethane	0.0250	0.0240	0.0239	95.8	95.7	70.0-126			0.201	20
1,2-Dichloroethane	0.0250	0.0248	0.0249	99.1	99.4	67.0-126			0.285	20
1,1-Dichloroethene	0.0250	0.0258	0.0265	103	106	64.0-129			2.39	20
cis-1,2-Dichloroethene	0.0250	0.0271	0.0270	108	108	73.0-120			0.387	20
trans-1,2-Dichloroethene	0.0250	0.0267	0.0271	107	108	71.0-121			1.71	20
1,2-Dichloropropane	0.0250	0.0231	0.0233	92.4	93.4	75.0-125			1.01	20
1,1-Dichloropropene	0.0250	0.0262	0.0270	105	108	71.0-129			3.02	20
1,3-Dichloropropane	0.0250	0.0271	0.0275	108	110	80.0-121			1.57	20
cis-1,3-Dichloropropene	0.0250	0.0274	0.0279	110	112	79.0-123			1.86	20
trans-1,3-Dichloropropene	0.0250	0.0271	0.0276	109	110	74.0-127			1.73	20
2,2-Dichloropropane	0.0250	0.0295	0.0274	118	110	60.0-125			7.21	20
Di-isopropyl ether	0.0250	0.0248	0.0250	99.3	100	59.0-133			0.711	20
Hexachloro-1,3-butadiene	0.0250	0.0222	0.0224	88.7	89.8	64.0-131			1.20	20
Isopropylbenzene	0.0250	0.0277	0.0284	111	113	75.0-120			2.24	20
p-Isopropyltoluene	0.0250	0.0277	0.0280	111	112	74.0-126			1.25	20
2-Butanone (MEK)	0.125	0.179	0.181	144	145	37.0-158			0.959	20
Methylene Chloride	0.0250	0.0248	0.0254	99.1	102	66.0-121			2.52	20
4-Methyl-2-pentanone (MIBK)	0.125	0.132	0.134	106	107	59.0-143			1.74	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



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

(LCS) R3289272-1 02/27/18 09:46 • (LCSD) R3289272-2 02/27/18 10:05

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Methyl tert-butyl ether	0.0250	0.0263	0.0261	105	104	64.0-123			0.776	20
Ethylbenzene	0.0250	0.0265	0.0265	106	106	77.0-120			0.0445	20
Naphthalene	0.0250	0.0259	0.0263	103	105	62.0-128			1.63	20
n-Propylbenzene	0.0250	0.0277	0.0286	111	114	79.0-120			3.10	20
Styrene	0.0250	0.0291	0.0304	116	122	78.0-124			4.51	20
1,1,1,2-Tetrachloroethane	0.0250	0.0256	0.0259	102	104	75.0-122			1.49	20
1,1,2,2-Tetrachloroethane	0.0250	0.0286	0.0291	114	116	71.0-122			1.74	20
Tetrachloroethene	0.0250	0.0245	0.0257	98.2	103	70.0-127			4.68	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0259	0.0265	104	106	61.0-136			2.56	20
1,2,3-Trichlorobenzene	0.0250	0.0237	0.0241	94.8	96.6	61.0-133			1.85	20
1,2,4-Trichlorobenzene	0.0250	0.0230	0.0237	92.0	95.0	69.0-129			3.17	20
1,1,1-Trichloroethane	0.0250	0.0264	0.0257	105	103	68.0-122			2.50	20
1,1,2-Trichloroethane	0.0250	0.0265	0.0271	106	108	78.0-120			2.11	20
Trichloroethene	0.0250	0.0263	0.0270	105	108	78.0-120			2.52	20
Trichlorofluoromethane	0.0250	0.0253	0.0251	101	100	56.0-137			0.680	20
1,2,3-Trichloropropane	0.0250	0.0275	0.0279	110	111	72.0-124			1.41	20
1,2,3-Trimethylbenzene	0.0250	0.0270	0.0274	108	110	75.0-120			1.39	20
1,2,4-Trimethylbenzene	0.0250	0.0271	0.0274	108	109	75.0-120			1.02	20
1,3,5-Trimethylbenzene	0.0250	0.0269	0.0270	108	108	75.0-120			0.415	20
Vinyl chloride	0.0250	0.0238	0.0212	95.1	84.7	64.0-133			11.6	20
Toluene	0.0250	0.0260	0.0267	104	107	77.0-120			2.57	20
Xylenes, Total	0.0750	0.0781	0.0792	104	106	77.0-120			1.40	20
(S) Toluene-d8				104	102	80.0-120				
(S) Dibromofluoromethane				104	102	76.0-123				
(S) 4-Bromofluorobenzene				107	108	80.0-120				

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



Method Blank (MB)

(MB) R3289532-1 02/27/18 13:45

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
C10-C28 Diesel Range	U		0.0222	0.100
C28-C40 Oil Range	U		0.0118	0.100
(S) o-Terphenyl	93.1			52.0-156

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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) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3289532-2 02/27/18 14:02 • (LCSD) R3289532-3 02/27/18 14:18

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	1.50	1.37	1.43	91.1	95.1	50.0-150			4.25	20
(S) o-Terphenyl				115	119	52.0-156				

L972534-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L972534-01 02/27/18 14:34 • (MS) R3289532-4 02/27/18 14:51 • (MSD) R3289532-5 02/27/18 15:07

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	1.50	0.543	1.88	1.87	89.4	88.6	1	50.0-150			0.594	20
(S) o-Terphenyl					114	117		52.0-156				

Method Blank (MB)

(MB) R3290175-3 03/02/18 11:33

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acenaphthene	U		0.000316	0.00100
Acenaphthylene	U		0.000309	0.00100
Anthracene	U		0.000291	0.00100
Benzidine	U		0.00432	0.0100
Benzo(a)anthracene	U		0.0000975	0.00100
Benzo(b)fluoranthene	U		0.0000896	0.00100
Benzo(k)fluoranthene	U		0.000355	0.00100
Benzo(g,h,i)perylene	U		0.000161	0.00100
Benzo(a)pyrene	U		0.000340	0.00100
Bis(2-chlorethoxy)methane	U		0.000329	0.0100
Bis(2-chloroethyl)ether	U		0.00162	0.0100
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100
4-Bromophenyl-phenylether	U		0.000335	0.0100
2-Chloronaphthalene	U		0.000330	0.00100
4-Chlorophenyl-phenylether	U		0.000303	0.0100
Chrysene	U		0.000332	0.00100
Dibenz(a,h)anthracene	U		0.000279	0.00100
3,3-Dichlorobenzidine	U		0.00202	0.0100
2,4-Dinitrotoluene	U		0.00165	0.0100
2,6-Dinitrotoluene	U		0.000279	0.0100
Fluoranthene	U		0.000310	0.00100
Fluorene	U		0.000323	0.00100
Hexachlorobenzene	U		0.000341	0.00100
Hexachloro-1,3-butadiene	U		0.000329	0.0100
Hexachlorocyclopentadiene	U		0.00233	0.0100
Hexachloroethane	U		0.000365	0.0100
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100
Isophorone	U		0.000272	0.0100
1-Methylnaphthalene	U		0.0000470	0.0100
2-Methylnaphthalene	U		0.000311	0.0100
Naphthalene	U		0.000372	0.00100
Nitrobenzene	U		0.000367	0.0100
n-Nitrosodimethylamine	U		0.00126	0.0100
n-Nitrosodiphenylamine	U		0.000304	0.0100
n-Nitrosodi-n-propylamine	U		0.000403	0.0100
Phenanthrene	U		0.000366	0.00100
Benzylbutyl phthalate	U		0.000275	0.00300
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300
Di-n-butyl phthalate	U		0.000266	0.00300
Diethyl phthalate	U		0.000282	0.00300

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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) R3290175-3 03/02/18 11:33

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dimethyl phthalate	U		0.000283	0.00300
Di-n-octyl phthalate	U		0.000278	0.00300
Pyrene	U		0.000330	0.00100
1,2,4-Trichlorobenzene	U		0.000355	0.0100
4-Chloro-3-methylphenol	U		0.000263	0.0100
2-Chlorophenol	U		0.000283	0.0100
2,4-Dichlorophenol	U		0.000284	0.0100
2,4-Dimethylphenol	U		0.000624	0.0100
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100
2,4-Dinitrophenol	U		0.00325	0.0100
2-Nitrophenol	U		0.000320	0.0100
4-Nitrophenol	U		0.00201	0.0100
Pentachlorophenol	U		0.000313	0.0100
Phenol	U		0.000334	0.0100
2,4,6-Trichlorophenol	U		0.000297	0.0100
(S) Nitrobenzene-d5	62.6			10.0-126
(S) 2-Fluorobiphenyl	73.3			22.0-127
(S) p-Terphenyl-d14	59.0			29.0-141
(S) Phenol-d5	34.8			10.0-120
(S) 2-Fluorophenol	47.9			10.0-120
(S) 2,4,6-Tribromophenol	52.5			10.0-153

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

(LCS) R3290175-1 03/02/18 04:17 • (LCSD) R3290175-2 03/02/18 04:42

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.0500	0.0408	0.0419	81.5	83.7	42.0-120			2.69	22
Acenaphthylene	0.0500	0.0400	0.0414	80.0	82.8	43.0-120			3.46	22
Anthracene	0.0500	0.0366	0.0371	73.3	74.3	44.0-120			1.36	20
Benzidine	0.0500	0.0119	0.0127	23.8	25.4	100-120			6.66	36
Benzo(a)anthracene	0.0500	0.0420	0.0420	84.0	84.1	44.0-120			0.111	20
Benzo(b)fluoranthene	0.0500	0.0414	0.0424	82.9	84.8	40.0-120			2.32	21
Benzo(k)fluoranthene	0.0500	0.0417	0.0411	83.4	82.2	41.0-120			1.45	22
Benzo(g,h,i)perylene	0.0500	0.0412	0.0412	82.4	82.4	45.0-121			0.0890	20
Benzo(a)pyrene	0.0500	0.0406	0.0408	81.2	81.6	41.0-120			0.561	20
Bis(2-chlorethoxy)methane	0.0500	0.0321	0.0346	64.2	69.2	36.0-120			7.62	25
Bis(2-chloroethyl)ether	0.0500	0.0344	0.0399	68.8	79.7	24.0-120			14.7	29
Bis(2-chloroisopropyl)ether	0.0500	0.0317	0.0363	63.5	72.5	32.0-120			13.3	29

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

(LCS) R3290175-1 03/02/18 04:17 • (LCSD) R3290175-2 03/02/18 04:42

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Bromophenyl-phenylether	0.0500	0.0375	0.0395	74.9	79.0	42.0-121			5.31	21
2-Chloronaphthalene	0.0500	0.0375	0.0395	75.1	78.9	37.0-120			5.00	24
4-Chlorophenyl-phenylether	0.0500	0.0400	0.0413	80.0	82.5	44.0-120			3.10	21
Chrysene	0.0500	0.0409	0.0404	81.8	80.9	45.0-120			1.19	20
Dibenz(a,h)anthracene	0.0500	0.0401	0.0399	80.1	79.7	44.0-121			0.532	21
3,3-Dichlorobenzidine	0.0500	0.0447	0.0439	89.5	87.9	29.0-153			1.77	23
2,4-Dinitrotoluene	0.0500	0.0415	0.0411	82.9	82.2	47.0-127			0.914	21
2,6-Dinitrotoluene	0.0500	0.0385	0.0391	76.9	78.2	42.0-120			1.62	22
Fluoranthene	0.0500	0.0414	0.0417	82.8	83.3	46.0-121			0.658	20
Fluorene	0.0500	0.0397	0.0415	79.5	83.1	45.0-120			4.42	21
Hexachlorobenzene	0.0500	0.0373	0.0389	74.5	77.8	41.0-124			4.28	21
Hexachloro-1,3-butadiene	0.0500	0.0315	0.0361	63.1	72.1	26.0-120			13.4	31
Hexachlorocyclopentadiene	0.0500	0.0319	0.0348	63.9	69.6	10.0-120			8.61	31
Hexachloroethane	0.0500	0.0305	0.0363	61.0	72.7	22.0-120			17.5	34
Indeno(1,2,3-cd)pyrene	0.0500	0.0415	0.0416	83.0	83.2	45.0-123			0.227	21
Isophorone	0.0500	0.0354	0.0372	70.8	74.3	37.0-120			4.86	24
1-Methylnaphthalene	0.0500	0.0326	0.0347	65.2	69.5	33.0-120			6.41	23
2-Methylnaphthalene	0.0500	0.0311	0.0341	62.3	68.1	35.0-120			9.00	25
Naphthalene	0.0500	0.0314	0.0346	62.7	69.2	33.0-120			9.86	28
Nitrobenzene	0.0500	0.0344	0.0382	68.7	76.5	31.0-120			10.7	28
n-Nitrosodimethylamine	0.0500	0.0245	0.0295	48.9	58.9	10.0-120			18.6	34
n-Nitrosodiphenylamine	0.0500	0.0432	0.0447	86.3	89.4	44.0-120			3.49	21
n-Nitrosodi-n-propylamine	0.0500	0.0368	0.0411	73.7	82.1	29.0-120			10.8	27
Phenanthrene	0.0500	0.0402	0.0411	80.3	82.1	42.0-120			2.23	20
Benzylbutyl phthalate	0.0500	0.0396	0.0396	79.2	79.2	36.0-123			0.0624	22
Bis(2-ethylhexyl)phthalate	0.0500	0.0406	0.0403	81.1	80.6	37.0-121			0.699	21
Di-n-butyl phthalate	0.0500	0.0417	0.0414	83.3	82.8	43.0-122			0.663	21
Diethyl phthalate	0.0500	0.0424	0.0430	84.8	86.1	48.0-123			1.45	20
Dimethyl phthalate	0.0500	0.0419	0.0424	83.8	84.9	47.0-120			1.33	20
Di-n-octyl phthalate	0.0500	0.0416	0.0416	83.1	83.2	38.0-120			0.0828	22
Pyrene	0.0500	0.0402	0.0400	80.3	80.0	43.0-120			0.467	21
1,2,4-Trichlorobenzene	0.0500	0.0300	0.0341	60.1	68.3	29.0-120			12.8	29
4-Chloro-3-methylphenol	0.0500	0.0376	0.0380	75.2	76.1	39.0-120			1.10	22
2-Chlorophenol	0.0500	0.0307	0.0365	61.3	73.0	28.0-120			17.4	29
2,4-Dichlorophenol	0.0500	0.0337	0.0363	67.5	72.6	37.0-120			7.24	26
2,4-Dimethylphenol	0.0500	0.0314	0.0373	62.7	74.6	35.0-120			17.3	25
4,6-Dinitro-2-methylphenol	0.0500	0.0467	0.0482	93.4	96.4	34.0-125			3.09	27
2,4-Dinitrophenol	0.0500	0.0386	0.0403	77.1	80.6	10.0-120			4.45	40
2-Nitrophenol	0.0500	0.0317	0.0363	63.5	72.6	35.0-120			13.4	28
4-Nitrophenol	0.0500	0.0213	0.0218	42.6	43.7	10.0-120			2.64	35

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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) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3290175-1 03/02/18 04:17 • (LCSD) R3290175-2 03/02/18 04:42

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Pentachlorophenol	0.0500	0.0400	0.0417	80.1	83.4	20.0-126			4.05	32
Phenol	0.0500	0.0201	0.0229	40.3	45.8	10.0-120			12.8	34
2,4,6-Trichlorophenol	0.0500	0.0398	0.0410	79.7	81.9	40.0-122			2.80	24
(S) Nitrobenzene-d5				65.0	71.0	10.0-126				
(S) 2-Fluorobiphenyl				74.8	80.0	22.0-127				
(S) p-Terphenyl-d14				62.8	64.1	29.0-141				
(S) Phenol-d5				38.1	43.0	10.0-120				
(S) 2-Fluorophenol				49.1	58.5	10.0-120				
(S) 2,4,6-Tribromophenol				71.1	72.9	10.0-153				

L972534-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L972534-01 03/03/18 22:28 • (MS) R3291021-1 03/03/18 22:51 • (MSD) R3291021-2 03/03/18 23:15

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Acenaphthene	0.0500	U	0.0403	0.0420	80.6	84.1	1	25.0-143			4.19	29
Acenaphthylene	0.0500	U	0.0434	0.0440	86.7	87.9	1	24.0-149			1.39	29
Anthracene	0.0500	U	0.0394	0.0392	78.8	78.4	1	27.0-145			0.555	30
Benidine	0.0500	U	ND	ND	0.000	0.000	1	1.00-120	J6	J6	0.000	40
Benzo(a)anthracene	0.0500	U	0.0427	0.0434	85.5	86.8	1	30.0-138			1.55	26
Benzo(b)fluoranthene	0.0500	U	0.0427	0.0451	85.4	90.2	1	28.0-140			5.50	31
Benzo(k)fluoranthene	0.0500	U	0.0441	0.0435	88.2	86.9	1	28.0-140			1.41	31
Benzo(g,h,i)perylene	0.0500	U	0.0465	0.0472	93.0	94.4	1	26.0-149			1.55	27
Benzo(a)pyrene	0.0500	U	0.0451	0.0452	90.2	90.5	1	28.0-139			0.361	29
Bis(2-chlorethoxy)methane	0.0500	U	0.0310	0.0321	62.0	64.2	1	19.0-135			3.48	30
Bis(2-chloroethyl)ether	0.0500	U	0.0317	0.0336	63.3	67.2	1	10.0-126			6.00	34
Bis(2-chloroisopropyl)ether	0.0500	U	0.0340	0.0345	68.0	69.0	1	18.0-128			1.50	35
4-Bromophenyl-phenylether	0.0500	U	0.0394	0.0396	78.7	79.2	1	28.0-146			0.630	30
2-Chloronaphthalene	0.0500	U	0.0383	0.0393	76.7	78.5	1	23.0-134			2.38	32
4-Chlorophenyl-phenylether	0.0500	U	0.0405	0.0413	81.0	82.6	1	32.0-142			1.87	29
Chrysene	0.0500	U	0.0426	0.0427	85.2	85.5	1	32.0-144			0.302	27
Dibenz(a,h)anthracene	0.0500	U	0.0441	0.0451	88.1	90.2	1	22.0-149			2.27	29
3,3-Dichlorobenzidine	0.0500	U	0.0268	0.0303	53.6	60.5	1	10.0-160			12.2	34
2,4-Dinitrotoluene	0.0500	U	0.0429	0.0456	85.8	91.2	1	30.0-156			6.04	29
2,6-Dinitrotoluene	0.0500	U	0.0409	0.0421	81.8	84.2	1	28.0-143			2.89	30
Fluoranthene	0.0500	U	0.0454	0.0459	90.9	91.9	1	31.0-146			1.07	30
Fluorene	0.0500	U	0.0416	0.0420	83.3	84.0	1	29.0-143			0.845	31
Hexachlorobenzene	0.0500	U	0.0410	0.0411	82.0	82.2	1	29.0-144			0.248	33
Hexachloro-1,3-butadiene	0.0500	U	0.0300	0.0310	60.0	61.9	1	18.0-122			3.20	35

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L972534-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L972534-01 03/03/18 22:28 • (MS) R3291021-1 03/03/18 22:51 • (MSD) R3291021-2 03/03/18 23:15

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexachlorocyclopentadiene	0.0500	U	0.0332	0.0329	66.4	65.8	1	10.0-146			1.03	34
Hexachloroethane	0.0500	U	0.0310	0.0331	61.9	66.2	1	12.0-120			6.69	36
Indeno(1,2,3-cd)pyrene	0.0500	U	0.0470	0.0476	94.0	95.2	1	24.0-151			1.29	28
Isophorone	0.0500	U	0.0337	0.0344	67.3	68.7	1	22.0-141			2.10	29
1-Methylnaphthalene	0.0500	0.000137	0.0320	0.0331	64.0	66.3	1	33.0-120			3.41	23
2-Methylnaphthalene	0.0500	U	0.0320	0.0329	64.0	65.9	1	13.0-142			2.81	29
Naphthalene	0.0500	U	0.0317	0.0327	63.4	65.5	1	19.0-125			3.25	32
Nitrobenzene	0.0500	U	0.0317	0.0328	63.3	65.6	1	14.0-134			3.57	32
n-Nitrosodimethylamine	0.0500	U	0.0205	0.0210	40.9	42.0	1	10.0-120			2.57	40
n-Nitrosodiphenylamine	0.0500	U	0.0416	0.0423	83.3	84.7	1	16.0-160			1.70	28
n-Nitrosodi-n-propylamine	0.0500	U	0.0399	0.0418	79.8	83.6	1	16.0-136			4.64	30
Phenanthrene	0.0500	U	0.0400	0.0404	80.0	80.9	1	27.0-137			1.12	28
Benzylbutyl phthalate	0.0500	U	0.0469	0.0473	93.8	94.6	1	30.0-147			0.809	27
Bis(2-ethylhexyl)phthalate	0.0500	U	0.0467	0.0479	93.4	95.8	1	25.0-140			2.51	26
Di-n-butyl phthalate	0.0500	0.000823	0.0428	0.0426	84.0	83.6	1	32.0-146			0.564	27
Diethyl phthalate	0.0500	U	0.0422	0.0429	84.3	85.8	1	34.0-149			1.70	26
Dimethyl phthalate	0.0500	U	0.0406	0.0419	81.3	83.8	1	29.0-147			3.04	27
Di-n-octyl phthalate	0.0500	U	0.0485	0.0491	97.1	98.1	1	24.0-146			1.08	29
Pyrene	0.0500	U	0.0423	0.0429	84.7	85.8	1	34.0-140			1.31	27
1,2,4-Trichlorobenzene	0.0500	U	0.0298	0.0310	59.7	62.1	1	19.0-120			3.93	33
4-Chloro-3-methylphenol	0.0500	U	0.0358	0.0371	71.7	74.2	1	20.0-138			3.45	28
2-Chlorophenol	0.0500	U	0.0322	0.0343	64.4	68.7	1	11.0-120			6.41	33
2,4-Dichlorophenol	0.0500	U	0.0332	0.0356	66.5	71.3	1	19.0-135			6.96	32
2,4-Dimethylphenol	0.0500	U	0.0318	0.0318	63.6	63.6	1	18.0-127			0.0146	31
4,6-Dinitro-2-methylphenol	0.0500	U	0.0477	0.0501	95.5	100	1	10.0-160			4.86	38
2,4-Dinitrophenol	0.0500	U	0.0435	0.0436	87.1	87.1	1	10.0-137			0.0548	36
2-Nitrophenol	0.0500	U	0.0381	0.0385	76.3	76.9	1	15.0-143			0.823	33
4-Nitrophenol	0.0500	U	0.0222	0.0222	44.4	44.4	1	10.0-120			0.0940	31
Pentachlorophenol	0.0500	U	0.0517	0.0499	103	99.7	1	10.0-160			3.66	40
Phenol	0.0500	U	0.0200	0.0213	40.0	42.7	1	10.0-120			6.43	34
2,4,6-Trichlorophenol	0.0500	U	0.0419	0.0429	83.7	85.8	1	10.0-153			2.44	29
(S) Nitrobenzene-d5					61.7	63.9		10.0-126				
(S) 2-Fluorobiphenyl					74.3	76.9		22.0-127				
(S) p-Terphenyl-d14					66.1	67.0		29.0-141				
(S) Phenol-d5					39.2	44.1		10.0-120				
(S) 2-Fluorophenol					53.6	58.9		10.0-120				
(S) 2,4,6-Tribromophenol					88.3	92.1		10.0-153				

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc



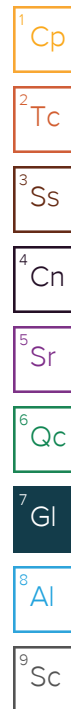
Guide to Reading and Understanding Your Laboratory Report

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.

Abbreviations and Definitions

MDL	Method Detection Limit.
MQL	Method Quantitation Limit.
ND	Not detected at the Sample Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
(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 Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
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, 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.
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
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.
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.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.



* Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Alabama	40660	Nebraska	NE-05-15-05
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	T 104704245-17-14
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

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

ESC Lab Sciences 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. ESC Lab Sciences performs all testing at our central laboratory.

